

# **THE WEST AFRICAN EXAMINATIONS COUNCIL**



## **WEST AFRICAN SENIOR SCHOOL CERTIFICATE EXAMINATION (WASSCE) FOR SCHOOL CANDIDATES, 2017 CHIEF EXAMINERS' REPORTS**

### **GHANA**



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# **GENERAL RESUMÉ OF THE CHIEF EXAMINERS’ REPORTS FOR THE WEST AFRICAN SENIOR SCHOOL CERTIFICATE EXAMINATION FOR SCHOOL CANDIDATES, 2017**

## **1. STANDARD OF THE PAPERS**

The Chief Examiners affirmed in their reports that the papers were of the required standard within the scope of the syllabuses and compared favourably with that of previous years. They also reported that the questions were fairly spread over the topics in the syllabuses and were unambiguous.

## **2. PERFORMANCE OF CANDIDATES**

### **(1) LANGUAGES**

The Chief Examiners ascribed different performance strands to candidates’ output in the Language subjects. While an ‘improved performance’ was observed for Gonja 2 and Fante 1, they reported ‘above average’ for English Language 2 and Ewe 2, ‘below average’ in French, Dangme 1 and Ga 1, and poor in Dangme 2 and Gonja 1.

### **(2) HUMANITIES**

The Chief Examiners made two main observations in respect of the performance of candidates. Government 2, History 2, Christian Religious Studies 2, Economics 2, Music 2, and Music 3B saw an improvement in performance. However, a decline in performance over the previous year was reported for Social Studies 2, Geography 2 and Geography 3, Islamic Studies 2 and Music 3A.

### **(3) SCIENCE**

According to the Chief Examiners, the performance of candidates for Animal Husbandry and Forestry was good. Candidates for Fisheries, Crop Husbandry and Horticulture, Physics and Chemistry were reported to have performed averagely. In Integrated Science and General Agriculture, candidates performed poorly.

### **(4) MATHEMATICS**

The Chief Examiners for Mathematics (Core) 2 and Mathematics (Elective) 2 pointed out that the performance this year was not encouraging. However, that of Mathematics (Core) 2 was slightly better than last year’s.

### **(5) BUSINESS SUBJECTS**

The Chief Examiners reported that there was a marginal improvement in performance for Principles of Cost Accounting 2, Typewriting and Business Management 2. On the other hand, performance of candidates for Financial Accounting 2 and Clerical Office Duties 2 was not encouraging.

(6) **TECHNICAL SUBJECTS**

According to the chief examiners the performance of candidates in the various Technical subjects varied. They reported that performance in Technical Drawing 2 and 3, Auto Mechanics 3, Woodwork 2 and 3, Building Construction 2 and 3 was encouraging. On the other hand, the Chief Examiners for Auto Mechanic 2, Electronics 2 and 3 reported a poor performance of candidates.

However, for Information and Communication Technology 2 and 3 the Chief Examiners reported of an average performance.

(7) **VOCATIONAL SUBJECTS**

According to the Chief Examiners, performance of candidates varied, ranging from 'poor' in Clothing and Textiles 2, 'below average' in Picture Making 2, General Knowledge in Art 3, Leatherwork 2, Sculpture 2, Foods and Nutrition 2, Graphic Design 2, Textiles 2, Leatherwork 2, Ceramics 2, and 'average' in General Knowledge in Art 2 and Management in Living 2 and 3.

(3) **SUMMARY OF CANDIDATES' STRENGTHS**

(1) **LANGUAGES**

Some commendable features were identified in candidates' scripts. Notable among them include the following:

(a) **Adherence to Rubrics**

In English Language 2, Dangme 2, Ewe 1 and French 2 candidates were highly commended for attempting all questions as required by the rubrics of the papers, writing full length essays and answering composition question without deviation.

(b) **Good Organization of Essays**

Good candidates in French 2, English Language 2, Ewe 2, Nzema 1 and Literature-In-English 2 and 3 presented their ideas in an orderly manner staying clear of winding and inappropriate introduction to their essays.

(c) **Ability to apply themes to aspects of life**

In Literature in English 2 and 3, Asante Twi 2 and Kasem 2 for instance, candidates were lauded for using illustrative details from the text to support their points. Some candidates were also commended for appropriate use of figurative expressions.

- (d) Knowledge of the Formal Features of Essay Writing  
Some candidates for English Language 2, Dagaare 1 and Gonja 1 were commended for exhibiting mastery in the use of formal features of the different forms of essays such as speech writing, articles, debates and letter writing.
- (e) Good approach to answering summary and comprehension questions  
In English Language 2, candidates were commended for using appropriate sentences and phrases in answering the questions on summary and comprehension passages.

(2) **HUMANITIES SUBJECTS**

The Chief Examiners noted the following commendable features in the candidates' scripts.

- (a) Adherence to Rubrics  
Candidates for Social Studies 2, Government 2, Economics 2, History 2, Christian Religious Studies 2 were reported to have followed the dictates of the rubrics.
- (b) Orderly Presentation of Material and Good Expression  
Candidates were commended for orderly presentation of facts in clear comprehensible language and use of good expressions in the following papers: Social Studies 2, Government 2, History 2, Economics 2 and Christian Religious Studies 2.
- (c) In-Depth Knowledge of Subject Matter  
In Social Studies 2, Government 2, History 2, Economics 2, Christian Religious Studies 2, Music 3A and 3B, Geography 2 and 3 candidates demonstrated an in-depth knowledge of the various topics in the respective syllabuses.

(3) **SCIENCE SUBJECTS**

- (a) Legible Handwriting and adherence to rubrics  
Candidates were commended for legible handwriting, adherence to rubrics and orderly presentation of work in the following subjects: Integrated Science, Physics, Biology, General Agriculture, Crop Husbandry and Horticulture, Fisheries and Forestry.
- (b) Provision of concise answers:

Candidates for Integrated Science 3, General Agriculture 2, Crop Husbandry and Horticulture 3, Forestry 2 and 3, Biology 3 were lauded by the Chief Examiners for providing concise answers.

(c) Usage of scientific terms:

Candidates were highly commended for the use and correct spelling of scientific terms in Integrated Science, Chemistry and Animal Husbandry.

(4) **MATHEMATICS**

(1) The Chief Examiner for Mathematics (Core) 2 catalogued some of the strengths of candidates as follows:

Candidates' ability to

- (i) use venn diagram to solve a probability problem;
- (ii) simplify and express trigonometric expression in a surd form;
- (iii) complete table of values for a quadratic relation and drawing the graph of the relation using given scale and interval;
- (iv) use a given mean to find the value of a variable of a statistical data;
- (v) evaluate a given binary operation defined on a set of real numbers;
- (vi) find the midpoint of a given vector and express it as a column vector.

(2) The Chief Examiner for Mathematics (Elective) 2 commended candidates for their ability to:

- (i) find inverse and composite functions;
- (ii) find the equation of a circle;
- (iii) find the first term, common difference and the sum of the first ten terms of an Arithmetic Progression (A. P);
- (iv) find the values of an unknown variable in a polynomial expression;
- (v) draw a cumulative frequency curve for a given distribution;
- (vi) express polynomial functions in partial fractions.

(5) **BUSINESS SUBJECTS**

(1) The Chief Examiners for Principles of Cost Accounting 2 and Business Management 2 commended the candidates in the following areas:

- (a) Arranging work in an orderly manner;
- (b) In-depth knowledge of the subject matter;
- (c) Providing precise answers;
- (d) Explaining business terminologies correctly ;

- (e) Using illustrations to support their answers where applicable.
- (2) The Chief Examiner for Typewriting commended candidates for the ability to:
- (a) Demonstrate understanding of the rubrics and other marginal instructions;
  - (b) Show consistency in style of production work;
  - (c) Exhibit correct ruling of tabular work;
  - (d) Show correct use of line spacing in letter and tabulation.

(6) **TECHNICAL SUBJECTS**

The Chief Examiners identified the following as strengths of the candidates:

(a) Orderly Presentation of Answers

Candidates for Metalwork 2, Information and Communication Technology (ICT) 2, Building Construction 2 and 3 and Electronics 2 were commended for arranging their work neatly, writing legibly, and providing concise answers.

(b) Application of Knowledge and Skills

Candidates for ICT 3 showed an improvement in query creation. In Technical Drawing 3, most candidates who opted for mechanical drawing showed improvement over that of previous years. Some candidates for Electronics 2 showed in-depth knowledge of classes of amplifiers and combinational logic circuit.

(c) Exhibition of Good Practical Skills

Majority of candidates for Woodwork 3 were commended for the ability to interpret the working drawings and mark out correctly. Candidates for Electronics 3 were also commended for performing the experiments correctly.

(7) **VOCATIONAL SUBJECTS**

The Chief Examiners highlighted the following strengths in candidates' work:

- (a) Improved knowledge in the use of sewing in Clothing and Textiles.
- (b) Appropriate use of terminologies and correct spelling of words for Textiles 2, Picture Making 2, Basketry 2, Food and Nutrition 3 and Management in Living 3.
- (c) Skillful use of tools and materials was exhibited in General Knowledge in Art and Clothing and Textiles.
- (d) Display of in-depth knowledge on healthy studio practices in Ceramic and Sculpture 2.

4. **SUMMARY OF CANDIDATES' WEAKNESSES AND SUGGESTED REMEDIES**

(1) **LANGUAGES**

(1) **WEAKNESSES**

(a) **Ghanaian Languages**

The Chief Examiners for the Ghanaian Languages identified poor orthography and inappropriate use of language as the commonest weakness in the candidates' work

(b) **English Language 2**

The Chief Examiners for English Language pointed out that some candidates;

- (i) resorted to the use of pidgin English;
- (ii) had limited stock of vocabulary;
- (iii) could not use appropriate vocabulary to describe situations;

(c) **Literature-in-English 2 and French 2**

For Literature-in- English 2 and French 2, candidates were said to have exhibited the following deficiencies:

- (i) poor knowledge of the text;
- (ii) poor use of expressions;
- (iii) inappropriate use of grammar.

(2) **SUGGESTED REMEDIES**

A number of recommendations were given to address the weaknesses identified. These include:

- (a) Emphasis on spelling drills .
- (b) Extensive reading of good material to improve language usage.
- (c) Literary devices should be learned not in isolation, but within the contexts of texts studied.
- (d) Exercises on summary and comprehension should be carried out frequently. Teachers must place emphasis on explaining errors made by students and teach them the correct way of answering questions on passages.
- (e) Literature-in-English and Ghanaian Language candidates should do thorough reading of their texts in order to be able to appreciate them well.

(2) **HUMANITIES**

(a) **WEAKNESSES**

The Chief Examiners noted the following weaknesses of the candidates.

For Christian Religious studies 2, Geography 2, Economics 2 and History 2, the following weaknesses were noted:

- (a) lack of adequate preparation for the examination;
- (b) deviations in answering questions and raising of points in essays without explanations;
- (c) lack of knowledge of the subject matter.

In Geography 3 candidates performed poorly due to

- (a) difficulty in sketching of maps and drawing of diagrams
- (b) inability of candidates to draw cross profile of the area specified
- (c) inability to establish the relationship between relief and transportation network on topographical maps among others.

For Music the weaknesses identified included

- (i) poor knowledge of chord progression and cadences;
- (ii) misinterpretation of some of the rhythms in pieces;
- (iii) inability to pitch accurately and thus lost the tonal centre.

(b) **SUGGESTED REMEDIES**

- (i) Candidates should be encouraged to read the approved textbooks for their subjects;
- (ii) Candidates should read and understand questions before attempting them;
- (iii) Candidates should read extensively to enrich their vocabulary and use of terminologies.
- (iv) Candidates must be taught the rudiments of music by their teachers.

(3) **SCIENCE SUBJECTS**

(a) **WEAKNESSES**

The Chief Examiner reported the following weaknesses of candidates:

- (i) Lack of mastery of subject matter:

Candidates showed lack of adequate knowledge of subject matter for example Magnetism and Animal Nutrition in Integrated Science; Optics in Physics; Qualitative Analysis in Chemistry and Genetic Diagram Construction in Biology.

- (ii) Misunderstanding of the questions:

Though questions were unambiguous, candidates had poor grasp of the demands of the questions set in Biology 3, Animal Husbandry 2 and 3, Fisheries 2 among others.

(iii) Wrong spelling of scientific terms:

The Chief Examiners for Integrated Science 3, General Agriculture 2 and 3 Fisheries 3, Physics 3, and Chemistry 2 reported that candidates could not spell scientific terms correctly.

(iv) Poor computation and drawing Skills:

The inability of most candidates to manipulate figures and sketching of objects was a source of worry for the Chief Examiners for Integrated Science 3, Physics 2 and 3 and Chemistry 3.

(v) Other notable weaknesses reported by the Chief Examiners include:

Inability to carry out simple calculations

Inability to assign proper units to figures

(b) **SUGGESTED REMEDIES**

The Chief Examiners for science subjects generally recommended that candidates should be taken through enough practical lessons to improve their performance.

The Chief Examiners also suggested that Candidates should:

- (i) prepare adequately before taking examinations.
- (ii) be encouraged to take lessons in Mathematics seriously to enhance their computation skills.
- (iii) be advised to read through examination questions carefully before attempting them.
- (iv) make the effort to understand and use scientific names and terms appropriately.

(4) **MATHEMATICS**

(a) **WEAKNESSES**

The Chief Examiner for Mathematics (Core) 2 listed the weaknesses of candidates as difficulty in:

- (a) finding the value of a logarithmic expression;

- (b) translating word story problems into mathematical statement and solving them;
- (c) solving problems involving geometry, such as cyclic quadrilaterals, tangent and chord theorem;
- (d) finding the product of two matrices;
- (e) solving problems involving financial mathematics.

The Chief Examiner for Mathematics (Elective) 2 listed the following weaknesses of candidates as difficulty in:

- (a) solving probability related problems;
- (b) applying the laws of logarithms;
- (c) finding the integration of a function using trapezium rule;
- (d) finding the angle between two vectors;
- (e) resolving forces to find the value of an unknown forces;
- (f) drawing histogram with unequal class intervals.

(b) **SUGGESTED REMEDIES**

The Chief Examiners for Mathematics (Core) 2 and Mathematics (Elective) 2 suggested that teachers should encourage candidates to learn and understand the concepts of the Mathematics topics in the syllabuses.

They also suggested that teachers should make the teaching of Mathematics lively and interesting for candidates to appreciate the topics in the syllabuses.

(5) **BUSINESS SUBJECTS**

(a) **WEAKNESSES**

The Chief Examiners identified the following weaknesses:

(i) **Poor Expression in English Language**

The Chief Examiners for Business Management, Typewriting and Principles of Cost Accounting reported that some of the candidates could not express themselves in good English even when they stated the right point.

(ii) **Misunderstanding of Questions Set**

The Chief Examiners for Principles of Cost Accounting and Business - Management reported that some of the candidates deviated in answering some questions.

(iii) The Chief Examiner for Typewriting reported of candidates' inability to

demonstrate mastery of the keyboard.

(b) **SUGGESTED REMEDIES**

The Chief Examiners suggested the following remedies for the weaknesses enumerated:

- (i) Candidates should be advised to take their time to read questions well and to understand their requirements before answering them.
- (ii) Candidates should also be advised to adequately prepare for examinations. A lot of practice with past examination questions would go a long way to improve performance. A lot of exercises must also be given as part of the preparation for the examination.
- (iii) Every section of the syllabus must also be given adequate attention to give candidates more options.
- (iv) For subjects that require skills such as Typewriting, a lot of keyboard work need to be done. Mastering of the keyboard will give the candidate the needed Speed and Accuracy.

(6) **TECHNICAL SUBJECTS**

(a) **WEAKNESSES**

The Chief Examiners identified the following weaknesses in candidates' work:

(i) **Inadequate Preparation for the Examination**

Majority of the candidates did not prepare adequately for the examination as they demonstrated limited knowledge in the basics of the subjects as shown in Technical Drawing 2, Building Construction 2, Electronics 2, Information and Communication Technology 2 and Metalwork 2.

(ii) **Poor Practical Skills**

Performance of some candidates for Woodwork 3, Auto Mechanics 3, Technical Drawing 3 and ICT 3 revealed lack of practical exercises.

(b) **SUGGESTED REMEDIES**

Some of the remedies recommended were as follows:

- (i) ensuring that more practical lessons and exercises are taught to deepen candidates' understanding of their subjects.
- (ii) Candidates should lay much emphasis on mastering the application of principles and desist from rote learning.

(7) **VOCATIONAL SUBJECTS**

(a) **WEAKNESSES**

The Chief Examiners found the following weaknesses in the work of the candidates:

- (i) Poor drawing skills were reported in General Knowledge in Art 3A, Jewellery 2 and Visual Art 3.
- (ii) Inability of candidates to apply certain principles to practical situations was evident in General Knowledge in Art 2, Clothing and Textiles 3, Management in Living 3 and Textiles 2.
- (iii) Poor spelling of basic terminologies and words in Clothing and Textiles 2, Jewellery, Management in-living 3, Ceramics 2, Foods and Nutrition 2B, Picture Making 2, Basketry 2, Leatherwork 2 and Sculpture 2.

(b) **SUGGESTED REMEDIES**

The Chief Examiners suggested that the following remedies could address the challenges.

- (i) Candidates should be given more assignments which involve all types of drawing and shading.
- (ii) Candidates should be encouraged to read prescribed textbooks in addition to notes given by their tutors.
- (iii) Teachers should teach candidates how to handle tools and materials well and should use as many text books as possible to teach.
- (iv) Candidates should be encouraged to learn and use the terminologies associated with their subjects.

## **RESUME OF THE LANGUAGES**

### **1. GENERAL COMMENTS**

The Chief Examiners of the various subjects agreed that the standard of the papers compared favourably with that of previous years. They reported that while candidates' performance in Gonja 2 and Fante 1 had improved, it was below average in French 2, Dangme 1 and Ga 1.

In addition, they observed that the performance for candidates in English Language 2 and Ewe 2 was above average, but poor in Dangme 2 and Gonja 1.

### **2. A SUMMARY OF CANDIDATES' STRENGTHS**

Some commendable features were identified in the scripts of good candidates. These features include the following:

#### **(1) Adherence to Rubrics**

Good candidates in English Language 2, Dangme 2, Ewe 1 and French 2 were commended for attempting the required number of questions as indicated in the rubrics of the respective papers. These candidates also wrote full length essays without deviation.

#### **(2) Good Organisation of Essays**

In French 2, English Language 2, Ewe 2, Nzema 1, Literature-in-English 2 and Literature-in-English 3, good candidates presented their ideas in an orderly manner, without winding and inappropriate introductions to their essays.

#### **(3) In-Depth Knowledge of Set Texts**

Good candidates in Literature-in-English 2 and 3, Asante Twi 2 and Kasem 2 were commended for using relevant and illustrative details from the set texts to buttress their points. These candidates were also applauded for the appropriate use of figurative expressions.

#### **(4) Knowledge of the Formal Features of Essay Writing**

Some candidates in English Language 2, Dagaare 1 and Gonja 1 were commended for showing mastery in the use of formal features of the different forms of essays such as speech writing, articles, debates and letter writing.

#### **(5) Good Approach to Answering Summary and Comprehension Questions**

The Chief Examiner for English Language 2 observed that good candidates used appropriate sentences and phrases in answering questions on summary and comprehension passages.

### 3. **A SUMMARY OF CANDIDATES' WEAKNESSES**

The Chief Examiners noted the following weaknesses in the scripts of candidates:

(1) **Weak Language**

The Chief Examiners for the Ghanaian Languages identified poor orthography and inappropriate use of language as a common weakness in the scripts of candidates who exhibited poor work.

(2) **Inadequate Preparation**

Several candidates for Literature-in-English 2 and 3 exhibited poor knowledge of the set texts. These candidates gave wrong names of characters, used irrelevant materials in answering their questions and were handicapped in their use of grammar.

(3) **Poor Vocabulary**

Candidates who did not do well in English Language 2 had a limited stock of vocabulary and some even resorted to the use of pidgin English. These candidates could not use appropriate vocabulary to describe situations.

### 4. **SUGGESTED REMEDIES**

A number of recommendations were made to address the weaknesses identified:

- (1) Emphasis on spelling drills and teaching of grammar to equip candidates to understand and tackle the questions well.
- (2) Extensive reading of good material to improve language usage and vocabulary.
- (3) Literary devices should be taught within the context of texts studied and not in isolation.
- (4) There should be frequent exercises on summary and comprehension. Teachers must explain errors made by students and teach them the correct way of answering questions on passages.
- (5) Students studying Literature-in-English and Ghanaian Languages should do a thorough reading of their set texts in order to appreciate them well.

## **ENGLISH LANGUAGE 2**

### 1. **GENERAL COMMENTS**

The standard of the paper compares favorably with that of previous years. The essay topics were based on the familiar topics usually set for the English Language paper 2. Suffice it to say that all sections of the syllabus were covered and the candidates had enough to choose from.

The comprehension passage was straight forward and was about an issue that is familiar to all students.

The summary passage was equally straight to the point and dealt with topics that fall within the domain of the candidates.

## **2. SUMMARY OF CANDIDATES' STRENGTHS**

- Candidates were able to write full length essays and came out with relevant points and ideas to satisfactorily answer the questions.
- There was quite some improvement in paragraphing
- A good number of candidates were able to answer the questions on letter writing, adhering to the features that were relevant.
- A few were able to answer the comprehension questions well and scored good marks.
- Quite a few displayed skills in answering summary questions.

## **3. SUMMARY OF CANDIDATES' WEAKNESSES**

- A majority of the candidates could not write full length essays.
- They displayed a lack of grasp of the mechanics of the language
- Candidates' spelling especially of common words was poor.
- Candidates still have difficulty locating answers in the summary and comprehension passages.
- Identifying grammatical names and functions remains a major problem of most candidates.

## **4. SUGGESTED REMEDIES**

- Students should be given more exercises in essay writing and teachers must guide candidates on how to answer questions.
- The reading culture must be inculcated in the students to enable them pick up some of the mechanics of writing and to develop their vocabulary.
- Teachers should take candidates through some spelling drills to improve upon their spelling.
- Grammar should be taught thoroughly to enable students differentiate between grammatical terms and figures of speech.
- Students should be given regular exercises in summary to make them grasp the techniques of answering summary questions.

## **5. DETAILED COMMENTS**

### **Question 1**

**Your friend has not been attending classes regularly. Write a letter to his/her parents informing them of his/her behaviour and the likely consequences.**

A good number of candidates attempted this question. The good ones presented the atmosphere the question demanded. The formal features were in place. However, a number of them flopped due to their poor language. Their main problem had to do with wrong use of tenses. Others also treated it as a formal letter and this affected them adversely.

### **Question 2**

**Many articles have appeared in various newspapers about the increase in crime rate. Write your contribution condemning the situation and suggesting ways of tackling the problem.**

Very few candidates answered this question. Those who attempted it were able to write the formal features correctly. For content the candidates showed understanding of what is meant by “crime rate”. They were able to state factors that led to increase in crime rate and offered good suggestions to tackle the problem. A few, however, wrote it as a formal letter. They got the first part right but the second part was poorly treated.

### **Question 3**

**Write a letter to the district chief executive thanking him for the construction of new roads and telling him of at least three ways in which the community will benefit from it.**

This was another popular question which most of the candidates attempted. They were able to write the formal features. They stated the situation that prevailed before the construction of the new roads and the havoc that it caused. While some stated lots of benefits to be derived from the new roads others failed to tackle this part of the question.

### **Question 4**

**A new principal has just been posted to your school. As the senior prefect, write a welcome address on behalf of the students, pointing out three areas of need in the school.**

Not many candidates answered this question. The few who attempted it wrote letters instead of a speech. Again some of those who attempted the question rather stated needs of the entire community as in the provision of electricity, roads and hospitals. They therefore scored very poor marks.

### **Question 5**

**Write a story to illustrate the saying: “once bitten, twice shy”.**

This was not a popular question among the candidates. Just a few attempted it. They displayed some understanding of the statement. However, they had a problem sustaining the flow of the narrative. Some started very well but got lost in the middle of the narrative.

**Question 6 - Comprehension**

The passage was very interesting and very much within the scope of the candidates. Yet the candidates' performance was woeful. Quite a number of them showed outright misunderstanding of the questions. There was a strong indication that the candidates had not studied the literature part of the language course. The vocabulary items were poorly answered. Candidates were unable to supply words or phrases that meant the same and could replace those in the passage. Also, many of them were not able to identify correctly, the grammatical item and its function.

**Question 7 - Summary**

The summary passage was about a topic that is very popular with the students. A good number of the candidates did not do well at all in this part of the paper. They were unable to identify the main ideas of the passage and differentiate them from their supporting ones and illustrations. Many of them resorted to mindless lifting as if they were answering questions on comprehension. Teachers should, therefore integrate the skills to be learned in their lessons and give students more exercises in summary as much as possible.

**LITERATURE-IN-ENGLISH 2**

1. **GENERAL COMMENTS**

The standard of the paper was high and compares favourably with that of previous years. The questions were clear enough. Candidates were not disadvantaged in any way and should have been able to give appropriate responses to them.

The performance of some candidates was not encouraging. However, a few candidates gave good responses.

## **2. A SUMMARY OF CANDIDATES' STRENGTHS**

- (1) Majority of candidates adhered strictly to the rubrics of the paper.
- (2) A good percentage of candidates were able to give apt introductions to the questions. Such introductions helped candidates to stay focused, and even led examiners to expect appropriate responses. In effect, lots of candidates stayed clear of giving long, winding inappropriate introductions to their essays.
- (3) Good candidates made use of close references to texts to support their points.
- (4) Some candidates presented their work in a well thought-out, orderly and clear manner.
- (5) Many candidates were commended for legible handwriting.

## **3. A SUMMARY OF CANDIDATES' WEAKNESSES**

Candidates who did not perform well had the following weaknesses:

- (1) Poor knowledge of texts.
- (2) Mere narration of plot with unnecessarily long winded introductions.
- (3) Poor control of language.
- (4) Failure to understand the demands of questions.
- (5) Some candidates reproduced notes they must have been given or read verbatim. They were unable to sift and modify such notes to respond to questions.

Some candidates wrote very long (in some cases 1½ pages) background to texts, thus having very little time for specific demands of questions.

- (6) Other essays tended to be over generalized. For example in Question 2, candidates deviated from the text and rather wallowed in preaching on what the government should do and not do.

## **4. SUGGESTED REMEDIES**

To overcome the weaknesses of candidates, the following suggestions are made:

- (1) Teachers must ensure that students study the prescribed texts and give essay type exercises in class.
- (2) Students must be taught how to answer questions.
- (3) Intensive and extensive reading of relevant novels and other supplementary readers to broaden their knowledge and acquire more vocabulary.
- (4) Effective teaching and learning to ensure that the syllabus is totally covered before exams.
- (5) Teachers must also read the Chief Examiner's Report for guidance and brief the candidates.

## 5. **DETAILED COMMENTS**

### **Question 1**

#### **Examine the significance of Fofu's visit to Odarley in the novel.**

The question required the significance of the visit that Fofu paid Odarley after the rape attempt on Fofu by Poison. The visit brings out the plight of children on the streets. From the visit so many things can be highlighted. They include (1) lack of protection, (2) lack of decent accommodation, (3) prevalence of social immorality, (4) lack of convenience, (5) prevalence of lawlessness, (6) squalor, (7) a display of strong bond of friendship.

While some candidates stayed focused on the specified visit, and dealt with its appropriate significance, others strayed into the subsequent visit of the duo to Fofu's mother. Such answers were way off focus and scored very low marks.

### **Question 2**

#### **Consider Baby T as a victim of social injustice.**

The question required a good understanding of social injustice and what makes Baby T a victim. A good knowledge of the background of Baby T was mandatory. This was to be followed by circumstances, actions and inactions of other characters and society that lead to the suffering and death of Baby T.

Relevant points should have included (1) broken home, (2) irresponsibility (parental, societal, institutional), (3) poverty, (4) exploitation, (5) belief in superstition, (6) depravity.

Answers were generally good, though some were too full of generalization, and what the government should do.

### **Question 3**

#### **How is Ajumobi portrayed in the novel?**

Good answers should have included (1) Ajumobi as husband and family man, (2) as a distinguished hunter, (3) an industrious farmer, (4) a sociable man in his society, which all culminate in his wife, Yaremi's refusal to marry another man after her widowhood rites.

Some candidates did well and were rewarded accordingly. Others exhibited shallow knowledge of the text and were penalised.

#### **Question 4**

##### **Comment on the attitude of the people of Kufi towards superstition.**

Answers were required to establish Kufi as a traditional society governed by a set of superstitious beliefs, that impact the people's behaviour.

Many candidates could not give more than two superstitious beliefs. Superstitious beliefs in the text include (1) unnatural deaths, (2) widow's involvement in the death of their husbands, (3) that the elements and creatures communicate with humans, (4) reincarnation/life after death, and (5) the belief that women will become rulers in the next world.

Mere itemization of superstitious beliefs was not enough. Good answers should have gone further to discuss how such beliefs impact the life of the people.

#### **Question 5**

##### **Examine Mrs. Dalton's blindness as a metaphor for race relations in the novel.**

The demands of the question were (1) identification of Mrs. Dalton, (2) the literal and metaphorical blindness of Mrs. Dalton, (3) metaphorical blindness of other characters, (4) the Dalton's 'generosity' to the blacks, and (5) Bigger's metaphorical blindness caused by anger and fear.

However, a lot of candidates dwelt only on Mrs. Dalton's physical (literal) blindness leading the tragedy of both Mary Dalton and Bigger Thomas. Such answers could not score any high marks.

#### **Question 6**

##### **Comment on the use of irony in the novel.**

Answers were to contain (1) a good understanding of irony (title, situational, name), (2) the interaction between Bigger and Mary, (3) Mrs. Dalton's perception, though blind, (4) Mr. Dalton's blindness to reality, (5) Mr. Britten's show of more anger than Mr. Dalton, (6) Bigger's show of 'faked' bravery in the face of fear, and other such instances of irony.

Generally, well done, though not as popular as Question 5.

#### **Question 7**

**Justify the view that the novel presents a struggle between good and evil.**

The question demands that candidates show that there is a struggle between good and evil in the novel considering the following: (1) identification of the conflict and the attempt by Manfred to prevent fulfilment of the ancient prophecy, (2) his arranged marriage between Conrad (his son) and Isabella, the believed heir to the throne of the castle, (3) Manfred's attempt to forcibly marry Isabella, (4) the appearance of Frederick, despite the belief that he is dead, (5) Manfred's intended murder of Isabella which ends in the death of Matilda (his daughter).

It was enough to merely mention conflicts (struggles) Emphasis on the result and establishment of what is good and evil were mandatory.

**Question 8**

**To what extent can we say that Manfred's downfall is caused by his lust for power?**

Answers should have focused on (1) Manfred's struggle for the ownership of the castle by overturning the prophecy, (2) his attempt at marrying Isabella to Conrad, (3) his attempt to divorce Hippolita and marry Isabella, (4) his treatment of Theodore, leading to the murder of Matilda (his own daughter).

All these attempts highlight Manfred's lust for power which leads to his fall.

Most candidates fell short of concluding that these attempts by Manfred backfired and led to his downfall.

**LITERATURE-IN-ENGLISH 3**

**1. GENERAL COMMENTS**

The standard of the paper and candidates' performance compared favourably with that of previous years.

## **2. A SUMMARY OF CANDIDATES' STRENGTHS**

Answers of high achievers showed

- (1) fewer errors of grammatical expression;
- (2) better grasp of the texts in terms of content and literary effects;
- (3) absence of unnecessary introductions, e.g. author's background and year of publication of text(s);
- (4) organization of points in answer to the questions;
- (5) use of illustrative details from the texts;
- (6) ability to apply themes to aspects of life.

## **3. A SUMMARY OF CANDIDATES' WEAKNESSES**

Candidates' weaknesses include

- (1) poor writing skills;
- (2) care not taken to understand the demands of the questions;
- (3) use of prepare material that does not fit;
- (4) some of the texts not having been read;
- (5) misunderstanding and misapplying literary terms;
- (6) use of unnecessary introductions.

## **4. SUGGESTED REMEDIES**

Remedies could include:

- (1) selecting and organising points to be discussed.
- (2) using details from texts to illustrate points.
- (3) improving writing skills in areas of sentence construction, punctuation and vocabulary.
- (4) familiarity with literary terms and using them appropriately.

## **5. DETAILED COMMENTS**

Questions 1 and 2 were not answered due to late arrival and selection of the text, *The Blood of a Stranger*.

### **Question 3**

The question, “Justify the title of the play, *Harvest of Corruption*”, was answered by many candidates. Particularly good answers examined in detail the writer’s description of characters and their particular behaviour or actions in the play. Candidates were expected to discuss characters like Chief Haladu Ade-Amaka, Madam Hoha and Ochuole and Aloho, ACP Yakubu and Justice Odili. However, while the detailed actions of these characters justify the title, there is a little hop left for the play’s society in characters like Ogeyi and Inspector Inaku who, by their outspoken actions, restore justice. This last point was not made by a lot of candidates.

### **Question 4**

This was also a favourite question. Many candidates failed to include in the assessment of the character of Ogeyi, her looks, family background and education, as well as her employment detail. However, answers on her modesty, Christian beliefs and practices as manifested in her relationship with Aloho and her singular act of exposing the corruption that has engulfed the society and destroyed her best friend, were amply provided.

### **Question 5**

The question was not properly answered by many of the candidates. These took the view that the Youngers are not a close-knit family, since they are sharply divided by their dreams and aspirations. That granted, candidates failed to see the overarching interest in enhancing the fortunes of the family, i.e. lifting them out of poverty. The cheque, no doubt, provided impetus for each person’s dream, but it also brought them together, thanks to the longer-than-life figure of Mama. Thus, candidates were wrong in seeing the Younger family as split, rather than close-knit.

### **Question 6**

Much as the question demanded a portrait of the female characters – Mama, Ruth and Beneatha – it also asked for details. For Mama, the expected answer includes her single parenting after the death of her husband, Mr. Younger. It also includes her strong Christian faith, her strength of character, her industry and her willingness to accept views which do not compromise her principles on such issues as abortion and unquestioned belief in God. While Ruth has some of Mama’s traits, she can stand up to some of her husband’s bullying and supports both mama and her children materially and morally. Beneatha is more seen as the maverick; she questions orthodox views about women’s place in society, she is educated and more clearly aware of her origin in Africa.

The trouble with most of the answers is their inadequate coverage of the characters’ differences and similarities.

### **Question 7**

There were a few good answers. These looked at the similarities and differences between the two pairs of relationships; that between Tony and Constance, and that between Young Marlow and Kate. The similarities were not so obvious to many candidates. These relates to the fact that both pairs of marriages are arranged or “contrived” by the families. And they are both based on pretence, for example. Tony feigning to love Constance in the presence of his mother and Kate pretending to be a barmaid so Young Marlow can overcome his bashfulness. But the differences are glaring. Tony and Constance are already in love with Bet Bouncer and Mr. Hastings respectively, while Marlow and Kate are first time explorers of their affections towards each other. Then, while the Kate/Marlow relationship succeeds, the Tony/Constance relation fails, obviously.

The question was, therefore, not fully answered.

### **Question 8**

This was a badly answered question. Many candidates described Mr. Hardcastle as one who hates Tony and justified this view with examples of Tony’s pranks, some of which embarrass Mr. Hardcastle and make him suffer loss of respectability before his guests. But the larger picture of Mr. Hardcastle is more interesting and more like him. He is prepared to accommodate Tony’s pranks with dignity, knowing that he is his mother’s spoilt child. When the tables turn on Mrs. Hardcastle as her son takes her on a merry-go-round on the journey to aunt pedigree’s Mr. Hardcastle has a pleasant time laughing at both. Such a good humoured personality as Mr. Hardcastle cannot hate Tony Lumpkin. The candidates got it all wrong.

### **Question 9**

The few candidates defined or explained the word ‘ambush’. Similarly, the land as a metaphor of oppression was not explained. Most candidates were too quick to relate the poem to the oppressive conditions of some African political societies without examining the metaphors or agents of oppression referred to in the poem. Candidates were expected to describe the activities of the giant whole, the sabre-tooth tiger and the hawk which deny freedom to move, dream or hope for oppressed people.

A few good answers concentrated on the details and brought out the images that constituted the blockage.

### **Question 10**

The expected answer should include a short definition or explanation of “symbol” as the use (in this case) of a concrete or palpable thing to represent an idea. That is how the piano and drums in the poem become symbolic. Many candidates, nevertheless, described the piano and drums as symbolic of Western European and African cultures respectively.

The other requirements for a good answer were not fulfilled by a lot of candidates. Mere references to the simplicity of African culture, as well as its naturalness, were not sufficient where details were not provided. The poem makes copious references to the rural life of Africa, including its flora and fauna. It also recalls the African's childhood experiences, all of these symbolically represented by the drum. The details in reference to the piano and no less graphically presented in words suggesting, difficulty, complexity and loneliness. Good answers concluded with the confused state the poet finds himself in, though better ones could have pointed to the direction of the poet's feeling for and hankering after his ancestral Africa.

### **Question 11**

The question was, generally, poorly answered. Though the simplistic definition of pun as a play on words, was accepted, it did not fulfil the full requirement of pun, i.e. one word with different meanings. Candidates were right in identifying 'rest' in the poem as the source of pun in the poem. What quite many did not do was to show the different meanings of 'rest' as 'peace' / 'comfort' / 'intendment' on the one hand, and as 'the remainder' / 'what is not included' on the other play out in determining and explicating the theme of the poem, which is God's gifts to mankind and his concern that he is not creature, man.

Quite a number of candidates saw pun in words like 'breast', 'nature', and so on. These are, at best metaphors or extended meanings.

### **Question 12**

This question on "the theme of endurance in Birches" was also poorly answered. Candidates were quick to link the birches to the poet's view of endurance without providing the evidence are provided the ravages of the ice storms and the birches' innate strength to bounce back during the summer, and the boy's swinging of the birches as they bend and rise again. Failure to provide such details which the poet relates to his own struggles with life does not prove that the candidate has been able to answer the question well. The need for illustrative detail is critical answering this question.

## **FRENCH 2**

## 1. GENERAL COMMENTS

The standard of the paper was not above WASSCE level but slightly higher than that of last year. The questions were not the straight-forward type e.g. “*Parlez de ...*”, “*Décrivez ...*”. A typical example was essay number one – “*Faites le portrait physique et moral de directeur de votre école*”.

This ensured that candidates would not reproduce model essays. This affected performance: scores were not too high as compared with those of previous years.

## 2. A SUMMARY OF CANDIDATES’ STRENGTHS

- (1) Candidates showed improvement in letter-writing formal features were correctly written.
- (2) There were fewer cases of deviation or lifting of portions of the comprehension passages to fix them in the essays.
- (3) A lot of candidates respected the range of words required for the essays. This helped to reduce the number of errors usually made as a result of lengthy essays.
- (4) The number of essays written entirely in English reduced considerably.
- (5) Content mark was quite high even in cases where there were several grammatical errors.

## 3. A SUMMARY OF CANDIDATES’ WEAKNESSES

Ignorance of basic French grammar, notably:

- (1) expression of possession, e.g. *mon directeur teint est ...*, *il plat favori est ...*
- (2) conjugation of common irregular verbs like ‘avoir’ e.g. *il avez*, ‘venir’ e.g. *il viens*
- (3) spelling especially ‘parce que’ (written as ‘par ce que’ or *parce qu’il* or *parce-que*), ‘quatre’ (written as ‘quartre’), ‘mecredi’, etc.
- (4) omission of accents, wrong accents and putting accents on words which do not require them. the most frequent ones were: *chér*, *l’ecole*, *pére*, *tres*, etc.
- (5) expression of age: e.g. ‘*il est quarante ans*’
- (6) ignorance of the use of infinitive after prepositions: e.g. ‘*je suis, content de t’écris...*’
- (7) wrong positioning of ‘ne’ and ‘pas’ in negation
- (8) confusion between ‘bon’/ ‘bien’ e.g. *il parle français bon*

- (9) wrong prepositions e.g. parler environ (de)
- (10) errors due to translation: ‘j’amour tu papa’
- (11) coining of words from English e.g. ‘Il est fluént’, ‘Il est christène’

#### 4. **SUGGESTED REMEDIES**

- (1) Teaching should not be limited to grammar.
- (2) Students should be encouraged to read to acquire vocabulary and idiomatic expressions.
- (3) Written comprehension exercises can help build vocabulary and improve language.
- (4) Students should be made to write some compositions in class (in addition to take-home assignments).
- (5) A manual should be prescribed for all schools.
- (6) Seminars should be organized for teachers by GAFT/CREF during which major weaknesses of students should be discussed. Experienced examiners should be used as resource persons.

#### 5. **DETAILED COMMENTS**

##### **Question 1**

##### **Faites le portrait physique et moral du directeur de votre école.**

In this descriptive essay with well-defined areas (physical and moral), candidates were required to begin with an introduction of the headmaster – name, name of his school, his nationality, place of abode, experience, etc. Equal attention was to be given to both aspects of the composition (physical and moral). The physical description ranged from age, height, size, complexion, etc. The moral qualities could be positive or negative or a blend – hardworking, quick-tempered, kind, etc. Candidates were expected to conclude with a general impression about the Headmaster.

A lot of candidates dwelt on the physical description and mentioned the moral aspect in passing as part of the conclusion. Others included material not necessarily pertinent to the question but relevant – name of wife, number of children, etc. It was, in some cases, obvious that some had studied a model essay on “*Mon directeur*” and decided to pour everything on paper. Content mark for this essay was generally satisfactory.

##### **Question 2**

##### **Selon vous, quels sont les avantages et les inconvénients du sport pour les élèves?**

Candidates were expected to explain 'sports' and give examples of sporting activities students were involved in as introduction. They were also expected to tackle the two parts of the essay (advantages and disadvantages) in the body. Under advantages, the following were expected among other things: sports as entertainment, as a health activity, as a means of developing interpersonal relationships, etc. For disadvantages, the candidates were expected to write about sports being as a distraction from academic work, as an avenue for making bad friends, getting injured, etc.

The very few candidates who attempted this question brought out some of these ideas.

### **Question 3**

**Racontez une histoire pour illustrer ce proverbe: "Contentement passe richesse".**

In this essay candidates were expected to briefly give the meaning of the proverb before writing/creating a story to illustrate it. Lessons drawn from the story were expected to be part of the conclusion.

The question was avoided by most candidates. Those who attempted it started straightaway with their story but concluded well. A few did not understand the proverb and wrote their own story. This resulted in deviation.

### **Question 4**

Candidates were required to write a letter to their father telling him about their experience in their new school after six weeks.

Most candidates wrote correctly all the features of a letter. In the body of the letter, they were required to give the reason for the letter, i.e. their general impression about the school (building, administration, environment, etc.), their experience (in the sense of happenings, encounters – whether negative or positive) and finally do a little comparison with their former school.

It was a popular question and most candidates dwelt on routine events in schools. The idea of the school being new did not come out clearly.

### **Question 5**

This was a letter to an uncle in France telling him about one's needs for school (about to re-open).

Most candidates stated the reason for writing the letter and they also indicated what they needed from the uncle. Some were able to point out why they had to fall on the uncle - poverty of parents, absence of parents, etc. Content was generally good and there was evidence of mastery of features of a letter.

## **Question 6**

In this question, candidates were required to write a letter to their French teacher explaining why they could not travel with the French club on an excursion to Dakar. They were expected to express regret for their inability to travel and give reasons for this.

Candidates who attempted it, did justice to the content with plausible reasons for their staying out. A few, however, deviated and wrote about the French club in their school. Most candidates wrote the features of the letter correctly.

## **FRENCH 3 (ORAL)**

### **1. GENERAL COMMENTS**

The French Oral examination had three tests: A – Listening Comprehension Test (10 marks), B – Reading Test (15 marks) and C – Conversation Test (25 marks) all totaling 50 marks.

#### A. Listening Comprehension Test

The passage on which the test was based was unseen by the candidates. The examiner in charge of the centre read the passage twice before candidates give answers to 10 questions 7 of which were multiple-choice questions, 2 open ended questions and one true or false (vrai ou faux).

#### B. Reading Test

Each candidate was given passage A or B to prepare for 10 minutes. The examiner used either passage without any definite pattern. The candidate read the passage for assessment by the examiner. Marks were awarded for pronunciation of 20 tested words marked over 10 marks and 5 marks for fluency.

#### C. Conversation Test

- (1) Dialogue: The examiner engaged the candidates in a conversation based on common interests. Candidates were expected to respond in French to 5 questions on general interest and 5 questions on selected literary texts. Answers should be in complete sentences. Marks were awarded out of 20.
- (2) Exposition: Candidates were given topics of general/contemporary interests. They were expected to give at least 5 sentences. Marks were awarded out of 5.

### **2. STANDARD OF PAPER**

The standard of this paper equaled past papers; that is to say that the passages, tested words, questions and options, were all up to the standard.

### **3. CANDIDATES' PERFORMANCE**

More candidates performed better in the listening comprehension than in previous years. There was also a slight improvement in the reading and conversation tests. There were, however, some who scored less than 10 over 50

### **4. A SUMMARY OF CANDIDATES' STRENGTHS**

As indicated, candidates' performance in the listening comprehension test was better than previous year's. Apparently, candidates are now conversant with the pattern of questions. They understood the passage, the questions and the options.

In the reading test, some candidates gave correct answers in correct grammar, correct sentence structure and content. They also gave complete sentences.

In the literature section, they proved that they had read the set texts very well. In the exposition test, candidates had no problem giving 5 complete well-structured sentences, correct in grammar and content. They therefore scored good marks.

## 5. A SUMMARY OF CANDIDATES' WEAKNESSES

### Listening Comprehension

There are some questions that seemed to confuse some candidates. They are questions 3, 4, 7 and 9.

Question 3: The passage said this about Marius: "*Bien qu'il soit travailleur ...*". The question was "*on reconnu pour ...*". The right answer is "*sincère*" but some chose "*travailleur*", "*Reconnaître pour*" is different from "*être*".

Question 4: Some wrote "*l'ouest de son pays*" instead of "*d'Amérique*". They must have thought that "*habitait*" meant "*est venu de*".

Question 7: Candidates must have confused "*rendre*" and "*garder l'argent*" so they did some guesswork.

Question 9: Some candidate thought the question was on time because of the word "*heure*" in the question. They therefore gave answers of time, e.g. 5heures.

There were a few spelling mistakes in the open-ended answers.

### Reading Test

Those who scored low marks in this test seemed to have no idea about pronunciation of French words. They had no training, no knowledge of the basics of pronounced the words phonetics. They read to please themselves and sometimes as like English words, e.g.

(a) Passage A – détermination, compétitions, périodes, courage, scolaire.

Passage B – Ministre, touche, éducation, Grâce, solidarité.

(b) No liaison: A – les examens [lezamin]

B – les élèves [lel1v]

(c) They pronounced [ s ] instead of [ z ] because they do not know the rule of one 's' within two vowels.

A – président. They said [pResid0] instead of [prezida]

B – raison. They said [R1s-] instead of [R1s-]

(d) They did not know the sound [wa] as in 'moi', 'toi'.

A – foi [foi] instead of [fwa]  
B – parfois [pafoi] instead of [parfua]

- (e) Wrong pronunciation of apostrophe words as in passage A ‘l’on’ [li-]
- (f) ‘l’ is pronounced in ‘travail’ and ‘meilleur’ instead of [j].
- (g) Many candidates did not know the difference between ‘aiment’ and ‘ami’
- (h) Accents did not mean anything to them. They did not know when to pronounce the ‘e’ ending of some words, e.g.

A – adressé [adR1s] [adrese]

B – sévérité as [seveRit] [sevekitz]

Below are some other wrong pronunciations

Passage A – chaque [□aku], langue [lange], prix [priks], nouveau [nove]

Passage B – année [ani], cessent [s1s1], douceur [d-ke] or [duk4],  
comprend [c-pr1]

### Conversation Tests

Literary texts: Some candidates performed poorly because they had not read the books. Some did not understand the questions. Those who did, could not construct complete sentences.

General questions and exposition tests: Candidates’ problems were: lack of vocabulary; inability to construct correct sentences and to conjugate verbs: wrong use of personal pronouns and possessive adjectives: use of wrong tenses and lack of concentration.

They gave answers in incomplete sentences or gave one word answers. They did not know numbers, days of the week and the months. In the exposition test, examiners had to prompt candidates to give at least 5 sentences. The description of a person was not well done. Candidates talked more about marriage, food, occupation and hometown. Surprisingly many candidates did not know the meaning of *le matin, l’après-midi, le soir, la nuit*. Some of them did not know the meaning of question tags such as: *qui, où, pourquoi, combien, quand*, etc. They would therefore give ‘oui/non’ answers to questions beginning with the question tags.

Here are some of wrong responses:

J’ai né à Accra.

Je suis 17 ans.

Mon professeur est 13ans.

Je me porte une chemise.  
Le nom de mon mère s'appelle ...  
Nous nous couche à ...  
Nous boitons du Fanta.  
Tu je visite Kumasi.  
Elle nez est petite.  
Mon village situé ...  
J'étais danse.  
Il y a dix cinq filles.  
Mon ami j'habite à Oda, etc.

## 6. **SUGGESTED REMEDIES**

- (1) Teachers have to read the syllabus to students as soon as they settle down in school. If they have an idea of what is involved, more of them would put in more effort than they do now.
- (2) Reading aloud in class should be done from form 1 with simple passages. The basics should be explained to students to know that every language has its rules for pronunciation. With simple words, the rules should be explained e.g. 'au' and 'ou'.
- (3) Teachers should start with written comprehension of easy passages before tackling listening comprehension later.
- (4) Short conversation exercises could be used from form 1. It seems students have a different way of pronouncing words and that is why they do not always understand examiners' question, e.g. '*qu'est-ce que tu as mangé?*' He/she will not answer the question because he/she knows only '*mange*'. If teachers start orals in class, it will help the students.
- (5) In form 2, teachers should start 'exposition' in groups to prepare essay topics for class exercise, e.g. 'Ma famille'. By form 3 they would be ready for the exams.
- (6) Dictation exercises will prepare students for reading and comprehension tests. E.g. [Ragarde] can be 'regarder', regardé, regardée, etc. and [Ragard] can be 'regard', regardes, regardent, etc. Such exercises will help them prepare well.
- (7) Students should speak French among colleagues.
- (8) They should read on their own and if possible, visit CREF.

## **DAGAARE 1**

### **1. GENERAL COMMENTS**

Generally, the paper was within the level of most candidates. The performance of the candidates falls below that of last year. A few candidates scored higher marks than usual in most of the questions while majority of the candidates from some schools scored very low marks.

### **2. A SUMMARY OF CANDIDATES' WEAKNESSES**

It was good to note that, the candidates did not, on the whole, lack ideas in the presentation of their essays. In fact, most of them answered the essay topics with confidence. In all, most candidates portrayed a good knowledge of all the formal features for the organization of the essays.

Another good point is that, their ability to identify types of clauses and literary devices have also improved upon that of last year.

### **3. A SUMMARY OF CANDIDATES' WEAKNESSES**

Generally, candidates suffered the usual trend of poor grammar, spellings and presentation of loose and jerky sentences.

Candidates were also guilty of beginning sentences with lower case (small letters).

Most candidates also ended whole sentences without the use of full stop. This trend was not very different from the situation in the previous years.

### **4. SUGGESTED REMEDIES**

One possible way to remedy this recurring problem is for Ghanaian language teachers to try and teach all the aspects of the language especially spellings, phonology and grammar aspects.

Candidates should be encouraged to cultivate the habit of reading so that, they can acquire the sense of good spellings and grammar in the language.

### **5. DETAILED COMMENTS**

#### **Question 1**

**Discuss four (4) causes of corruption in Ghana and suggest four (4) ways of curbing the situation.**

This question was the most unfamiliar question of all the questions and was avoided by most candidates. The few candidates who attempted this question ended up discussing how to acquire wealth but not actually through corrupt practices.

## Question 2

**You are the head prefect of your school. Write a letter to your school's headmaster and tell him about four (4) problems that affect students in the school.**

It was relatively the most popular of all the questions. It was fairly well answered except that a few of the candidates failed or did not provide the recipient's address and heading. Some candidates also gave all the four problems alright but did not elaborate on them.

## Question 3

**Write a speech to be delivered to a Youth Association in your community on the topic "The benefits of environmental cleanliness in the community".**

This was another unpopular question among the candidates. In actual fact, a few candidates attempted this question and performed poorly on it.

## Question 4

**Write a story that ends "Once bitten, twice shy".**

As usual, most candidates answered this particular question very well giving different incidents about themselves or a friend.

## Question 5 - Translation

Candidates were asked to translate an English version of a passage into Dagaare. The passage was within the level of the candidates but most candidates lack the skills of translation and hence performed below expectation.

## Question 6 - Comprehension

Generally, candidates' performance on this question was not encouraging because most of them did not have the skills of comprehending the entire passage.

## Question 7

- (a) **Explain the following: Voiced consonants and Voiceless consonants**
- (b) **Write down four voiced consonants and four voiceless consonants of your language.**
- (c) **With two examples of words each, demonstrate the distribution of the following consonants in your language: [ s ] and [ m ].**

This question appears quite strange to most candidates, especially the first aspect of the question which asked candidates to define voiced and voiceless consonants. Most candidates performed poorly on this aspect in attempt to explain voiced and voiceless in articulating consonants.

The section (b) and (c) aspects of the question was, however, well answered by most candidates. Candidates who answered this question scored higher marks in these two aspects.

### **Question 8**

- (a) What is syllable?**
- (b) State four types of syllable structure in your language.**
- (c) Give two examples each of the four syllable types.**

Even though the question was familiar to most candidates, their general performance was not the best. Most candidates could not explain clearly what a syllable is in their language and so subsequent answers demanded by the question were poorly presented by candidates.

### **Question 9**

- (a) Indicate the word class of the underlined word in each of the following sentences.**
- (b) State the function of the underlined words in each of the following sentences.**

In this question, candidates were required to identify the various word classes of some underlined words/phrases in sentences. In fact, most candidates could not identify these and hence ended up reproducing the same sentences in their scripts. A few of them managed to identify some word classes alright.

The section (b) asked candidates to parse some aspects of sentences – the subject, object and complement of a sentence. Candidates' performance in this aspect was not different from the section (a) of the same question as above.

### **Question 10**

- (a) What is a clause?**
- (b) With two sentences each, give examples of the following clauses:**
  - (i) Declarative clause**
  - (ii) Imperative clause**
  - (iii) Adverbial clause**
  - (iv) Adjectival clause**

Candidates were asked to explain what a 'clause' is and give two examples each of a Simple Independent Clause, Interrogative Clause, Adverbial Clause and Dependent Adjectival Clause. Almost every candidate who attempted this question scored higher marks. However, a few candidates could not comprehend the different category of clauses.

## **DAGAARE 2**

### **1. GENERAL COMMENTS**

The standard of the questions compares favourably with that of the past years. The questions covered all aspects of the syllabus and were well within the read of the candidates.

The general performance of the candidates was, however, average and somehow better than that of the previous year.

### **2. SUMMARY OF CANDIDATES' STRENGTHS**

- (1) Some candidates understood the rubrics as well as the demands of the questions and gave the correct answers.
- (2) A few candidates were able to answer essay questions arranging their points sequentially.
- (3) Very few students understood the questions on the poetry and performed commendably.

### **3. SUMMARY OF CANDIDATES' WEAKNESSES**

- (1) A few candidates misunderstood the rubrics and answered more than one question in each question.
- (2) Spelling, the use of upper case and lower case letters and punctuation are still persistent problems for some candidates.
- (3) Some candidates misunderstood the questions and deviated in answering them.

### **4. SUGGESTED REMEDIES**

- (1) Teachers should go through past WASSCE questions with students several times before the actual examination itself. This will help the students to understand the rubrics as well as the demands of the various questions asked particularly questions on poetry.
- (2) Students should be made to read more supplementary readers in order to build their vocabulary as well as improve upon their spelling, use of upper case and lower case letters and punctuation.
- (3) Teachers should take students through how questions are asked and what they are required to provide as answers.

## 5. DETAILED COMMENTS

### Question 1

- (a) **What is a folktale?**
- (b) **Discuss the structure of a folktale.**
- (c) **Give four importance of folktales.**

This question required candidates to give the definition of a folktale, discuss the structures of a folktale and discuss any three importance of a folktale.

A few candidates attempted this question. They failed to give the definition of a folktale correctly but were able to discuss the structure of a folktale. Unfortunately, they stated the three importance of folktale without briefly discussing them as required of them. Consequently, they did not score high marks.

### Question 2

- (a) **What is traditional marriage?**
- (b) **Give three reasons why people marry**
- (c) **Discuss three rites performed in the marriage process.**

This question demanded the definition of marriage, discuss any three reasons why people marry and to discuss any three stages of marriage practiced among the candidates.

The question was attempted by many of the candidates. They were able to give the correct definition of marriage, discuss sequentially three stages of marriage practiced in their area, but only stated without discussing, three reasons why their people marry. They therefore scored average marks.

### Question 3

- (a) **Discuss the role of the major character in the novel “Ban4n4kaae”.**

Candidates were expected to discuss what part Ban4n4kaae, as the main character, played in the novel, especially her relationship with her suitor and her junior father.

Very few candidates attempted this question. They, however, failed to discuss the events sequentially and got low marks.

### Question 4

- (a) **Discuss how the plot of the novel “Ban4n4kaae” sequentially.**

Candidates were expected to discuss the plot of the novel under the setting the events, the climax, the anticlimax and the conclusion.

No candidate attempted this question. This may be their failure to understand the meaning of the term used for “plot”.

### **Question 5**

- (a) Discuss two major themes of the drama “Y1me` Se1 Naa”.**
- (b) Explain four literary expressions as used in the drama.**

Candidates were expected to discuss to important themes of the drama book *Y1me` Se1 Naa* and give the meaning of two quoted proverbs and two quoted idioms as they are used in the drama.

A few candidates answered this question. Some of these candidates stated the tow important themes but failed to discuss them. They could not give the correct meaning of the two quoted proverbs and the two quoted idioms as used in the drama. As such, they scored low marks. However, those who understood the question satisfied its demands and got high marks.

### **Question 6**

This was a context question which comprised three subquestions:

- (a) Who made the statement and who was the addressee?**
- (b) When and where did this interaction take place?**
- (c) State the outcome of this interaction.**

Candidates were expected to identify the speaker and the person spoken to. They were also expected to state the place and the time the statement was made. Finally, they were to discuss what happened after the statement was made.

A good number of the candidates attempted this question. A few of them only enumerated what happened after the statement was made instead of discussing them. The rest were able to provide the correct names of the speaker and the person spoken to, the correct place and time the statement was made and discussed sequentially what happened after the statement was made. They scored high marks.

### **Question 7**

- (a) What is the theme of the poem “Damaarakogi”?**
- (b) (i) What is the mood of the poet?**  
**(ii) Quote a line from the poem to support the response.**
- (c) State any three structures of the poem.**

Candidates were expected to state the theme of the poem “*Damaarakogi*” identify the mood of the writer and supporting the writer’s mood by quoting affirmative sections of the poem and to discuss the structure of the poem under three literary terms.

Many candidates attempted this question. Some of these candidates understood the demands of the question and answered it correctly thus getting high marks. Few of them quoted sections of the poem in their attempt to discuss the structure of the poem. Consequently, they got low marks.

### **Question 8**

- (a) What is the theme of the poem “Ko4raa `maao”?**
- (b) State any three structures of the poem.**
- (c) Discuss the function of each of the following literary devices as used in the poem.**

Candidates were expected to state the theme of the poem, discuss the structure of the poem under three literary terms and discuss how the literary devices of repetition and exaggeration are used effectively in the poem.

Not many candidates attempted this question. Candidates who answered this question were able to identify the theme of the poem. Candidates, however, could neither discuss the structure of the poem correctly under three literary terms nor discuss how repetition and exaggeration are used effectively in the poem. They had no knowledge of what literary terms they were to discuss under the structure. Candidates rather quoted examples of repetition and exaggeration from the poem as answers. They therefore scored low marks.

# **DAGBANI 1**

## **1. GENERAL COMMENTS**

The standard of the paper was as high as those of previous years. The performance of many candidates had improved greatly in use of language.

## **2. A SUMMARY OF CANDIDATES' STRENGTHS**

- (1) Good orthography: The spelling, word-division, punctuation and grammar of some candidates were very good. This made their answers very easy to read and understand.
- (2) Use of language: The use of language of many candidates was very good. They used formal and/or informal language appropriately. They also used proverbs, appropriate registers, correct tenses, loaned words and good idiomatic expression. Most of them avoided ambiguous expressions and complex sentences.
- (3) Length of answers: In the composition, some candidates tried to write within the given number of words. Where they exceeded or fell short, they did this by a few words. In the other sections, their answers were short and precise.

## **3. A SUMMARY OF CANDIDATES' WEAKNESSES**

- (1) Poor orthography: The spelling, word-division and punctuation of some candidates were very poor, pronouns which are written as separate words were added to verbs and written together as single words. Some of them also misused the full-stop, capital and small letters. This made their compositions very difficult to read and understand.
- (2) Verbosity: The answers of some candidates were rather very long and unnecessary. In the composition, they exceeded the given number of words by far more word. In the other section their answers were rather too long and unnecessary.

## **4. SUGGESTED REMEDIES**

- (1) Poor orthography: This can be remedied in classrooms through reading, dictation and other class exercises.
- (2) Verbosity: Any time students are given composition exercises, they should be given number of words within which to write it. In the other sections, students should be encouraged to give short and precise answers.

## 5. DETAILED COMMENTS

### Question 1

**Discuss four (4) causes of corruption in Ghana and suggest four (4) ways of curbing the situation.**

Some of the candidates who chose this question were able to discuss it in detail. They were able to discuss the causes and suggested very good ways of curbing them. Some of the causes discussed included the lust to get rich quickly, inadequate remuneration for workers, insatiable human needs and demand from family members, society, friends, institutions, etc. More points discussed included temptation of people to live beyond their means, job insecurity and inadequate social security after retirement for public and civil servants, etc.

Some of the solutions suggested by these candidates were public education on probity and accountability, punitive measures should be meted out to offenders, adequate remuneration for work done and better social security scheme to cater for Ghanaian workers after retirement. More points raised included honest public workers should be identified and given good awards for others to emulate and religious bodies and the media houses and other should shun people who amass wealth through bribery and corruption, etc. Other candidates could not raise four points. They raised three or two of the above points and discussed them. Other candidates wrote one or two sentences and stopped.

In conclusion, some candidates called on society as a whole to help fight corruption. Some other candidates could not conclude their compositions.

### Question 2

**You are the head prefect of your school. Write a letter to your school's headmaster and tell him about four (4) problems that affect students in the school.**

This question was very popular with candidates. Some of the candidates who chose this question wrote address, date and salutation very well. They also gave their letters appropriate heading in capital letters. In their introduction, they said that many problems exist in the school but that only four very problematic issues were mentioned in the letter for the attention of headmaster to take steps to solve them.

In the body of their compositions, some candidates took the identified problems facing the school one by one and discussed them in detail. Some of the problems were utilities (such as water, sanitation, electricity, etc.) accommodation (e.g. living quarters for teachers, overcrowded dormitories, inadequate classrooms), lack of teaching and learning materials, lateness and unpunctuality on the part of students and teachers. Other points discussed included absenteeism, poor feeding, immorality among students and teachers,

unnecessary and unjust punishment. Some candidates wrote about personal problems facing them. A few other candidates appealed to the headmaster/mistress to head to their request made on behalf of all the school to bring about improvement in the school as a whole. Some compositions did not have conclusion.

### **Question 3**

**Write a speech to be delivered to a Youth Association in your community on the topic “The benefits of environmental cleanliness in the community”.**

Some of the candidates who chose this question gave their speech a heading in capital letters before their introduction. Some other candidates did not give their speeches heading.

To introduce their speeches, some candidates addressed the chair and observed protocol. Other candidates did not address the chair but showed appreciation to the audience to deliver their speeches and mentioned the topic and its definition in brief. Other candidates did not give any introduction to their speeches.

In the body of their compositions some candidates discussed good health, accessibility during emergency/free movement among houses, reduction in illnesses and frequent deaths and reduction in expenditure on hospital bills. Other points discussed included increased productivity (more food, more income, etc.), happy moments in the community, social cohesion and unity, increased in life-span of the people and attraction of tourists and other visitors. Other candidates could not discuss four points. Some discussed three points whilst other discussed two points or one points.

To conclude their compositions, some candidates thanked the executive and audience for the opportunity and listening to him. Some other candidates did not give any conclusion to their compositions.

### **Question 4**

**Write a story that ends “Once bitten, twice shy”.**

This question was very popular with candidates. Some candidates introduced their stories with the traditional story telling opening markers. Others said that they were going to illustrate the proverb by narrating what happened to them at their friends’.

In the body, some candidates narrated incidents which happened in the story vividly. They were able to give causes of incidents (laziness, disobedience, lying, etc.) and showed their consequences such as loss of properties, failing examinations, punishment, trouble and humiliation, etc.) Some other candidates narrated their stories showing only causes without showing consequences.

To conclude their compositions, some candidates ended their stories in the ways Dagbamba end their stories. Others candidates gave the morals of their stories. Some compositions did not, however, have conclusions.

### **Question 5 - Translation**

Candidates were given a short passage of about fifteen ideas to translate into Dagbani.

Some candidates were able to translate the passage very faithfully into eleven to fifteen ideas. Others translated it into six to ten ideas. Other candidates translated it into one to five ideas whilst others started it but could not continue translating it. Other candidates also summarized it instead of translating it.

### **Question 6 - Comprehension**

Candidates were given a short prose passage in Dagbani to read and answer questions on it. The questions were based on stated facts, inference, meaning, personification, usage and summery (title).

The questions on stated facts, usage and summary were well answered. However, the questions on usage, inference and personification were not well answered.

### **Question 7**

- (a) **Explain the following: Voiced consonants and Voiceless consonants**
- (b) **Write down four voiced consonants and four voiceless consonants of your language.**
- (c) **With two examples of words each, demonstrate the distribution of the following consonants in your language: [ s ] and [ m ].**

Some of the candidates who chose this question were able to define the consonant well but they could not show which of them was voiced or voiceless. They were, however, able to discuss the distribution of the given consonants very well. (E.g. word-initial, word-medial, word-final). Some other candidates seemed to have little knowledge about the question and wrote down some consonants without discussing them.

### **Question 8**

- (a) **What is syllable?**
- (b) **State four types of syllable structure in your language.**
- (c) **Give two examples each of the four syllable types.**

Some of the candidates who chose this question were able to define the syllable very well but could not discuss the four difficult types of syllables nor provide appropriate examples.

### **Question 9**

- (a) Indicate the word class of the underlined word in each of the following sentences.**
- (b) State the function of the underlined words in each of the following sentences.**

Some candidates were able to show the word classes very well but could not show the functions of each of the phrases underlined in each sentence correctly.

### **Question 10**

- (a) What is a clause?**
- (b) With two sentences each, give examples of the following clauses:**
  - (i) Declarative clause**
  - (ii) Imperative clause**
  - (iii) Adverbial clause**
  - (iv) Adjectival clause**

The statement and command were well discussed with appropriate examples each but the adverb and adjectival phrases were poorly discussed.

## **DAGBANI 2**

### **1. GENERAL COMMENTS**

The standard of the compared favourably with that of previous years. The questions were within the confines of the syllabus and were within manageable levels. Candidates' performance was therefore appreciably high.

### **2. A SUMMARY OF CANDIDATES' STRENGTHS**

- (1) Candidates' general performance in the oral literature was good. There were two questions on folktale and customary marriage in Dagbani. Both questions were well managed by a good number of the candidates.
- (2) Most candidates were comfortable with the rubrics and clarity of the question paper. As such there was very little deviations.
- (3) Some candidates' responses to the questions were direct. There was no ambiguity in the answers provided by the candidates.
- (4) There was improvement in the handwriting of some candidates.

### **3. A SUMMARY OF CANDIDATES' WEAKNESSES**

- (1) Some candidates did not perform well in the written literature especially on Question 4 where candidates were asked to state the plot of the story on *Chentiwuni*. Candidates also had problem dealing with the explanations in Question 5 on *Mba`ya*. There were four statements extracted from some of the happenings in the story which candidates were required to give explanations based on the story, but strangely enough most candidates provided their own imaginary explanations.
- (2) A handful of candidates tried to answer more than one question in a section.
- (3) The issue of cancellation also came up strongly. Some candidates were robust in cancelling their work. A lot of crosses were made over the work rendering the work untidy.

### **4. SUGGESTED REMEDIES**

- (1) Subject teachers are advised to take the teaching of literary appreciation seriously.
- (2) Candidates should be advised to desist from answering more than one question from a section as this usually result in candidates answering only three questions

in all instead of four. This eventually make them lose marks. Teachers must therefore explain to students to adhere to the rubrics of the question.

- (3) Candidates should be taught the correct way of cancelling their work. This could be done once across the page and neatly too.

## 5. DETAILED COMMENTS

### Question 1

- (a) **What is a folktale?**
- (b) **Discuss the structure of a folktale.**
- (c) **Give four importance of folktales.**

The question was well within the scope of candidates. A good number of candidates showed great understanding of the questions and distinguished themselves creditably.

### Question 2

- (a) **What is traditional marriage?**
- (b) **Give three reasons why people marry**
- (c) **Discuss three rites performed in the marriage process.**

This question was also familiar with the candidates. Some candidates defined traditional marriages well and followed up with the steps taken to contract marriages. However, a few candidates were unable to state in clear terms the laid down steps Dabombas follow to contract their marriages.

### Question 3

- (a) **Discuss the role of the major character in the novel “*Chentiwuni*”.**

The general performance of candidates was fair. Most candidates were able to list and point out the works of Jebuni in the story. However, a few others succeeded in writing very lengthy stories about Jebuni. One therefore needed to read the whole story before getting the opportunity to extract the points one after the other.

### Question 4

- (a) **Discuss the plot of the novel “*Chentiwuni*” sequentially.**

Question 4 was based on the story of *Salinwa6i`li*. Candidates were required to discuss plot of the story of “*Salinwa6i`li*” in the *Chentiwuni* story.

The question was poorly handled. Most candidates did not understand the word plot. A such very little work was done.

Some candidates because of their little understanding of the question resorted to writing very lengthy stories about the work of Chentuwuni and in the end succeeded in scoring very low marks.

### **Question 5**

- (a) Discuss two major themes of the drama.**
- (b) Explain four literary expressions as used in the drama.**

Question 5(a) was well handled. Candidates were able to state the themes well.

However, the second part of the question 5(b) was woefully answered. Instead of candidates explaining the sayings based on happenings in the story they merely resorted to interpreting them in their own way of understanding.

### **Question 6**

This was a context question which comprised three subquestions:

- (a) Who made the statement and who was the addressee?**
- (b) When and where did this interaction take place?**
- (c) State the outcome of this interaction.**

Question 6 was based on a statement in the Mba`ya Drama series. Candidates were requested to identify and state the person whom the statement was attributed to and to whom he was talking to.

The second question was based on what occasion the statement was made and where exactly it was made. Finally candidates were required to show what happened after the statement was made.

The question was finally handled. Some candidates had a firm grip of the question. A handful of candidates however, failed to take advantage of studying the contents of the novel seriously.

### **Question 7**

- (a) What is the theme of the poem?**
- (b) (i) What is the mood of the poet?**  
**(ii) Quote a line from the poem to support the response.**
- (c) State any three structures of the poem.**

The first part which had to do with the theme was well handled. The state of mind of the writer was well articulated too.

Sadly the third part of the question on the structure was abysmally done. Most candidates did not understand the structure of the text. They therefore succeeded in spending valuable time on unnecessary aspect of the entire story.

**Question 8**

- (a) What is the theme of the poem?**
- (b) State any three structures of the poem.**
- (c) Discuss the function of each of the following literary devices as used in the poem.**

The question was fairly handled. The theme was well stated. The second and third part of the questions were poorly attempted. Candidates were unable to state the structure of the text. The two literary devices were not properly used to show their work and impact in the story.

# DANGME 1

## **1. GENERAL COMMENTS**

The 2017 paper in Dangme compared favourably to that of previous years' papers. The paper, in general, is of standard. It tested the various aspects of language studies as prescribed by the teaching and examination syllabuses.

The questions were rendered in a manner that suits the level and experience of the candidates. The majority of candidates therefore attempted almost all the questions. This notwithstanding the general performance of candidates this year seem to have fallen marginally below that of last year. In some isolated cases a few candidates scored quite appreciable marks and deserve mention or commendation.

## **2. A SUMMARY OF CANDIDATES' STRENGTHS**

In general terms, candidates exhibited the following characteristics and deserve commendation:

- (1) Candidates demonstrate understanding of the tenets/requirements/demands of the questions.
- (2) Candidates answered/approached the questions and ensured systematic, orderly/sequential presentation of facts and ideas especially in the essays and the translation.
- (3) Good use of language such as proverbs, idioms, idiomatic expressions and euphemisms were made appropriately. This occurred mostly in the essays.
- (4) Good paragraphing was also ensured in the essays and the translation.

## **3. A SUMMARY OF CANDIDATES' WEAKNESSES**

- (1) Generally, candidates exhibited lack of knowledge or very little knowledge/concept of the structure (phonology) of the language. Lack or little knowledge about phonation and syllable structure were exhibited in the paper.
- (2) Inability to render ideas in translation, faithfully and coherently. Literal translation and lifting appeared in candidates renditions.
- (3) Unnecessary double pluralisation in Dangme characterized most of the answers e.g. "F4lihi" for "F4li", "nimlihi" for "nimli", "nihi kom1" for "ni kom1", "bihi" for "bi", etc.
- (4) Inability of candidates to differentiate between spoken and written/standard versions of Dangme e.g. "eny4ni for "eny4ne", "lae" for "hlae", "sukuu bi" for "sukuu no" (single).

- (5) Little knowledge about the use of the continuous/progressive tense in Dangme e.g. “laa” for “lae”, “ngmaa” for ngmae “n11” for “n1e”, etc.

#### **4. SUGGESTED REMEDIES**

The following suggestions are being made/put forward:

- (1) The conventionally accepted forms of speech and the written (standard) forms of the Dangme language should be vigorously taught and students encourage to adhere to the right/correct forms and versions in their writings.
- (2) Translation lessons should be seriously and thoroughly taught in the schools.
- (3) The issues of standard Dangme and dialectal forms should be pointed out to students.
- (4) A lot of reading should be encourage in the schools.

#### **5. DETAILED COMMENTS**

##### **Question 1**

**Discuss four (4) causes of corruption in Ghana and suggest four (4) ways of curbing the situation.**

Very few candidates attempted this question. Those who answered this question were able to raise just a few issues such as inadequate pay, salary/wages, fear of losing a job, external pressure from home, and get-rich-attitude, etc. For the solutions, government should pay workers well, people should learn to be satisfied, and government to give good pension/retirement packages to workers, etc. were some of the points raised. Performance on this question is not encouraging.

##### **Question 2**

**You are the head prefect of your school. Write a letter to your school’s headmaster and tell him about four (4) problems that affect students in the school.**

Majority of the candidates chose this question. Those who attempted this question demonstrated well understanding of the demands of the question and raised issues such as lack of infrastructure, classrooms, library, dining halls and halls of residents, others are lack of teachers, textbooks, and other materials and lack of commitment on part of teachers, lack of places of convenience, bad roads, etc.

Candidates performed quite appreciably on this question.

##### **Question 3**

**Write a speech to be delivered to a Youth Association in your community on the topic “The benefits of environmental cleanliness in the community”.**

This question was one of the least attempted questions by candidates. Those who made an attempt also did quite well. Few were about to follow the features of speech writing and raised issues such promotion of good health, less visits to the hospital and less medication. Enjoyment of good life and healthy living were some of the issues raised. Performance is not very encouraging.

#### **Question 4**

**Write a story that ends “Once bitten, twice shy”.**

Not many candidates answered this question. Out of those who attempted this question, only very few candidates wrote stories that connected the ending. As such they could not raise the issues that would connect/lead to that conclusion. This question was, however, the second most attempted question next to question 2.

#### **Question 5 - Translation**

A text in English was translated into Dangme by almost all the candidates. Quite a good number of the candidates did well on this question. They were able to render quite faithfully, the original passage in English into Dangme. Very good display of rich expressions were used in candidates’ rendition. A few candidates, however, had some difficulties with the appropriate language/expressions in their renditions and hence some lifted and did some literal translations.

Generally, the performance is quite commendable.

#### **Question 6 - Comprehension**

The majority of the candidates demonstrated in their responses to the questions that they really could read and understand the comprehension passage. Quite a good number of the candidates were able to answer the questions correctly. A few candidates, however, had some level of difficulty in understanding the passage and in most cases copied long portions as answers. The higher order/inferential questions posed great challenge to such candidates. On the whole, however, the general performance on this questions is quite commendable.

#### **Question 7**

- (a) Explain the following: Voiced consonants and Voiceless consonants**
- (b) Write down four voiced consonants and four voiceless consonants of your language.**
- (c) With two examples of words each, demonstrate the distribution of the following consonants in your language: [ s ] and [ m ].**

This question was in three parts. The candidates was required to discuss/explain how consonants are produce and then write out four voiced and 4 voiceless consonants in/of

Dangme. For the 3<sup>rd</sup> part of the question, the candidate was to show the distribution of the sounds | s | and | m | in Dangme words.

Quite a good number of candidates attempted this question. The majority of candidates had difficulty with the 1<sup>st</sup> part which was on the production of consonants but did well on the voiced and voiceless consonant and also did well on the distribution of the given sounds | s | and | m |. A few candidates, however, confused vowels and consonants and so got that aspect wrong.

### **Question 8**

- (a) What is syllable?**
- (b) State four types of syllable structure in your language.**
- (c) Give two examples each of the four syllable types.**

For this question which was also in three parts, the candidate was required to define a syllabus in Dangme, discuss any 4 syllable structures of Dangme and give two examples of words for each of the 4 structures discussed. This was the least attempted question in the section. And those who attempted did quite poorly on it. They had difficulty in explaining what a syllable is and also had difficulty in discussing the syllable structures in/of Dangme. Quite a marginal number of candidates did quite well on this question.

### **Question 9**

- (a) Indicate the word class of the underlined word in each of the following sentences.**
- (b) State the function of the underlined words in each of the following sentences.**

This question was in two parts and tested candidates' knowledge in the grammar of Dangme. The first part of the question tested candidates' knowledge about word classes in Dangme while the second part tested the concept about phrases. In the first part, the candidate was to write the word classes of the words or group of words indicated in the sentences while in the second part the candidate was required to show or state the phrase type of the underline word or group of words. The majority of candidates answered this question and did quite well on the first part but quite poorly on the second part of the same question. Majority of the candidates knew the word classes but not much of/or about phrases in Dangme.

### **Question 10**

- (a) What is a clause?**
- (b) With two sentences each, give examples of the following clauses:**
  - (i) Declarative clause**
  - (ii) Imperative clause**
  - (iii) Adverbial clause**
  - (iv) Adjectival clause**

This question which was also in two parts, tested candidates knowledge about clauses in Dangme. For the first part, the candidate was to define a clause or say what a clause is in Dangme and then say/tell what the given clauses are and illustrating with two examples for each of the given types.

Quite a good number of candidates attempted this question. Generally, candidates did not perform well on this question. They had difficulty with the definition and could also not say what the given examples to illustrate their discussion on the past two of the question.

## **DANGME 2**

### **1. GENERAL COMMENTS**

The standard of the paper compared favourably to that of previous years'. Candidates' performance this year compared to the previous year was quite commendable. Teachers should be advised to follow the syllable to the letter and cover details for enable candidates to be able to answer questions covering in detail the relevant requirement of particular questions.

### **2. A SUMMARY OF CANDIDATES' STRENGTHS**

Question 1: Quite a good number of candidates attempted this question. Performance was quite above average except that candidates could not adequately discuss the structures in folk tales and the roles folk tales play in character training.

Question 2: A good number of candidates attempted this question and candidates' performance was generally above average.

Question 3: Written literature – character study. Many candidates attempted this question and performance was generally above average but in a few cases candidates confused the characters they were required to comment on.

Question 4: Few of the students attempted this question on Written Literature. Performance was averagely commendable.

Question 5: Many candidates attempted this question but a few could commendably handle the require demands of the questions. The explanations of the proverbs and figures of speech were satisfactorily handled by candidates who answered this question.

Question 6: Many candidates answered this question satisfactorily. Performance was generally above average.

### **3. A SUMMARY OF CANDIDATES WEAKNESSES**

Question 7: Many of the candidates attempted this question. Performance was, however, below average.

Question 8: No many of the candidates attempted this question. Performance was below average.

Many of the candidates showed inadequacy in mastery of the orthography.

Written literature: Candidates did not study the set books with the seriousness required and so could not respond appropriately.

#### **4. SUGGESTED REMEDIES**

Teachers are advised not to just leave students to read the set books at their leisure. They should set exercises and have these painstakingly marked to discover students' weakness for remedy and serious revision.

#### **5. DETAILED COMMENTS**

##### **Question 1**

- (a) What is a folktale?**
- (b) Discuss the structure of a folktale.**
- (c) Give four importance of folktales.**

Many candidates answered this question on folktales but could not explain convincingly character moulding roles that the animals play, through personification.

The question required candidates to show how animals in folktales are presented in personified manner. Many of the candidates who attempted this question could not write a folktale to illustrate their responses to question 1(b).

##### **Question 2**

- (a) What is traditional marriage?**
- (b) Give three reasons why people marry**
- (c) Discuss three rites performed in the marriage process.**

This question was generally satisfactorily answered by all candidates who attempted it.

##### **Question 3**

- (a) Discuss the role of the major character in the novel.**

Candidates were required to identify a particular character. Many candidates attempted this question and they performed commendably well.

##### **Question 4**

- (a) Discuss how the plot of the novel sequentially.**

##### **Question 5**

- (a) Discuss two major themes of the drama.**
- (b) Explain four literary expressions as used in the drama.**

Many candidates attempted this question but not many could explain the proverbs and figures of speech.

##### **Question 6**

This was a context question which comprised three subquestions:

- (a) Who made the statement and who was the addressee?**

- (b) When and where did this interaction take place?**
- (c) State the outcome of this interaction.**

This question was on character identification. It was satisfactorily answered by all the candidates who attempted it.

#### **Question 7**

- (a) What is the theme of the poem?**
- (b) (i) What is the mood of the poet?**  
**(ii) Quote a line from the poem to support the response.**
- (c) State any three structures of the poem.**

Candidates had problems with the structure of the poem. Identification of figures of speech also pose a serious problem to candidates.

From responses of candidates, it became clear that teachers did not pay sufficient attention to the study of the poems.

#### **Question 8**

- (a) What is the theme of the poem?**
- (b) State any three structures of the poem.**
- (c) Discuss the function of each of the following literary devices as used in the poem.**

The comments for question 7 goes for question 8 as well.

## **EWE 1**

### **1. GENERAL COMMENTS**

The Ewe Paper 1, for School Candidates, for the year 2017 was generally of standard. All the questions were at the level of the candidates, that is, the senior secondary school level.

On the whole, the paper covers all the four sections or areas of the language. These include, composition writing, translation, comprehension and language structure. In all, candidates are expected to answer questions from all the four sections.

Candidates' performance was generally quite good.

### **2. A SUMMARY OF CANDIDATES' STRENGTHS**

The performance of the candidates in the paper as a whole was not too bad. It was on average. Most of the candidates made selections which favoured them and they discussed the points very well. For example, Questions 1 & 2. Those who selected these two questions were able to raise very strong points which were all relevant to the situations. For example, question on corruption. Very good and reasonable points were raised.

There was also an improvement in candidates' expression and handwriting. Also, there is improvement in their orthography.

### **3. A SUMMARY OF CANDIDATES' WEAKNESSES**

Some candidates still have problems in the language. Their performance was very low, that is below the expected average. They did not understand what they read. This was most found in the question on translation. Some candidates found it difficult to do the translation exercise. What they wrote was far different from what was in the passage.

In answering the Comprehension questions, some candidates copied down whole sentences or even the paragraph as answers to a question.

With regard to the language structure, that is the phonology and grammar, some candidates wrote down different things which are entirely wrong. Either they did not have knowledge of the question or they did not understand the question.

### **4. SUGGESTED REMEDIES**

All these problems mostly might have come from their poor foundation. What it means is that, the beginning of the study of the language was not very good. Candidates should be given some remedial lessons in the language right from their first year in the secondary school. The basic rules of the language should be enforced. They should be taught to know the difference between the written language, that is the standard Ewe, and the spoken language. Candidates don't seem to know the difference and for that matter they write what they speak. Also to overcome this problem candidates should be encouraged to read books.

## 5. DETAILED COMMENTS

### Question 1

**Discuss four (4) causes of corruption in Ghana and suggest four (4) ways of curbing the situation.**

Question 1 is the second well answered question. A few of the candidates who tried their hands on this question did very well. They gave good and relevant points concerning corruption in Ghana as a whole and also their suggestions of curbing the situation were very relevant. A few of them who answered this same question mixed the points up – no clear causes and no clear solutions and so on.

### Question 2

**You are the head prefect of your school. Write a letter to your school’s headmaster and tell him about four (4) problems that affect students in the school.**

Question 2 also followed the same trend. This was the question well answered. Candidates gave very good and reasonable points. The question demands candidates to write a letter to their head of institution telling him/her about problems facing them in the school. In fact, good points were raised and the points were very relevant to the situation these days in our institutions. It was answered.

### Question 3

**Write a speech to be delivered to a Youth Association in your community on the topic “The benefits of environmental cleanliness in the community”.**

This was the question answered by a handful of candidates. Those who tried it gave some good points anyway, but it was not tackled as a speech, but as a continuous essay, that is, no address, no heading, no features of speech writing displayed.

### Question 4

**Write a story that ends “Once bitten, twice shy”.**

This was a question on narrative – the topic was to write a story that ends, “Once bitten, twice shy”. Those who attempted it also tried to narrate some incidents that led to the explanation of the topic. Some relevant and others too just out of way.

### Question 5 - Translation

This was a Translation and it was a compulsory question. Candidates tried to translate the passage into their language, but this was not done very well. Some of the terms in the passage were not well translated to bring out meaning. For example, words like, “planned assignment”, “dormitory”, “midnight”, “security guard”, “novices”, “shrill sound of a cricket”, “a deep voice vibrated”, etc.

Because of these terms the passage was not well translated and the actual meaning of the passage did not come out well.

### **Question 6 - Comprehension**

The comprehension passage was about a festival celebrated that year. It described how that year's festival was far different from the past years. It was also a compulsory question. The answers to the questions were quite good except some few candidates who copied long sentences as answers to some of the questions. In addition, some candidates also found it difficult to explain some literary terms in the passage, and for that matter, they were confused with the terms like "personification" and "idioms". However, some of the answers given were accurate and meaningful.

### **Question 7**

- (a) **Explain the following: Voiced consonants and Voiceless consonants**
- (b) **Write down four voiced consonants and four voiceless consonants of your language.**
- (c) **With two examples of words each, demonstrate the distribution of the following consonants in your language: [ s ] and [ m ].**

It was a very simple question. The question was in three parts: (a), (b) and (c). Part (a) was just a simple definition of voicing in consonants. Many candidates could not explain what voicing is, and the answer they gave was not very explanatory at all.

The (b) part also dealt with voiced and voiceless consonants. Some of the candidates actually gave correct answers and some too mixed the voiced and the voiceless consonants. Then the (c) part also demanded for examples in words. Here, some candidates did well and some did not do well.

### **Question 8**

- (a) **What is syllable?**
- (b) **State four types of syllable structure in your language.**
- (c) **Give two examples each of the four syllable types.**

This question also follows the same line, that is, in three parts – (a), (b) and (c). Part (a) asked candidates to define or explain 'syllable'. Here, candidates could not give suitable definition. Most of them scored zero.

Past (b) asked candidates to give four types of syllable structure. Many candidates misfired. Some did very well by giving the four types correctly. Part (c) asked candidates to give two examples each of the four types. In this part also, candidates did not do well.

### Question 9

- (a) **Indicate the word class of the underlined word in each of the following sentences.**
- (b) **State the function of the underlined words in each of the following sentences.**

This was one of the grammar questions. There were two parts – (a) and (b). In part (a), there were ten short sentences. In each of the sentence, a word is underlined. Candidates were asked to identify the types of word class underlined. Performance here was not encouraging. Only a few candidates were able to understand and they did well.

Part (b) also follows the same line, but in this part some words were underlined and candidates were asked to give their functions in the sentences. This was also poorly done by some the candidates.

### Question 10

- (a) **What is a clause?**
- (b) **With two sentences each, give examples of the following clauses:**
- (i) **Declarative clause**
  - (ii) **Imperative clause**
  - (iii) **Adverbial clause**
  - (iv) **Adjectival clause**

This question was also in two parts: (a) and (b). Part (a) was just the explanation of a clause. Here, candidates could not give meaningful and explanatory definition of a clause. In the (b) part, four types of clauses were given including main and subordinate clauses. Candidates were asked to explain each type and give examples. In this also, candidates were not able to explain meaningfully the types mentioned and the examples given were all out of place. This also shows that candidates were not conversant with the two types of clauses and their examples.

## EWE 2

### **1. GENERAL COMMENTS**

The 2017 Ewe 2 paper was of good standard. Questions framed were basically based on the syllabus and their levels of difficulty were just within reach of candidates. There were no marked differences between the quality of questions set this year and that of the past year.

However, compared to last year, candidates' performance was generally not as good as expected. The usually weak areas of performance found especially in poetry appreciation and discussion of topics from Written Literature (Prose) continue to be seen in the poor way some questions were answered.

### **2. A SUMMARY OF CANDIDATES' STRENGTHS**

Candidates showed they have a grasp on the definition of concepts and identification of themes in the works of authors of prose and selected drama. Answers provided for the poem, "*Tsitsiawo hã Fena*" show, to a large extent, their indepth understanding of issues raised in the poem. The right lines quoted in support of the kind of mood expressed by the poet i.e. the mood of sadness and pain all go to buttress this observation.

Again, candidates' good handling of the context question on drama as to who said what to whom and at where is also commendable. It shows students are really reading the texts prescribed.

### **3. A SUMMARY OF CANDIDATES' WEAKNESSES**

The major weaknesses of candidates have to do with how to package the content of their answers. They did have a fair idea of what the rubrics say but did not know how to arrange their thoughts on paper to attract the necessary points. As a result, most candidates resorted to giving a one-line answer to a question that called for discussion or comments. The importance of folktales and reasons for marriage only drew points that could not be explained by candidates. This kind of thinking should be avoided.

The structure of poems which called for a thorough discussion was an issue for candidates. Only mentioning the stanza numbers and lines of a poem alone is not enough. Quoting literary without explaining how they impact on the theme of a poem is equally not enough.

### **4. SUGGESTED REMEDIES**

Candidates should take their time to do a thorough analysis of issues raised in a question. Each point noted must be explained into details. For example, one reason for which marriage is contracted could be "for companionship". How the companionship works, the benefits derived from it and its impact on society as a whole should be explored in the discussion.

All questions must be looked at along this line, unless otherwise specifically stated in the rubrics.

## 5. DETAILED COMMENTS

### Question 1

- (a) **What is a folktale?**
- (b) **Discuss the structure of a folktale.**
- (c) **Give four importance of folktales.**

This question required that candidates state what folktale (gli) is, discuss the various stages in the Ewe folktale (gli) and comment on four importance of folktale.

Strengths: The very few who answered the question could easily map out the four broad stages of storytelling in Ewe viz; the annunciation (glinuzezeu), the character cataloguing (*glimenuw4lawo xexlē*), the narrative proper (gli toto) and the epilogue (gli 5o5o). The very good ones gave detailed description of what each stage entailed and capped it with strong comments on how important storytelling (gli toto) is to the Ewe speaking folks.

Weaknesses: The question was unpopular with candidates. Several of the few who attempted it failed to give a chronological arrangement of the stages of storytelling. They missed out on the cataloguing aspect of a tale a tale. Others mistook “glimeha” for “glimedcha” where the former is a song sung by a character in the tale and the latter, though also a song, is an interlude put in by listeners. Candidates must learn to reveal the moral lesson of a story just before the final stage of the story comes in.

### Question 2

- (a) **What is marriage?**
- (b) **Give three reasons why marriage is contracted.**
- (c) **Discuss three customary steps taken in the marriage process.**

This question demanded the definition of marriage (sr-2e2e). Candidates were to give reasons why marriage is contracted and to discuss three customary steps taken in the marriage process.

Strengths: This was a heavily patronized question. Most candidates clearly state what marriage is, emphasizing on the fact that it is the union between man and woman as custom demands. They could spell out reasons for marriage without difficulty.

Weaknesses: Many candidates, however, did not include the ‘catchword’ “marriage by customary tradition” (*sr-2e2e le se nu to*) in their definition of the term/concept. A definition of marriage without referring to customary demands is simply incomplete. Again, candidates resorted to giving points only without explaining the reasons why people marry as in subquestion (b). Others also mistook western practices of marriage

ceremonies, viz wedding, court marriage, etc. as the steps in the marriage contract for the traditional way of doing things.

### **Question 3**

**(a) Discuss the role of the major character in the novel “HI-biabia”.**

Requirements of this question include discussing the role of the principal character, Nyuiemedi in the novel of HI-biabia. Four (4) different roles of the lead character were expected.

Strengths: Candidates showed they know the storyline and could re-tell it with little difficulty. They had a hands-on identifying the roles associated with Nyuiemedi’s childhood life, his challenges as an adolescent and the efforts made to avenge mankind’s wickedness towards him in his adulthood. A few candidates did a strikingly good job at picking points/or roles across the lifespan of the character to attract appreciable scores in commendation.

Weaknesses: The large majority of candidates did not know how to package the roles of Nyuiemedi to cut across his childhood, struggles to make it in life, acts of revenge, etc. They only went into reproducing the storyline of the novel, recounting events as they unfolded and even emphasizing irrelevant occurrences that involved minor characters.

### **Question 4**

**(a) Discuss the plot of the novel “HI-biabia” sequentially.**

Candidates were asked to discuss the plot in the novel HI-biabia. Candidates were tasked to siphon events from all three segments of the novel, viz, the beginning, middle and conclusion parts.

Strengths: To earn a good score, candidates began the discussion well with concrete examples of episodes found at the beginning of the story. The life of Nyuiemedi and activities associated with it were well catalogues from his childhood to adulthood, which is commendable.

Weakness: This question was not very popular. A few candidates could not make any reference to the climax of events, let alone comment on the denouement and retributive justice the lead character Nyuiemedi inflicted on himself. These are the principal pillars, a novel must be seen to hinge on which candidates discussing the plot of a story must necessarily talk about.

### **Question 5**

**(a) Discuss two major themes of the drama.**

**(b) Explain four literary expressions as used in the drama.**

Candidates were to comment of two important themes in “T4k4 At-lia”, a drama piece and explain four texts quoted from the drama in relation to their application or usage.

Strengths: Candidates did well in identifying the themes of “Toma2oma2o 5e vi2e” (The wages of disobedience) and “Nyiuw4w4 nyo” (It pays to be charitable)

Weaknesses: Even though the themes were readily supplied by candidates, many could not comment, through a discussion, on the basis for selecting them. They thus lost heavily on marks in that regard. Many also deviated in handling question 5(b). Most of the lines quoted which are literary devices in themselves could not be explained, let alone linked up with the story. They therefore explained the lines out of content. The impression created points to the fact that candidates did not read the question carefully.

### **Question 6**

This was a context question which comprised three subquestions:

- (a) Who made the statement and who was the addressee?**
- (b) When and where did this interaction take place?**
- (c) State the outcome of this interaction.**

The question demanded that candidates state who initiated a given statement and to whom it was given. They were to mention when and where the interaction took place and provide the outcome of the statement.

Strengths: Questions (a) and (b) were well answered. Candidates aptly ascribed the statement to Gbadago and Agbeba2a respectively as being speaker and listener, and correctly indicated where the statement was made.

Weaknesses: Candidates fumbled with the outcome of the statements, not knowing exactly what it was. Some looked too far away for events that were totally removed from the outcome expected. It is advisable that subject teachers teach students the right stuff on how to answer context questions. The outcome of an utterance taken from the middle of a drama text for example cannot travel too far to the end of the play as some candidates struggled to portray.

### **Question 7**

- (a) What is the theme of the poem “Tsitsiawo hã fena”?**
- (b) (i) What is the mood of the poet?**  
**(ii) Quote a line from the poem to support the response.**
- (c) State any three structures of the poem.**

This question on poetry tasked candidates to state the theme of “Tsitsiawo hã fena”, indicate the mood of the poet with supporting lines from the poem and discuss the structure of the poem in three ways.

Strengths: Candidates were to the task in stating the theme of vanity (tofloko) and its related ideas in their answers. The mood of sadness, unhappiness (vevesese), etc. was easily identified too.

Weaknesses: The discussion of poems and their structure has, over the years, been the bane of candidates' answering skills as they always did a poor show of this demand. The farthest they could go was to mention the number of stanzas and lines of the poem and make a cursory reference to some literary devices. Teachers must expose students to the totality of literary appreciation when it comes to poetry. All the elements that go into making a poem beautiful viz, stanza length, diction, literary devices and how they relate to the thematic content of stanzas should come into play as structure is discussed. Only this can earn a good mark for the candidate.

### **Question 8**

- (a) What is the theme of the poem “*Hĩa*”?**
- (b) State any three structures of the poem.**
- (c) Discuss the function of each of the following literary devices as used in the poem.**

The rubrics of this question required the candidate to state the theme of poem *Hĩa*, discuss the poem's structure in three ways and provide and discuss one example each of repetition (gbugn4gbl4) and hyperbole (dzededenya) as used in *Hĩa*.

Strengths: The answer given as theme for *Hĩa* by candidates was high on point. The theme of suffering which underscores the long poem of a hundred and fifty (150) lines was easily identified. Equally satisfying was the right quotations cited from the poem in support of repetition as a literary device, which attracted commendation by way of a good score in that regard.

Weaknesses: It was a herculean task for candidates to get the correct quotations to cite in support of the hyperbole literary device requested. This robbed them of vital marks. Also, deficiencies in the handling of question 8(b) on structure was very pronounced because candidates could only tell the number of lines in the poem and stopped at that.

## **FANTE 1**

### **1. GENERAL COMMENTS**

The standard of the paper is as good as previous ones.

The paper unveiled the candidates' strengths and weaknesses. It also passed the test and it is commended.

### **2. A SUMMARY OF CANDIDATES' STRENGTHS**

Candidates limited themselves to the stated five hundred words (500).

The passage that was to be translated into Fante was well done. There was some improvement in this year's work. Candidates understood the passage and translated it accordingly. The fifteen main ideas in the passage were clearly stated.

The comprehension passage is good, clear and explanatory. Candidates answered the questions as required. The causes and solution of corruption in Ghana were vividly discussed.

The letter that was to be addressed to the headmaster about the problems that affect academic work in the school was well written. The candidates showed maturity in this exercise. Many candidates wrote on the topic. The elements were provided. That is, the addresses, dates, heading, salutation and valediction. Pleasantries in formal letters are not required.

### **3. A SUMMARY OF CANDIDATES' WEAKNESSES**

Candidates' weaknesses were noted in the following areas:

- (1) Some candidates started sentences with small letters and punctuated them wrongly.
- (2) Some candidates wrote long sentences without paragraphs.
- (3) The underlisted words must be noticed:
  - mpanyimfo (elders) and not 'mpanyinfo';
  - modern terminologies can be transliterated e.g. computer – k4mputa;
  - 'bio so' is not used to start a sentence. It is 'Bio';
  - 'seseiara' (now) and not 'seesiara';
  - 'm' precedes 'b', 'p' and 'f' in words. E.g. mpampa, mbofra, mfonyin, mpuna;
  - Nasal consonants that determine negation are 'mm' and 'nn'. E.g. mmba, nndzi, nnk4.



- public education on probity and accountability
- religious bodies and other institutions to speak more against corruption

Many candidates wrote well on the topic and showed maturity on how to curb corruption.

## **Question 2**

**You are the head prefect of your school. Write a letter to your school's headmaster and tell him about four (4) problems that affect students in the school.**

The letter is a formal type and it is to be addressed to a headmaster of a school.

The elements were provided.

These are: the addresses, dates, heading, salutation and valediction.

Some problems that were identified were:

- utilities such as water, electricity, etc.
- accommodation – overcrowded dormitories, inadequate classrooms
- lack of teaching and learning materials
- teacher absenteeism and lateness among students
- poor feeding
- immorality among teachers and students.

Conclusion:

Appeal was to be made to the headmaster and school authorities to heed to the request made on behalf of the student body to bring about improvement in the school.

Some students wrote paragraphs on immorality among teachers and students and neglected other important problems such as books, toilets, furniture, etc.

## **Question 3**

**Write a speech to be delivered to a Youth Association in your community on the topic “The benefits of environmental cleanliness in the community”.**

Candidates were to address the chair and observe protocol

Some advantages:

- good health
- reduction in illnesses and frequent deaths

- increase in the people's lifespan
- attraction of tourists and other people/visitors.

Candidates who wrote on this topic wrote good essays. Good expressions were used. However, some candidates were carried away and they wrote lengthy essays at the expense of the other topics/questions.

#### **Question 4**

**Write a story that ends "Once bitten, twice shy".**

Some candidates who wrote on the topic could not use specific incidents to bring out the meaning of the stories.

Stories could be written about oneself, a friend or any other person.

Possible causes: Laziness, truancy, negligence, deceit by somebody, disobedience, etc.

Consequences: Many candidates did not write the effects of their stories.

#### **Question 5 - Translation**

Candidates were to translate a given passage into Fante.

Candidates translated the passage as expected. The fifteen main ideas were stated coherently. They could, however, not translate the underlisted words well.

dormitory	–	bea a y1da
security guard	–	bamb4nyi
as novices	–	afoforfo
gravelled walkway	–	kwan a w4dze mbosea egu do

Candidates could have explained words which they found difficult to find their Fante version.

#### **Question 6 - Comprehension**

Candidates were given a passage to read and answer the questions on it. The passage was clear and explanatory. Candidates answered the questions as expected. Some candidates lifted some portions of the passage as their answers.

#### **Question 7**

- Explain the following: Voiced consonants and Voiceless consonants**
- Write down four voiced consonants and four voiceless consonants of your language.**

- (c) **With two examples of words each, demonstrate the distribution of the following consonants in your language: [ s ] and [ m ].**

The question was well answered.

- (a) Candidates were, however, unable to define voiced and voiceless consonants.

Voiced consonant: Ngyegyee a no mu piw nye dza mframa a orupue ab1fa anomu no anomu mfafakuwa no mu bi siw no kwan ma 4dze ahomtsew pue a 4y1 dede.

Voiceless consonant: Ngyegyee a no mu mmpiw nye dza mframa a orupue no anomu mfafakuwa ebien bi fam ho kakra a 4ma mframa a orupue no no ho kyer no kakra naaso opue waa a 4ny1 dede.

- (b) Candidates gave good examples of voiced and voiceless consonants. E.g.

Voiced consonants: / b /; / d /; / g /; / m /

Voiceless consonants: / t /; / k /; / s /; / f /

- (c) Consonant distribution come under:

	Enyim	Finimfin	Ekyir
/ s / -	/ sar /,	/ akasaa /	-
/ m / -	/ mpuwa /	/ pImpam /	/ finImfinIm /

### Question 8

- (a) **What is syllable?**
- (b) **State four types of syllable structure in your language.**
- (c) **Give two examples each of the four syllable types.**

Some candidates made an attempt to answer the question.

Candidates who answered the question did it poorly.

Definition of As1nsin: As1nsin y1 ngyegyee a no u piw na 4da noho edzi d1 ankonam anaa dza 4w4 kasafua mu na vawol w4 mu. Otum kyeky1 kasafua mu.

As1nsin ahorow:

- (i) V – vawol
- (ii) K – K4nsonant
- (iii) KV – K4nsonant vawol
- (iv) KKV – K4nsonant k4nsonant vawol

Mfatoho – a:fa n:s4, me:ma kra  
 4:s4 m:pa b4:d4m bra  
 pra

### Question 9

- (a) **Indicate the word class of the underlined word in each of the following sentences.**
- (b) **State the function of the underlined words in each of the following sentences.**

- (a) Candidates answered the question on word class as expected.
- (b) Candidates were to write the functions of some words. Candidates were not able to answer this part well.

The words are:

- |       |                  |   |            |
|-------|------------------|---|------------|
| (i)   | dua no           | – | 4y1fo      |
| (ii)  | egyinambowa      | – | 4y1tsia    |
| (iii) | ne maame         | – | 4gyefo     |
| (iv)  | me kyer1kyer1nyi | – | nyle boafo |
| (v)   | h4n hen          | – | nyle boafo |

### Question 10

- (a) **What is a clause?**
- (b) **With two sentences each, give examples of the following clauses:**
- (i) **Declarative clause**
  - (ii) **Imperative clause**
  - (iii) **Adverbial clause**
  - (iv) **Adjectival clause**

Candidates did well to write the examples of some given clauses. However, the definitions of the stated clauses were poorly written.

- (a) As1mpruw: \$y1 nkasafuakuw bi a otum gyina ne nan do anaa d1 onntum nnhyina ne nan do. Dza ogyina ne nan do no nyla w4 mu.
- (b) Explanation of the given clauses.
- (i) As1mpruw tsir a 4y11 as1nka. \$kyer dza obi y1. \$da as1m no edzi a nyla w4 mu. \$nndan biribiara ana ne ntseasee no edzi mu.

- (ii) As1mpruw tsir a 4y1 4hy1. \$y1 nkasafuakuw a 4ma obi y1 biribi anaa odzi dwuma bi.
- (iii) As1mpruw mfemfamho a 4y1 nyla tamsi. \$y1 nkasafuakuw a 4kyer1 ber anaa bea a obi y11 biribi. Ogyina biribi do ansaana ne ntseasee eedzi mu
- (iv) As1mpruw mfemfamho a 4y1 dzin-tamsi. \$y1 nkasafuakuw a 4kyer1 biribi anaa obi no su. Ogyina biribi o ansaana ne ntseasee eedzi mu.

## **FANTE 2**

### **1. GENERAL COMMENTS**

The standard of the paper and the general performance of the candidates compared favourably with those of previous years. The rubrics were quite clear and the questions set actually tested what candidates ought to have covered before writing the paper and candidates who had the right tuition proved equal to the task.

### **2. A SUMMARY OF CANDIDATES' STRENGTHS**

- (1) In most cases candidates provided correct answers to many of the questions; and there was marked improvement in candidates' handwriting.
- (2) Paragraphing was good with sentences that had grammatical correctness.
- (3) Candidates' performance in Question 3 was averagely commendable.
- (4) A good number of candidates appeared well-prepared by their teachers and this reflected in their general performance as their responses to questions, in most cases, were precise.

### **3. A SUMMARY OF CANDIDATES' WEAKNESSES**

- (1) Some candidates still have problems of orthography as this was clearly seen in the work scripts of some of them.
- (2) Another area which continues to be a problem is negation. Thus some candidates still write *mfa* instead of *mmfa* and *ndzi* instead of *nndzi*.
- (3) A few candidates' answers to Question on characterisation were marred as a result of repetition.
- (4) Some candidates answered more than one question from a section as demanded by the rubrics.

### **4. SUGGESTED REMEDIES**

- (1) Candidates require proper tuition from teachers who are qualified in the subject (Fante).
- (2) There is also the need for candidates to read extensively so as to prepare them well for the examination.
- (3) Spelling and dictation should be regularly practiced so as to reduce/minimise orthographical mistakes.

- (4) Teachers who handle Ghanaian Languages (Fante in this respect) have to teach students to know the vowels and consonants and their permitted combinations. This will go a long way in minimising orthographical problems.

## 5. **DETAILED COMMENTS**

### **Question 1**

- (a) **What is a folktale?**  
(b) **Discuss the structure of a folktale.**  
(c) **Give four importance of folktales.**

This question calls for the definition of a folktale, state the structure of which is the purpose, beginning, the actual story and the end. Candidates were also required to state the importance of folktale which include serving as a form of enjoyment, unity, a way of bringing up children in the house as well as the moral lesson taught.

Candidates' response was encouraging.

### **Question 2**

- (a) **What is traditional marriage?**  
(b) **Give three reasons why people marry**  
(c) **Discuss three rites performed in the marriage process.**

This was a question on marriage which expects candidates to define the concept, why we marry and the process through which marriage is contracted and pointing out the various fees/amount that are paid by the man before the two got to stay as a married couple.

The majority of candidates attempted it and their response was highly commendable.

### **Question 3**

- (a) **Discuss the role of the major character in the novel.**

This was a question on characterization which expected candidates to point out the role played by Araba Pentsiwa in both her father's house and that of Egya Abaka when she was taken to render service as a way of defraying the loan sought by her mother.

On the whole this was the most popular question. The service rendered include running errands, sweeping and cleaning the house, and helping to bake and sell bread.

### **Question 4**

- (a) **Discuss the plot of the novel sequentially.**

Candidates were expected to state the plot of the book which comprises three areas, namely the beginning, the actual story and the conclusion. Only few candidates attempted

it and the responses was rather poor. An indication that candidates really did not know about the plot of the book well.

### **Question 5**

- (a) Discuss two major themes of the drama.**
- (b) Explain four literary expressions as used in the drama.**

This question calls for two themes of the book. The success of every marriage depends solely on love and unity/patience the result of which enable B1kyed4 and Adoma to become married couple.

The other section under (b) seeks to test candidates on their understanding of proverbs and idiomatic expression. This was an area where candidates performed poorly.

### **Question 6**

This was a context question which comprised three subquestions:

- (a) Who made the statement and who was the addressee?**
- (b) When and where did this interaction take place?**
- (c) State the outcome of this interaction.**

This is a context question in which candidates did well by pointing out the speaker and the address, the time and place where the speech was made and the outcome of the dialogue which saw Adoma and B1kyed4 as married couple despite the early challenges that nearly marred their marriage.

On the whole candidates' attempt was commendable.

### **Question 7**

- (a) What is the theme of the poem?**
- (b) (i) What is the mood of the poet?**  
**(ii) Quote a line from the poem to support the response.**
- (c) State any three structures of the poem.**

This poem discusses the relevance of Unity in nation building and candidates' attempt was good having pointed out the mood of the writer and the structure.

### **Question 8**

- (a) What is the theme of the poem?**
- (b) State any three structures of the poem.**
- (c) Discuss the function of each of the following literary devices as used in the poem.**

Candidates were expected to state the theme of the poem and the importance of the palm tree (Ab1 dua) and identify three literary devices namely simile, repetition and hyperbole used by the writer.

Candidates' performance in this areas was good.

## GA 1

### 1. GENERAL COMMENTS

The standard of the paper compared favourably with that of the previous years. Performance of candidates as compared to that of last year was average.

### 2. A SUMMARY OF CANDIDATES' STRENGTHS

Very few candidates used less than the minimum five hundred words in their essays. Candidates who wrote on problems in their schools, and the need for cleanliness in our homes and in the environment, wrote good essays.

### 3. A SUMMARY OF CANDIDATES' WEAKNESSES

Many candidates had problem of word boundary. A lexical noun subject and the following verbs were written as two words, but the subject pronoun and the following verb were written as one word: *Kofi ye nii – Eye nii*.

Many candidates did not always remember that verbs that end in vowels in the positive, end in three vowels in the negative. E.g. *ye – yeee* (eat), *bi – biii* (ask), *ba – baaa* (come), *kpe – kpeee* (chew). Candidates were inconsistent, they wrote, for example, both 'baa' and 'baaa' for 'baaa'.

The distinction between the letter 'o' and '4' representing different Ga sounds, and 'e' and '1' representing different Ga sounds is ignored by candidates. They use 'o' to represent the | o | and | 4 | sounds, and 'e' to represent | e | and | 1 | sounds.

Many candidates did not show any difference between letters of the alphabet and phonetic symbols.

### 4. SUGGESTED REMEDIES

Teachers should spend more time and energy to emphasize the difference, using pairs like:

Bo (shout)	fo (cry)	Gbo (September)	
B4 (mould)	f4 (birth)	gb4 (stranger)	
Lè (know)	gbè (kill)	kpè (meet)	ts□ (pluck)
L□ (him/her)	gb□ (path)	kp□ (shine)	ts□ (call)
W4 – w444 (sleep – does not sleep)			
Kpé – kpeee (chew – does not chew)			

### 5. DETAILED COMMENTS

#### Question 1

**Discuss four (4) causes of corruption in Ghana and suggest four (4) ways of curbing the situation.**

Candidates were to discuss four causes of corruption in Ghana, and suggest four ways of curbing the situation. Candidates who attempted this question appeared to miss the difference in corruption, bribery and stealing or pilfering. Corruption involves bribery, stealing or pilfering and other vices that militate against proper behaviour in public life. Candidates therefore wrote on causes of stealing in work places. Reasons like inadequate remuneration. Desire to get rich quick, insatiable human needs, external pressure from family and others which nurture corruption also nurture stealing and pilfering which candidates gave. Candidates who attempted this question answered it well.

### **Question 2**

**You are the head prefect of your school. Write a letter to your school's headmaster and tell him about four (4) problems that affect students in the school.**

Candidates were to write a letter, as prefect of their school, to the head of the school telling him about four problems that the students face. They were expected to mention problems like utilities such as water, electricity, accommodation, classrooms, teaching and learning materials and teachers.

Many candidates answered this question and answered it well. A few candidates, however, did not recognize that they were to write an official letter. They got the format of the letter wrong by not providing the addressee's address and a heading for the letter.

### **Question 3**

**Write a speech to be delivered to a Youth Association in your community on the topic "The benefits of environmental cleanliness in the community".**

Candidates were to write a speech to be delivered to a Youth Association in the community on the topic "The benefits of environmental cleanliness in the community". The speech was expected to include advantages of good health, free movement among houses, reduction in hospital bills, increased production from good health, increase in life span, among others.

Not many candidates attempted this question. The few who attempted it did well except that, being a speech, opening was expected to follow an addressing format to recognize the presence of various people invited for the occasion. Many of the few who attempted this missed this point.

### **Question 4**

**Write a story that ends "Once bitten, twice shy".**

Candidates were to write a story that supports the proverb that "once bitten twice shy".

Candidates who attempted this question wrote very interesting stories which the proverb adequately supports. Many concluded by linking the story to the proverb.

### **Question 5 - Translation**

Candidates were to translate a three paragraph piece from English into Ga. Many candidates did well. A few, however, missed “ny44`te` the Ga equivalent of “midnight” and gave the “ma`k1” which is the Ga equivalent for “dawn”. A few candidates attempted to break the passage down into fifteen ideas. This is a total waste of precious time in an examination. Candidates were expected to translate the piece in three paragraphs as in the English passage.

### **Question 6 - Comprehension**

Candidates were expected to read a passage and answer questions on it. There were questions involving recall, inference and grammar. Question 6(b) expected candidates to indicate the category and function of “*Mli ni jl hei sr4toi sr4toi*”. Very many candidates could not answer this question correctly. Similarly, candidates could not give the meanings of the idioms in 6(e).

### **Question 7**

- (a) **Explain the following: Voiced consonants and Voiceless consonants**
- (b) **Write down four voiced consonants and four voiceless consonants of your language.**
- (c) **With two examples of words each, demonstrate the distribution of the following consonants in your language: [ s ] and [ m ].**

Candidates were to define voicing in Ga. Phonetics and phonology and give four voiced sounds and four voiceless sounds. They were also to give words showing the distribution of the sounds | s | and | m |.

Candidates answered this question poorly. They could not define voicing as what happens in the voice box as air from the lungs passes through it. They either vibrate or do not vibrate. Candidates’ answers suggest that they had no idea about distribution of sounds in Ga. For the voiced and voiceless sounds examples, candidates were expected to give the phonetic symbols without the slashes | s |, | m |, | k | and | g |. Others used capital letters like F, M, G, without the slashes. This question was very badly answered.

### **Question 8**

- (a) **What is syllable?**
- (b) **State four types of syllable structure in your language.**
- (c) **Give two examples each of the four syllable types.**

Candidates were expected to define syllable, give four Ga syllable types in terms of structure, and to give examples of words which contain the types. Many candidates could not define 'syllable'. Again, many candidates gave words which are mono-syllabic, di-syllabic, tri-syllabic and so on as the types. In 8(c) where they were expected to give words containing the syllable types, many failed to read the question well and so did give the two words required for each syllable type.

### **Question 9**

- (a) Indicate the word class of the underlined word in each of the following sentences.**
- (b) State the function of the underlined words in each of the following sentences.**

Candidates were expected to indicate the word class of underlined words in sentences in 9(a) and to indicate the grammatical functions of underlined words and phrases in 9(b). 9(b) was very poorly answered.

### **Question 10**

- (a) What is a clause?**
- (b) With two sentences each, give examples of the following clauses:**
  - (i) Declarative clause**
  - (ii) Imperative clause**
  - (iii) Adverbial clause**
  - (iv) Adjectival clause**

Candidates were expected to define "clause" in 10(a), and to describe and give examples of given clause types in 10(b). The clause types were indicative, imperative, adverbial and adjectival clauses.

Candidates appeared to have very little knowledge of the clause types; the main clauses, subordinate clauses and the differences between them as well as the type of clauses that occur in subordinate position of the sentence.

## GA 2

### **1. GENERAL COMMENTS**

There is no disparity between this year's examination and that of previous years. The standard of the paper measures up to candidates' level of education.

Candidates' performance this year, however, fell below expectation. It seems candidates did not or were not prepared adequately for the examination.

### **2. A SUMMARY OF CANDIDATES' STRENGTHS**

A few of the candidates answered the questions the way they were required to do. They discussed all points or ideas they stated to their logical conclusions.

Another commendable feature noted was that many candidates followed the numbering system as on the question paper. They also left enough space between subquestions.

### **3. A SUMMARY OF CANDIDATES' WEAKNESSES**

- (1) Some candidates failed to read the instructions on the question paper and as a result wasted their time answering more than one question from a section.
- (2) Lack of understanding of questions especially Questions 2, 3 and 7.
- (3) Candidates' inability to:
  - (a) answer context questions;
  - (b) identify and discuss the structure of poems;
  - (c) state and explain themes of poems and drama pieces they are supposed to have studied;
  - (d) mention and discuss the mood of the poet.

### **4. SUGGESTED REMEDIES**

- (1) Candidates should be encouraged to spend some time to read the instructions well before starting work.
- (2) Teachers should consistently remind their students of the rules and guidelines of the examination, particularly as regards the rubrics.
- (3) Candidates need more exposure to literary practice and set book study. In addition, they should be made to write more essays on their set books and answer more context questions as class or home assignment or weekly tests.
- (4) Teachers should prevail upon candidates to get copies of the set books and read them meticulously.
- (5) Candidates should need to try their hands at past question papers, get them marked and their short falls explained to them as part of their preparations.

## 5. DETAILED COMMENTS

### Question 1

- (a) **What is a folktale?**
- (b) **Discuss the structure of a folktale.**
- (c) **Give four importance of folktales.**

A substantial number of candidates who answered this question excelled. They explained that in beginning to tell story, one has to say, “*Mita nyl aloo mikata nyl*” for the audience to respond, “*Ta w4, w4miihere bo n4*”. To wit: “*Do I tell you a story or not*” with the response, “*Tell us, we are all ears*”.

They explained further that the story teller then proceeds with the story telling by first saying “*Gbi ko ll*” or “*Jee ...*” (Once upon the time). Somewhere along the line, he pauses for musical interludes and continues with the story telling. Anyone who calls for a song to be sung, precedes the song with this statement: “*Gbi ll miyl jlmI*” (I was there that day).

In concluding, the story-telling sums up everything by saying something like: “*B4 ni fee ni nilee gbI shwa je ll mli fll nI. Midesa ni mita nll, e`44 oo, e`444 oo, miklta ... toi sll*”. (This is how wisdom spread all over the world. Whether the story I told is interesting or not, I hand over the baton to ...). They therefore scored high marks.

### Question 2

- (a) **What is traditional marriage?**
- (b) **Give three reasons why people marry**
- (c) **Discuss three rites performed in the marriage process.**

Candidates were expected to define or explain marriage. For example, marriage is the formal union of a man and a woman, typically recognized by law or the society, by which they become husband and wife.

They were also required to discuss three reasons why marriage is contracted for instance, people enter into marriage to procreate to increase the size of their families and also to show that they are fertile and potent.

When people get married, their respective families get linked together and this fosters peaceful co-existence and good neighbourliness. Married couples earn society recognition and respect; their voices or contributions are heard and taken on board in meetings.

Finally candidates were expected to discuss three processes of marriage namely, knocking, paying of dowry and wedding, etc. Knocking is done to find out whether a lady is single and therefore can be married or declares one’s intention.

After one's intention has been accepted he proceeds to pay an amount of money to the lady to sew dresses or clothes which when she puts on will mean that someone has placed his hand on her.

Later, a day is fixed for the man to pay the marriage dowry plus an assortment of items to the lady's parents. Finally, the gentleman weds the lady and takes her to his home to begin a new life.

A few of the candidates answered the question as expected, but the majority of them only defined marriage, wrote a little about the reason why people contract it and dwelt extensively on courtship as a process.

### **Question 3**

**(a) Discuss the role of a minor character in the novel *Nam4ale*.**

Candidates were to discuss the role of Nuumo Wul4m4, a minor character with a major role in the novel.

In commenting on Nuumo Wul4m4's role, candidates were expected to mention among other things that as chief priest, he always said opening and closing prayers at all traditional meetings.

Besides he was a peace broker and that anytime a misunderstanding arose among members of society, especially the elderly, he was there to make sure peace prevailed. His magic statement, "*Any1mim1i, n4 shi ni w4tara 11, ejeee shw1m4 sane. Ejeee adesa ko nilee naa nitsum4. Ny1naa hem4k1yeli k1k1 ak1 w4baaye kunim*" always did the trick.

Also, he fortified Tawia Apiajei, the main character spiritually before he set off for the Proverb Usage competition.

Furthermore, he offered good counsel to all and sundry and performed rituals on regular basis to cleanse Booba.

Only a few of the candidates were able to answer the question along this line. The majority of candidates could only talk about the general function of a Wul4m4 (Chief Priest), which is offering of libation.

### **Question 4**

**(a) Discuss the plot of the novel "*Nam4ale*" sequentially.**

It seems the majority of candidates had not read the novel well, so they could not answer the question adequately. A few, though, answered it as expected.

Candidates were required to begin the summary with a brief history of the people of Booba and Yoomoma; their origin, settlement, occupation, etc. They were to comment of their peaceful co-existence and unity. In fact, the secret behind their oneness. Then

comes the establishment of a paramountcy for the two towns and the qualification for occupying the stool.

Also worth mentioning is the inability of the elders of Booba to come out with a suitable proverb, till Tawia Apiajei volunteered to provide one. He was lucky to have met an old woman in the bush one day when he was on a hunting expedition. The wonderful woman gave Tawia the needed proverb which would win the stool for Booba.

Tawia heeded to the instructions from the old woman, and on the D-day after undergoing some purification and fortification rites, he delivered the proverb which could not be explained by the people of Yoomoma`.

Tawia's heroic exploits earned him the Asafoiats<sup>1</sup> of Booba with the stool name, Asafoiats<sup>1</sup> Tawia Nam<sup>4</sup>ale.

### Question 5

- (a) **Discuss two major themes of the drama *M4 ko n4 leebi*.**  
(b) **Explain four literary expressions as used in the drama.**

- (a) Candidates were expected to discuss two themes of the drama "*M4 ko n4 leebi*" and explain given expressions/statements.

Most of the students who answered this question performed badly. Either they had not read the set book or did not pay attention in class. However, they were able to explain the expressions/statements.

Theme 1: It pays to be patient – Otobia listened to bad advice from her friend, Lamile and left Saka, the husband. She then became a call girl and on one of her expeditions her 'lover' for that night nearly killed her. Though she was saved by three good Samaritans, her life became miserable. She regretted and went to beg Saka to take her back, but to no avail.

Theme 2: Vengeance is the Lord's or simply, forgive your offenders always. – Ataa Ado brought an orphan to reside with them in his house. In fact, the boy, by name Ayikwei was Ataa Ado's relation. His wife, Am<sup>1</sup>lle did not like the idea of Ayikwei staying with them. So she mal-treated him and finally forced him out of the house. God blessed Ayikwei and he became wealthy. A rich man willed his properties and wealth to him. Am<sup>1</sup>lle, the aunt who sacked him from their house became poorer and poorer and homeless so she approached Ayikwei for assistance. Ayikwei forgave her and accommodated her in his house.

- (b) Meanings: For example, "*~mInI'l abaana akI obleku yI awushi*" meaning "*Ebaay<sup>4</sup>se akI eko jo<sup>4</sup> fe eko loo m<sup>4</sup> ko yI hewall fe m<sup>4</sup> ko*".

"*Jee gbi kome aj<sup>44</sup> miI fII*" meaning "*M4 ko n4 leebi, ni m4 ko n4 gbIkI*".

### Question 6

This was a context question which comprised three subquestions:

- (a) **Who made the statement and who was the addressee?**
- (b) **When and where did this interaction take place?**
- (c) **State the outcome of this interaction.**

The majority of candidates who answered this context question were able to mention the speaker, the place the statement was made and the addressee.

But they woefully failed to discuss the outcome of that statement. They were to explain that the statement served as a catalyst to Otobia by refusing to heed to her husband's plea to return to her matrimonial home.

She divorce the husband and became a prostitute and when she realized that the husband had become rich, she went to beg him to take her back. But he refused her re-entry and she became dejected and wretched.

### Question 7

- (a) **What is the theme of the poem “~maa Yi EyI”?**
- (b)
  - (i) **What is the mood of the poet?**
  - (ii) **Quote a line from the poem to support the response.**
- (c) **State any three structures of the poem.**

A fair number of candidates could neither state the theme of the poem nor the mood of the poet. Because they could not state the mood, they were not able to come out without any quotation.

However, some of the candidates were able to indicate the three aspects of the structure of the poem but could not discuss them.

They were to give an answer like: she/he used figures of speech to emphasize a point or throw more light on a fact.

The poem was written in verse and in lines to attract people to it and making the reading easy. Most of the candidates only mentioned the aspects and left out the explanations.

### Question 8

- (a) **What is the theme of the poem “~maa Yi EyI”?**
- (b) **State any three structures of the poem.**
- (c) **Discuss the function of each of the following literary devices as used in the poem.**

Some of the candidates could not state something like: ‘*Be cautious with whatever you do*’ or ‘*Don’t sit down idle and expect manna to fall into your hands*’ as the theme. They wrongly mentioned *Aflimata* as the theme.

Candidates also failed to discuss the structure of the poem as they did in answering 7(c). Candidates were able to pick examples of the two literary devices from the verse, but could explain them.

For example, '*g4bi, g4bi, g4bi*'. The poet used it to show how that particular bird picks food items from the ground and eats them.

# GONJA 1

## **1. GENERAL COMMENTS**

It was observed from candidates' performance that the standard of the paper was high. It covered all aspects of the syllabus and comparable to that of past years' papers. The questions were clear and in simple language. Candidates' answers indicated that there were no ambiguous questions.

Compared to previous years' performance of candidates, it can be said that this years' performance was a bit lower than that of last year in terms of average performance. This year fewer candidates scored zero as compared with the past two years. It was observed that more candidates scored above eighty-five than was the case in the past two years.

In addition, lesser candidates failed to answer all the questions as was the case in the previous two years.

## **2. A SUMMARY OF CANDIDATES' STRENGTHS**

The following were the commendable strengths observed in candidates' answers:

Firstly, it was found that some candidates tried to use figures of speech like idiomatic expressions and proverbs in their essays. This is good and candidates should be encouraged to do same.

Secondly, more than sixty percent of candidates were able to write and answer all the ten questions which is encouraging.

Thirdly, it was observed that more candidates were able to write up to the required number of words in the essay. Even though more than fifty percent of the candidates wrote less than the five hundred words, the number seems to have increase as compared to previous years.

## **3. A SUMMARY OF CANDIDATES' WEAKNESSES**

Candidates' weaknesses were many and actually affected their performance negatively.

The first weakness was poor spelling. This has been a major problem with Gonja candidates over the years. Every year, reference is made to how poor spelling makes candidates score less for mechanical accuracy. But is seems nothing is being done to improve students' spelling.

For example, words that are supposed to be one are separated while words that are supposed to be separated are written as one word. Words like '*benimu*', '*adamta*' are written as '*be nimu*' and '*a damta*'. Also, '*kuw4r4ma*' is not one word but should be written as '*ku w4r4 ma*', etc.

The second weakness is that some candidates start writing their essays very well and in the middle they fix in some portions of the comprehension passage.

Finally, it was observed that some candidates cannot read and comprehend.

#### **4. SUGGESTED REMEDIES**

It will be good for teachers to build a word bank on the board or on a chart for students to learn to write words correctly. Secondly, more spelling drills and vocabulary building activities could be used to help improve candidates' spelling.

Candidates should also be given more essay writing exercises to assist them write good essays. They should also be educated to desist from copying portions of the comprehension passage as part of their essays.

Finally, teachers should use the Directed Reading Activity (DRA) method where they put questions on the board and give students a passage and make them read to the end of a paragraph where they can find the answer to a question. This will assist students to read and understand.

#### **5. DETAILED COMMENTS**

##### **Question 1**

**Discuss four (4) causes of corruption in Ghana and suggest four (4) ways of curbing the situation.**

This required the candidate to give four causes of corruption in Ghana and four solutions to the problem.

Only about ten percent (10%) of the candidates attempted this question. Out of that number, only about forty percent (40%) was able to give and explain very well the causes of corruption and ways to curbing it. The lack of jobs and school drop-out problems. This question was not well executed as expected.

##### **Question 2**

**You are the head prefect of your school. Write a letter to your school's headmaster and tell him about four (4) problems that affect students in the school.**

The candidate was expected to write a letter to the Headmaster of his/her school as the school prefect telling him/her about four problem facing the students of the school.

This was the most popular question among the candidates. About seventy percent (70%) of the candidates attempted this question. out of that number about sixty percent (60%) was able to give the four problems facing the students in the school. The only problem

was that about thirty percent (30%) of that number could not write up to the required number of words. This question was better dealt with than the other three.

### **Question 3**

**Write a speech to be delivered to a Youth Association in your community on the topic “The benefits of environmental cleanliness in the community”.**

This demanded the candidate to write a speech on the topic. ‘The importance of sanitation and keeping the environment clean’. With this question only about fifteen percent (15%) of the candidates attempted it. About five percent (5%) of that number followed the requirement of speech writing. The rest only wrote the title and went ahead to give the importance of sanitation and keeping the environment clean. However, most of them about eighty percent, managed to give good points on the topic.

### **Question 4**

**Write a story that ends “Once bitten, twice shy”.**

With this question, only about five percent (5%) of the candidates wrote the story which was to end with the proverb, “once bitten, twice shy”.

Out of that number about seventy percent tried to write a story but in most cases the stories did not relate to the proverb. This question was not well answered.

### **Question 5 - Translation**

This was the translation passage. It was observed that about fifty percent (50%) of the candidates did well to score above ten (10) out of twenty. The rest could not do faithful rendering of the passage. Another thing that affected the translation was poor spelling. Some of the candidates could not translate words like ‘dormitory’, ‘gate’, ‘cricket’ and wrote them down like that. The question was fairly answered.

### **Question 6 - Comprehension**

It was found out that many of the candidates, about fifty percent (50%), could not read and understand what the passage was about. As a result that number could not answer many of the questions. The highest mark was fifteen out of twenty while about twenty percent (20%) scored less than five (5) out of twenty.

### **Question 7**

- (a) Explain the following: Voiced consonants and Voiceless consonants**
- (b) Write down four voiced consonants and four voiceless consonants of your language.**
- (c) With two examples of words each, demonstrate the distribution of the following consonants in your language: [ s ] and [ m ].**

With this question, the candidate was required to explain ‘voicing’ and to give examples of voiced and voiceless consonants. It was observed that about seventy percent (70%) of the candidates did not know the difference between voicing in consonants and how vowels are produced. They mixed consonants and vowels in the examples they gave. The question was poorly answered. This is a clear indication that teachers are not able to help students in the understanding of the area of phonetics of the language.

### **Question 8**

- (a) What is syllable?**
- (b) State four types of syllable structure in your language.**
- (c) Give two examples each of the four syllable types.**

This question asked the candidate to define a syllable and to give the types of syllabus structure and give four examples of the four types.

What was observed was that about sixty percent (60%) of the candidates could not tell what a syllabus is. Also, they did not have an idea about the syllabus structure of the language. This number gave open and closed syllabus as the structure. The question was poorly answered.

### **Question 9**

- (a) Indicate the word class of the underlined word in each of the following sentences.**
- (b) State the function of the underlined words in each of the following sentences.**

The candidate was expected to identify the word class of the words underlined in sentences. Strangely enough about eighty percent (80%) of the candidates failed to answer this question as expected. They could not identify adjectives, verbs and even pronouns in sentences. Candidates scored very poor marks in this question.

### **Question 10**

- (a) What is a clause?**
- (b) With two sentences each, give examples of the following clauses:**
  - (i) Declarative clause**
  - (ii) Imperative clause**
  - (iii) Adverbial clause**
  - (iv) Adjectival clause**

With this question, the candidate was to define a clause and to give examples of main clause and minor clause in different types of sentences. Unfortunately, more than seventy percent (70%) of the candidates who answered this question could not define a clause. They also failed to give the required examples for main and minor clause. It seems teachers are not able to explain the whole concept of clause and the various aspects related to it. They scored low marks in it.

## **GONJA 2**

### **1. GENERAL COMMENTS**

Like the previous years, the question paper was divided into two main sections. The questions in all were eight and the candidates were required to answer four.

The first section or Section 'A' had two questions; one on customs and the other on oral literature. The candidates were to answer one. The second section or section 'B' on the other hand, was divided into three parts based on prose, drama and poetry. Each of these parts consisted of two question and the examinees were to answer one. This paper covered topics from the WAEC examination syllabus.

Comparatively, the candidates performed better in this paper than the previous years.

### **2. A SUMMARY OF CANDIDATES' STRENGTHS**

Some of the candidates put up excellent performance in answering questions from parts 1 and 2 of section B. In other words, they were able to answer the prose and drama questions vividly.

Teachers should continue to encourage their students to study the set books prescribed for the course by WAEC.

### **3. A SUMMARY OF CANDIDATES' WEAKNESSES**

The candidates, however, encountered problems in answering questions seven and eight of the paper. These were poetry questions on "*Gha` Kuliso*" and "*Bomion Adama Pibi*". The students could not discuss the theme, structure and literary devices in the poems well.

### **4. SUGGESTED REMEDIES**

Candidates should be encouraged by their teachers to study the eight selected poems from the set book prescribed by the WAEC.

### **5. DETAILED COMMENTS**

#### **Question 1**

- (a) What is a folktale?**
- (b) Discuss the structure of a folktale.**
- (c) Give four importance of folktales.**

This was a question on folktales. It had three subquestion; (a), (b) and (c) respectively. In subquestion (a), candidates were expected to explain what ‘folktale’ means. It is a form of oral literature which originated long ago and is used for entertainment. Folktales also educate and inform.

Subquestion (b) deals with the procedure of storytelling. Culturally, stories are told at night when all house chores have been done by children.

The process starts with riddles. During this period, participants ask riddles and give their responses. They do so as they wait for others. An example of such riddle is, ‘*Pise, pise, yarr!*’ The response to this riddle is that the dog does not brush its teeth but they are white.

The second part is termed the “killing of animals”. This helps to determine who tells the first story. The one who chooses the head of the smallest animal, that is, the ‘ant’ begins the process of storytelling.

Beginning a story: Some people begin a story with a question such as ‘Do you know why the wolf lives in the bush’ others start a story with phrases like ‘Long, long ago ...’ or ‘Once upon a time ...’

Interpolation: Some stories have songs. At a point he narrator sings the song while the audience respond and dance.

Conclusion: A narrator may conclude his/her story by giving an answer to the question he/she asked at the beginning of the story e.g. ‘That is why the wolf now lives in the bush’.

The candidates were also asked to discuss three functions of folktales. These are some functions of folktales;

- (i) They are used to teach children good morals.
- (ii) Folktales are also used to entertain and educate people.
- (iii) We use folktales to explain the origin of some events.

## **Question 2**

- (a) What is traditional marriage?**
- (b) Give three reasons why people marry**
- (c) Discuss three rites performed in the marriage process.**

This is a question on culture. It is precisely on marriage. The candidates answered the question very well.

In the first place, the candidates were required to explain the term marriage. A couple is said to be married when the man has followed the customary rites known as 'Woyonio' or 'K4ltakoshi' in Gonja to get a woman to his home.

In the second part, the students were to discuss the benefits of marriage in three ways. Examples of such benefits include the following:

- (i) Bearing of children. This is a very important benefit of marriage.
- (ii) Respect is also another benefit of marriage. People who are married are given much respect in the society.
- (iii) Marriage also unites the couple and their families. It goes beyond the family level to the society as a whole.

### **Question 3**

**(a) Discuss the role of the major character in the novel.**

The candidates were asked to discuss the role of the main character in the play. The major character is Gb1adese. The role of Gb1adese during the dispute between his two wives. The senior wife, Edo`b4n1 was banished from the village following the order by the Chief. The warriors deceived Gb1adese and set Edo`b4n1 free. She went and stayed in another village.

Finally, Edo`b4n1 had a daughter called Ny1nb4en4 who Gb1adese expressed the desire to marry. This sent Edo`b4n1 back to Gb1adese house.

### **Question 4**

**(a) Discuss the plot of the novel sequentially.**

This question was well answered by the candidates. It was also a prose question which required the discussion of the plot of the play. The play started when Echintir and her brother, Brakinso deceived the chief that Edo`b4n1 the senior wife was keeping a friend in the village. This made the chief annoyed and he asked for the punishment of the chief deceived him and took Edo`b4n1 to another village. The woman had a child in the village.

Finally, Gb1adese was disappointed when he realized that Ny1nb4en4 was the daughter of Edo`b4n1 and for that matter he could not marry her.

### **Question 5**

- (a) Discuss two major themes of the drama.**
- (b) Explain four literary expressions as used in the drama.**

This was another question which was well answered by the candidates. The students were asked to discuss two major events in the play.

One of the events is how the education of Ntuwe and her brother, Esadi was terminated because their father was interested to become a chief.

Another event in the play is how lawyer Tuntumba defended and won the case in court on behalf of Awodima. Finally, Awodima had to kill himself because he did not belong to the royal family and therefore could not be a chief.

### **Question 6**

This was a context question which comprised three subquestions:

- (a) Who made the statement and who was the addressee?**
- (b) When and where did this interaction take place?**
- (c) State the outcome of this interaction.**

It was a drama context question based on this, “*Ku ma` lubi ... nko n na` foe ekpa?*”

The question was well answered.

The answers to the question are as follows:

- (a) It was lawyer Tuntumba who said so. He was speaking to Awodima.
- (b) He said so at the time he visited Awodima in his house and Esaedi presented him water in a calabash.
- (c) The lawyer said this because of two things;
  - (i) to make Awodima aware that it is culturally right to drink water from the calabash;
  - (ii) he had earlier made a remark about Shamoya which was not correct.

The candidates answered the question very well.

### **Question 7**

- (a) What is the theme of the poem?**
- (b) (i) What is the mood of the poet?**  
**(ii) Quote a line from the poem to support the response.**
- (c) State any three structures of the poem.**

The first poem in this part is “Gba`kuliso”. Three subquestions were asked on the poem.

- (a) The candidates were to identify the theme of the poem. The theme is, patience moves mountains”. It encourages people to be patient and investigate whatever they hear.
- (b) The poet was in a worried and helpless situation.
- (c) The students were required to discuss the structure of the poem.

In discussing the structure, the candidates need to talk about the following features:

- (i) Length and number of stanzas: The poem is made up of twenty five lines. It is divided into three stanzas. The first stanza being the longest followed by the second and third respectively.
- (ii) Repetition: In the poem, repetition is used to bring out more vital information like this:
  - “Nkuli ma` wale bi
  - Nkuli bee bure kade
  - Nkuli bee jajl esa be ashe`
  - Nkuli bee ta esa a da`i kelldaso”

The candidates could not answer this question well.

### Question 8

- (a) **What is the theme of the poem *Bomin Adama Pibi*?**
- (b) **State any three structures of the poem.**
- (c) **Discuss the function of each of the following literary devices as used in the poem.**

The title of the poem is “*Bomin Adama Pibi*”. It had three subquestions. The candidates poorly answered this question. They needed to answer the question this way:

- (a) The theme is “ungratefulness”. It talks about how people are sometimes ungrateful when they are kindly treated.
- (b) The structure of the poem takes this form.
  - (i) Lines – The poem is made up of twenty five lines
  - (ii) Stanzas – It has four stanzas. The second stanza is the longest followed by the first, third and fourth in that order.
  - (iii) Repetition – The poet uses repetition in the poem to emphasize on important views. An example of repetition in the poem is:
    - “*Bomin Adama Pibi*
    - Bomin Adama Pibi*
    - Bomin Adama Pibi*”
- (c) Literary devices are also used in the poem to reveal certain feelings by the poet.
  - (i) Repetition – This is a device which brings out the feelings of by the poet
  - (ii) Exaggeration is also used in the poem to show the intensity of events.

# KASEM 1

## **1. GENERAL COMMENTS**

This year's paper compared favourable with that previous years especially in terms of scope clarity as well as content. It tested the various aspects of language work as prescribed by the syllabus.

Candidates performed quite fairly in the essay writing and comprehension, but far below standard in terms of the translation and language structure.

## **2. A SUMMARY OF CANDIDATES' STRENGTHS**

- (1) Detailed materials – Most of the candidates provided relevant or valid ideas or points to discuss and develop their essays or answers. They used the required maximum number of words and sometimes exceeded in order to provide the necessary responses to their chosen topics.
- (2) Paragraphing: In most of cases, candidates need to be commended for paragraphing their appropriately.
- (3) Titling of topics: Most candidates titled their chosen topics appropriately; the titles given to their chosen topics were quite good.
- (4) Suitable responses: Candidates provided suitable or valid alternative responses or answers which were not considered in the marking scheme.
- (5) Introduction and conclusion: Most of the candidates were able to offer relevant notes on their introduction and conclusive ideas to their chosen essay topics.
- (6) A few candidates demonstrate a level of maturity in their responses to most of the questions.

## **3. A SUMMARY OF CANDIDATES' WEAKNESSES**

- (1) Poor spelling: the problem of very poor spelling of some words exist in candidates work. Candidates bad spelling were very appalling. Even words used in the questions were wrongly spelt by candidates.
- (2) Very poor punctuation: candidates seem to have no idea at all about this aspect of language work. They even start sentences and proper nouns with small letters. This is rather appalling to behold. Candidates do not know where to put a full stop to an idea (sentence) and when to start with a new sentence, using a small letter, such as 'navrongo' for 'Navrongo', etc.
- (3) Word division: This also continues to be a problem. Examples "p4" for | pa – o |; "yerane" for | yera ne |; "yira" for | yi da |, etc.
- (4) Wrong use of | ye | over use of this linker "and", making it to continue constructing long sentences.

#### 4. **SUGGESTED REMEDIES**

- (1) Language teachers may make good use of the Kasem Orthography book. This help to correct the wrong spellings. They may also give dictation drills and reading competition to students.
- (2) Regarding to punctuations, candidates need to be taught seriously. They can even transfer knowledge from English language lessons.
- (3) Teachers may help students to be able to identify words division.
- (4) Students should know the use of this linker | ye | (and), so as to avoid using it to construct long sentences without full-stops.

#### 5. **DETAILED COMMENTS**

##### **Question 1**

**Discuss four (4) causes of corruption in Ghana and suggest four (4) ways of curbing the situation.**

This topic attracted few candidates. Those who opted for it did justice to it. They had good introductions. Candidates attempted to give definitions to the topic. They conceded that Ghana is a rich country in the African continent but due to corruption only few people enjoy at the expense of the vast majority of its citizens.

Candidates included poverty, greed and fact that the rule of law does not work in the case of the ruling class. These facts, though were not captured in the marking scheme, also aid the advancement of corruption in the country. Illiteracy was also cited as a cause, since the majority of Ghanaians do not have high level of education to challenge the wrong doings in the society.

Candidates performed well on the topic as a whole.

##### **Question 2**

**You are the head prefect of your school. Write a letter to your school's headmaster and tell him about four (4) problems that affect students in the school.**

This was a straightforward question which demanded the candidate to identify four problems that are experienced in the school and solicit the intervention of the head of the school to bring about changes that could possibly raise learning standard of the school.

A large number of candidates opted for this topic. Most of them performed very well. Candidates' ideas or facts also included the following:

- (i) the teaching staff are not enough;
- (ii) inadequate classroom accommodation;
- (iii) lack of water/poor lighting system;

- (iv) use of phones by students;
- (v) immorality among students and teachers, etc.

As expected, candidates used formal language and observed the normal features of letter-writing. Candidates virtually appealed to the head of the school to look into the problems presented and contact the appropriate quarters for help to solve some, if not all. They also pleaded with the headmaster to work hard to enable the teachers to be more accommodating and friendly on campus.

### **Question 3**

**Write a speech to be delivered to a Youth Association in your community on the topic “The benefits of environmental cleanliness in the community”.**

This topic did not appeal to a good number of candidates. The few candidates who chose it did their best to perform a little above average. Candidates followed the usual features of speech delivery; they addressed the chair and observed protocol accordingly. Candidates attempted to define the theme of the topic.

After enumerating the benefits of cleanliness in general, candidates continued to appeal to the target group in the community to unite and bring on ideas and suggestion that could help to make the community a good place to live in and to attract strangers to visit and possibly to stay with them. The youth should eschew laziness and negative practices. They should construct places of convenience in the community and always keep it neat and tidy. They provided good and suitable conclusions.

### **Question 4**

**Write a story that ends “Once bitten, twice shy”.**

This topic also attracted only few candidates. It required the candidate to narrate an episode that ever occurred in one’s life that needs bringing up to mind and to end with the saying.

Incidentally, candidates only created stories between two individuals. These stories portrayed the characters being friends and lastly, one cheating the other, making the cheated one to end up regretting, hence saying it should not be so any more.

In some cases, the characters involved folktale known ones such as the Hare and the Wolf (one being wise and the other a fool). No candidate wove the story the story around one’s own experience as expected.

### **Question 5 - Translation**

The candidate was presented with a passage written in English and expected to render it into the Kasem language. He was to give faithful rendering and to capture all ideas the passage which should not be less than fifteen (15) in all. About half (½) of the candidates were able to perform quite well. Others had to re-cap words or expressions in English from the given passage as they seemed not able to give the equivalence in Kasem.

### **Question 6 - Comprehension**

The candidate was expected to read through a passage carefully and answer ten questions from the given passage. The questions were based on recall, inference, grammar, meaning, literary and summary – (a – j).

Most of the candidates were comfortable with the questions that tested recall, meaning, inference and the summary. Half of the number of candidates also gave correct responses to the literature item. The grammar item posed a serious problem. Candidates seemed to have no idea the expression (noun phrase clause) “*N4n-k4g4 kolo maama na su da to*”. The function, etc.

- (i) Yere: Yere tachei`i (noun phrase)
- (ii) Toto`e: taam-kugu (subject)

On the whole candidates fared well.

### **Question 7**

- (a) **Explain the following: Voiced consonants and Voiceless consonants**
- (b) **Write down four voiced consonants and four voiceless consonants of your language.**
- (c) **With two examples of words each, demonstrate the distribution of the following consonants in your language: [ s ] and [ m ].**

Candidates gave scanty definitions an indication that they did not have enough knowledge about the topic. Part of subquestion (b) required the candidate to provide the voiced consonants. Most of the candidates did not find this easy. The (c) part of the question 7 demanded the candidate to show the distribution of the consonants | s | and | m |. Few candidates fared well in this area.

### **Question 8**

- (a) **What is syllable?**
- (b) **State four types of syllable structure in your language.**

- (c) Give two examples each of the four syllable types.**

The candidate was required to define syllabus in Kasem. Candidates could not convince anybody that they knew what a syllable is. They were expected to state simply that it is a part of a word; it is a phoneme that cannot be broken into any more parts, etc.

The (b) part of the question demanded the candidate to show the structure of the syllable in Kasem. A lot of candidates failed in this test.

Candidates who provided the correct responses to the (b) test item also gave satisfactory responses to the (c) test item. This demanded the candidate to show the syllable structure in word formation. Generally, candidates' performance on this question was quite below standard.

### **Question 9**

- (a) Indicate the word class of the underlined word in each of the following sentences.**
- (b) State the function of the underlined words in each of the following sentences.**

In subquestion (a), ten sentences were listed with underlined words and the candidate was expected to identify their word-classes. These included adjectives, adverbs, linkers, nouns and pronouns. The part (b) demanded the candidate to identify the functions of some underlined phrases in five (5) sentences. These included subject (taam-kugu), direct object (taamnaga), indirect object (gaale n k1 taamnaga), subject complement (taamnaga taam-kugu/taam kugu ta-naga), object complement (taamnaga gurinu).

The majority of candidates who chose this question performed better in the (a) area than the (b) one. Most of the candidate had no pure idea about the functions of various phrases.

### **Question 10**

- (a) What is a clause?**
- (b) With two sentences each, give examples of the following clauses:**
- (i) Declarative clause**
  - (ii) Imperative clause**
  - (iii) Adverbial clause**
  - (iv) Adjectival clause**

The candidate was expected to give an accurate definition of a clause in the Kasem language. Candidates' responses were very scanty and as such did not meet the exact requirement.

Equally, the (b) side of the question did not favour the candidates. Some four types of clauses were given to the candidate to show two clauses of each of the clause types. Candidates seemed to have no idea at all about the topic. Only a few candidates attempted this question but did not perform well as all.

## KASEM 2

### **1. GENERAL COMMENTS**

The standard of the paper compared favourably with that of previous years. The performance of candidates, however, was poor as compared to that of last year.

### **2. A SUMMARY OF CANDIDATES' STRENGTHS**

Candidates performed well in the questions whose answers were recall.

### **3. A SUMMARY OF CANDIDATES' WEAKNESSES**

Candidates could not read the literature books. This is exhibited in their spellings and sentence structures which were rather poor. In some answers, simple sentences and phrases were written as answers. Some candidates used single words to answer questions. These practices were common.

Word division was poor, e.g. 'dedwo`i' written as 'di do`i', 'banto' written as 'bam to', etc. Vowel harmony, a prominent feature in Kasem was ignored by most candidates. Candidates did not know what theme is or the structure of a poem.

### **4. SUGGESTED REMEDIES**

Candidates should read and study the literary books in detail so that they can answer deductive questions. Candidates should not merely read the books as if they are reading them for pleasure, which they did.

### **5. DETAILED COMMENTS**

#### **Question 1**

- (a) What is a folktale?**
- (b) Discuss the structure of a folktale.**
- (c) Give four importance of folktales.**

A folktale is a narrative that depicts human behaviour in which living and non-living things behave and act like human beings. A story has a beginning, middle and end. The benefits include children learn how to talk, teaches good morals, promotes socialization, etc.

Candidates stated that a story is a conversation between people in which one listens and the others talk. The majority of candidates were able to state the structure but many of

them wrote words/phrases, e.g. ‘Bobo’ – beginning, ‘tetane’ – middle, ‘Iwola’ – end. Answers to the (c) part was satisfactory.

### **Question 2**

- (a) What is traditional marriage?**
- (b) Give three reasons why people marry**
- (c) Discuss three rites performed in the marriage process.**

Marriage is an agreement between a man and a woman to stay together with the concern of both families after traditional rites are performed. Kasenas marry because of sex, work, respect, children, etc. The steps include making intensions (male) to the girl’s parents, courtship, marriage announcement, feasting by in-laws, dowry, etc.

Candidates put down points without explaining them. Some answers are one word, e.g. charem (courtship), kayi diri (feast by in-laws), etc. Candidates described the English marriage system where the two families must agree before the marriage takes place, whereas in Kasena culture, many suitors can court the girl but she marries one of them. Items like drink, yam and kola are not used in courtship but they were named as items of courtship. Stages of marriage were not coherently mentioned in order of occurrence.

### **Question 3**

- (a) Discuss the role of the major character Kawuri in the novel.**

These activities include the following; she could do most work of women at an early age; she wanted her brother to marry before she would marry; forced her brother to cut her hand; she wears long dresses; she leaves her husband’s house at midnight to escape insults, etc.

Candidates described who Kawuri is with the word ‘ye’ (is) instead of stating what she did. Events were written disjointedly and also full of half-truths and unintelligible.

### **Question 4**

- (a) Discuss the plot of the novel sequentially.**

A few candidates answered this question and most of them did well.

### **Question 5**

- (a) Discuss two major themes of the drama.**
- (b) Explain four literary expressions as used in the drama.**

Candidates were asked to give two themes of the drama and also give the meaning of some literary devices.

Answers: Long ago, excision was good but it is not today; rival wives do not like each other, etc.

Candidates did not answer the (a) part (themes) but they answered the second part very well.

### **Question 6**

This was a context question which comprised three subquestions:

- (a) Who made the statement and who was the addressee?**
- (b) When and where did this interaction take place?**
- (c) State the outcome of this interaction.**

The (a) and (b) parts were answered very well. Candidates summarized the answer for (c) and their answers mentioned two or three things only when five things were demanded.

### **Question 7**

- (a) What is the theme of the poem?**
- (b) (i) What is the mood of the poet?**  
**(ii) Quote a line from the poem to support the response.**
- (c) State any three structures of the poem.**

Theme: There is no one who is not in need of something, etc. Mood: The poet was happy.

Structure: three verses, twenty-four (24) lines, assonance, alliteration, repetition, etc.

Candidate's answers were phrases or dependent clauses instead of sentences. The (b) was nicely answered. The answers given by candidates for subquestion (c) were morals learnt from the poem instead of the structure.

### **Question 8**

- (a) What is the theme of the poem?**
- (b) State any three structures of the poem.**
- (c) Discuss the function of each of the following literary devices as used in the poem.**

Subquestion (a): a prince is recognized in a crowd, etc. (a) one verse, fifty-two (52) lines, literary devices.

Candidates did not know the theme of the poem. They could not describe the structure of the poem. However, candidates were able to discuss the literary devices as used in the poem.

## **NZAMA 1**

### **1. GENERAL COMMENTS**

The standard of the paper was comparable to that of previous years and was well within the scope of the syllabus. Candidates' performance have generally improved this year as compared to the previous years.

### **2. A SUMMARY OF CANDIDATES' STRENGTHS**

- (1) Candidates' understanding of the questions was very evident in their performance.
- (2) Their performance in the essay question was very encouraging. The majority of them satisfied the required number of words and their ideas and thoughts were organised in clear and coherent language.
- (3) Most candidates were able to answer the comprehension questions in their own words which shows that they actually read and understood the passage.

### **3. A SUMMARY OF CANDIDATES' WEAKNESSES**

- (1) Most candidates still have problems with correct spellings, grammar, punctuation, etc. and therefore score zero in the mechanical aspect of the essay.
- (2) Poor handwriting and word boundary makes difficult to read and understand what some candidates write.
- (3) Instead of translating ideas, some candidates did literal translation of the individual words and therefore lost the import of the message being conveyed.

### **4. SUGGESTED REMEDIES**

- (1) Candidates should be taken through regular dictation exercises in order to overcome their problem with spellings, grammar, punctuation, etc.
- (2) Candidates should be given more exercises in translation to be familiar with the rules of translation. E.g. they should be made to know that they are to translate ideas and not the meanings of the individual words.
- (3) Candidates should be given proper training in good handwriting and word boundaries in order to avoid illegible answers.

### **5. DETAILED COMMENTS**

#### **Question 1**

**Discuss four (4) causes of corruption in Ghana and suggest four (4) ways of curbing the situation.**

Most candidates attempted this question and did well by identifying causes such as the lust to get rich quick, inadequate remuneration for workers, excessive demands from family members/society/institutions and the temptation of individuals to live beyond their means as a form of show off. They also suggested some means of curbing the trend such as public education on probity and accountability, severe punishment for offenders, award scheme to be instituted for honest workers, etc.

### **Question 2**

**You are the head prefect of your school. Write a letter to your school's headmaster and tell him about four (4) problems that affect students in the school.**

This question was the choice of most candidates and they did well by identifying problems such as lack of regular supply of water and electricity, accommodation for both staff and students, lack of adequate and suitable teaching and learning materials, lateness and absenteeism on the part of both staff and students, poor feeding, etc.

### **Question 3**

**Write a speech to be delivered to a Youth Association in your community on the topic "The benefits of environmental cleanliness in the community".**

The few candidates who answered this question did well by addressing the dignitaries present and indicated their happiness for the opportunity given them to address the audience. They then outlined reduction in illness and frequent deaths, reduction in expenditure on hospital bills, increase in productivity, good healthy life, increase in the life span of the people among others.

### **Question 4**

**Write a story that ends "Once bitten, twice shy".**

The few candidates who chose this question did well by producing good illustrative stories. However, a few of them produced stories which have nothing to do with the proverb.

### **Question 5 - Translation**

Candidates were asked to translate a given passage from English into Nzema. As a compulsory question, most candidates attempted it and did well by translating ideas. However, some of them did word for word translation and therefore lost the import of the message.

### **Question 6 - Comprehension**

Candidates were to read a given passage and answer all questions based on it. Most candidates did well but some could not answer the inference and grammatical questions. A few candidates who had correct answers but made mistakes in spelling some words thereby losing some precious marks as a result.

### **Question 7**

- (a) **Explain the following: Voiced consonants and Voiceless consonants**
- (b) **Write down four voiced consonants and four voiceless consonants of your language.**
- (c) **With two examples of words each, demonstrate the distribution of the following consonants in your language: [ s ] and [ m ]**

Candidates were asked to explain the difference between voiced and voiceless consonant sounds and give four examples of each. They were also to show how the consonants [ s ] and [ m ] are distributed in the Nzema language with two examples in each case.

Candidates who attempted this question performed abysmally. Most of them did not know that voiced consonants are produced when the vocal cords vibrate in the course of production and voiceless ones are produced when they do not vibrate. As a result, some of them could also not give the correct examples. Most of them were, however, able to show how the consonants [ s ] and [ m ] are distributed.

### **Question 8**

- (a) **What is syllable?**
- (b) **State four types of syllable structure in your language.**
- (c) **Give two examples each of the four syllable types.**

Candidates who attempted this question could not satisfy its requirements. Some candidates confused the term syllable (1n111kp4k1) with tone (1nel1). They could also not identify the syllabus types which include vowel alone (V), consonant and vowel (KV), lengthened vowel (V:), consonant and lengthened vowel (KV:) and nasal consonant (N). They were also to give examples such as V – ako, KV – ako, V: – eeko, KV – kooko, N – nza.

### **Question 9**

- (a) **Indicate the word class of the underlined word in each of the following sentences.**
- (b) **State the function of the underlined words in each of the following sentences.**

Candidates were asked to identify the word classes of underlined words in given sentences and to identify the functions of phrases underlined in given sentences.

This question was well answered by most candidates who attempted it.

**Question 10**

- (a) What is a clause?**
- (b) With two sentences each, give examples of the following clauses:**
  - (i) Declarative clause**
  - (ii) Imperative clause**
  - (iii) Adverbial clause**
  - (iv) Adjectival clause**

Candidates who attempted this question also did well.

## NZEMA 2

### 1. GENERAL COMMENTS

The standard of the paper was good and compared favourably with that of previous years. Generally, the performance of the candidates was encouraging. It was on the same level as compared to that of the previous years.

### 2. A SUMMARY OF CANDIDATES' STRENGTHS

Some of the candidates provided mature responses; evident that they had prepare for the paper. Significant among them was correct themes for the poems they attempted. Additionally, most of the candidates were able to give and explain the importance of marriage.

### 3. A SUMMARY OF CANDIDATES' WEAKNESSES

Some of the candidates just provided points in answer to questions that needed to be discussed or explained in full.

With respect to the question on folktales, most of the candidates could not discuss the correct structure of a folktale.

On written literature, most of the candidates could not satisfy the points for the structure of a poem. Some gave only the points and failed to explain them or exemplify them.

### 4. SUGGESTED REMEDIES

Candidates should be carefully taken through the procedure for answering question generally. Teachers should teach their students how to answer question son written literature most especially discussing the structure of poems and the plot of a story.

Teachers are entreated to give their students more exercises in this area of study, mark them and discuss them well with the students.

### 5. DETAILED COMMENTS

#### **Question 1**

- (a) What is a folktale?**
- (b) Discuss the structure of a folktale.**
- (c) Give four importance of folktales.**

The candidates were required to explain a folktale, discuss its structure and give four importance of folktales.

Expected answer:

- (a) A folktale is a story circulated by word of mouth has among a group of people. It usually has animals and insects as the characters. A folktale has no author and has a specific structure and a moral.
- (b) Structure of a folktale
- (i) Opening: opened with the expression “*Akono o yia...! Oo yia ...!*”
  - (ii) Body: the story itself.
  - (iii) Conclusion: the moral is given. “*Yem4 a le. Asalada konwu...!*”
  - (iv) End: Another person is invited to tell a story with the expression, “*Me nw4ra ne saa 4yl fl o ...!*”

Most candidates were able to show what a folktale is. However, the structure was poorly answered. On the importance, only a few stated and explained correctly. Most of them only wrote points and failed to explain them.

- Example:
- (i) It enhances retentiveness
  - (ii) It helps children to be eloquent
  - (iii) It teaches good morals
  - (iv) It is used to entertain, etc.

## Question 2

- (a) **What is traditional marriage?**
- (b) **Give three reasons why people marry.**
- (c) **Discuss three rites performed in the marriage process.**

The question expected candidates to define marriage give three reasons for marriage and discuss three rites performed in the marriage process.

Expected answers:

- (a) Marriage: A relation between a male and a female who have agreed to live together as man and wife, having passed through the required rites with the blessing of both parents and the society.
- (b) Three reasons for marriage:
- (i) for company and support;
  - (ii) for procreation;
  - (iii) for social respect;
  - (iv) prevents promiscuity, etc.
- (c) Three different rites performed.
- (i) K4k4b4l1 – permission to marry the woman (knocking)
  - (ii) Asuazul1 – payment of bride price (evidence that the woman has been legally and customarily married.
  - (iii) At4fol1liela – the traditional wedding

- (iv) Adendual1 – money paid to siblings of the girl
- (v) Ba nli akunlu fal1 – Item given to the mother of the bride.

Generally, most of the candidates were able to meet the demands of the question. However, a few only gave points and failed to explain them

### **Question 3**

- (a) Discuss the role of the major character in the novel.**

The candidates were required to discuss the role of Adwoba Ehwia in the story.

Expected answer:

- (i) In the home serving parents
- (ii) Being with uncle in Tarkwa and schooling
- (iii) Role as a student in Ghana
- (iv) As a student abroad
- (v) Role as a medical doctor
- (vi) Role as a patriotic citizen
- (vii) Role on education of the girl child and on the environment

Most of the candidates who attempted this question were able to satisfy the demands of the question. A few, however, wrote a summary of the story.

### **Question 4**

- (a) Discuss the plot of the novel sequentially.**

Expected answer

- (i) Introduction: The writer used the marriage of the main character which should have ended the story to begin the story.
- (ii) Opening: The story introduces the family of the main character, Adwoba Ehwia.
- (iii) Development: Discusses the main character's schooling both at home and abroad.
- (iv) Conflict: The challenge that the main character went through and that of her parents.
- (v) Climax: The sickness of the main character.
- (vi) Denouement: Antidote found for treatment of main character; meets her lover and marries.

This question was poorly answered with candidates writing a second edition of the story.

### **Question 5**

- (a) Discuss two major themes of the drama.**
- (b) Explain four literary expressions as used in the drama.**

Candidates were required to discuss two major themes of the drama and explain four literary expressions as used in the drama.

Expected answers:

- (a) Themes:
- (i) Maltreatment of other peoples' children in marriage – when !menlebo4 was married to Menwon1 Ay111 she maltreated his children and forced them out of their father's house.
  - (ii) Women abandoning their husbands when they are in financial crises. When Menwon1 Ay111 lost his job and became poor the wife failed to go into farming with her husband and sought divorce.
- (b) Literary expressions and how they have been used in the drama.
- (i) “*Ak411 Izane ky1 ewua nu a 4bolo*” – This proverb was used by Menwon1 Ay111 that life changes with time. He used it to show that since the wife died his life has changed for worse.
  - (ii) “*Nyamenle a kposa ak411 ale1 a*”. – (God takes care of the poor). !menlebo4 gave this proverb when her husband lost his job to assure her husband that God is in control.
  - (iii) “*Maanle nu Iy1 kuma*” – (The world is a dangerous place) – Toab1 said this to advise the children of Menwon1 Ay111 that they should take good care of themselves.
  - (iv) “*...w4 adwenle Idi*” – (You are an intelligent child). This was an expression by Menwon1 Ay111 to acknowledge the fact that his son Ale1f1 was very intelligent in spite of his age.

Most of the candidates were able to give two themes. While some discussed them, some could not. With respect to the literary expressions, the candidates gave their meaning without relating them to the drama.

### Question 6

This was a context question which comprised three subquestions:

- (a) **Who made the statement and who was the addressee?**
- (b) **When and where did this interaction take place?**
- (c) **State the outcome of this interaction.**

In this question, an extract was quoted from the drama with candidates being asked to answer questions on them.

Expected answers:

- (a) The statement was made by Toab1 to Menwon1 Ay111.
- (b) It was made when Menwon1 Ay111 told Toab1 that he intended to marry !menlebo4. It took place at Menwon1 Ay111's house.

- (c) Menwon11 Ay111 went ahead to marry !menlebo4 despite Toab1’s advice. The woman maltreated her husband’s children and they were compelled to leave their father’s house. As a result of the woman’s extravagant way of life, when Menwon11 Ay111 lost his job he became poor. The woman sought divorce.

Subquestions (a) & (b) were well answered. However, candidates gave sketchy answers to the third part and were penalised for that.

### Question 7

- (a) **What is the theme of the poem “Ageege Adendul1”?**  
 (b) (i) **What is the mood of the poet?**  
 (ii) **Quote a line from the poem to support the response.**  
 (c) **State any three structures of the poem.**

Expected answers:

- (a) Challenges that travelers went through on their Ageege trip.
- (b) Sadness and advised against those who want to undertake the trip to Ageege. –  
 “Sia no anzodwol1 1minli Ageebe”  
 “Anr11 Ageege bagele w4 k1 agua”
- (c) (i) Structure: has four stanzas with unequal number of lines.
- (ii) Sentence structure: used simple, compound and complex sentences. E.g.  
 (a) “Ageege adendul1 4”  
 (b) “B1maa me nzule menlua me ahonle”  
 (b) “Saa ...anr11...”
- (iii) Literary expressions  
 (a) Idioms: “*Adendul1 bom a to ...*” used to show the painful struggle travelers went through.  
 (b) Simile: “*Ageege 11kpo k1 twea*”. Used to express the hardships in Ageege.  
 (c) Repetition: “...*b1maa*” used to show the pain they went through, etc.

For the first two parts the candidates were able to satisfy the requirements of the question. However, the part on the structure was poorly answered. Candidates mentioned the features but failed to exemplify them.

### Question 8

- (a) **What is the theme of the poem “Asoo 4bay1 bo1”?**  
 (b) **State any three structures of the poem.**

(c) **Discuss the function of these literary devices: repetition and hyperbole.**

Expected answers:

- (a) Theme: Hardship that Ghanaians went through some time back in their history.
- (b) Structure:
- (i) Stanzas: Six stanzas. Lines in the stanzas are irregular. Some have seven lines and others ten.
  - (ii) Literary expressions:
    - (1) Poet used personification e.g. “*Adell Ilie ehia Idanla zo*” to show the rot in the system.
    - (2) Proverbs: “*M44 ll дума la a blb4 a*”  
  
This was used to show that those known in society were considered in the allocation of essential commodities.
    - (3) Idiom: “*Yem4 bl nzi edw1kl 4*” used to show how people were selfish in the society.
  - (iii) Sound pattern: Assonance – *Awozinli lyl kabii...*
  - (iv) Repetition: “*Asoo 4bayl bol*” was used to end each stanza.
- (c) (i) Use of repetition: The poet ended each stanza with “*Asoo 4bayl bol*” to show the poet’s pessimism in the system.
- (ii) Use of hyperbole: “*Menli lyl fii kl Inweazo Inwea*” used to show the number of people who had queued to buy essential goods.

Candidates were able to handle subquestion (a) well but they failed to exemplify the type of structure used as required by subquestion (b). Candidates could not identify the hyperbole in the poem.

## **TWI (AKUAPEM) 1**

### **1. GENERAL COMMENTS**

The standard of the paper both in structure and content was similar to the previous years' papers. The performance of candidates in the paper also was similar to the performance of candidate in previous years.

### **2. A SUMMARY OF CANDIDATES' STENGTHS**

- (1) Most of the candidates were able to write the composition (Section A) to the required number of work (500).
- (2) Most of the candidates understood the composition topics they selected and came out with good scripts on them. A particular example is question 2 on four problems confronting their school and question 4 on the proverb, once bitten twice shy.
- (3) Candidates understood the comprehension passage and were able to answer almost all the questions on it.
- (4) A few candidates were able to answer the Translation (Section B) as expected of them.
- (5) Many candidates could answer question 7 and 8 (Phonology) to the satisfaction of examiners.
- (6) Candidates' performance in question 9 (Language Structure) was very commendable.

### **3. A SUMMARY OF CANDIDATES' WEAKNESSES**

- (1) Generally candidates' performance revealed weaknesses in Mechanical Accuracy – in the form of wrong spelling, tense, concord and punctuation.
- (2) A large number of candidates were unable to answer question 2(b) on the grammatical name of a selected expression and its function.
- (3) Many candidates were unable to answer the question 2(f) on literary device.
- (4) The distribution of the consonant [ m ] was a great problem – question 7(c)(ii).
- (5) The definition/explanation of syllabus posed a great challenge to many of the candidates – Question 8(a).
- (6) Many candidates were unable to provide all the 4 syllable types in Akan – Question 8(b).
- (7) Question 10 candidates revealed very scanty knowledge about the types of clauses – Question 10(b)(i), (ii), (iii) and (iv).

#### 4. **SUGGESTED REMEDIES**

To improve candidates' performance there should be more exercises in the following aspect:

- (i) Mechanical accuracy – spelling, tense, concord, punctuation, etc.
- (ii) Literary devices
- (iii) Phonology – description and distribution of consonants, articulation of consonants, etc.
- (iv) Grammar – clauses, phrases – i.e. types, examples.

#### 5. **DETAILED COMMENTS**

##### **Question 1**

**Discuss four (4) causes of corruption in Ghana and suggest four (4) ways of curbing the situation.**

Candidates were required to discuss four (4) causes of corruption in Ghana and suggest four (4) ways of curbing the situation.

The demands of the question:

- (i) A good introduction affirming that there is corruption in the country.
- (ii) Body of the composition
  - (a) to discuss four causes of corruption e.g. the 'get-rich quickly' syndrome, inadequate remuneration for workers, insatiable human needs, etc.
  - (b) to discuss four solutions e.g. public education of the negative effects of corruption on the nation, better remuneration for workers, etc.
- (iii) A good conclusion e.g. calling on all to help fight the menace.

Candidates were able to satisfy the demands of the question.

##### **Question 2**

**You are the head prefect of your school. Write a letter to your school's headmaster and tell him about four (4) problems that affect students in the school.**

Candidates were to write a letter to the headmaster of their school about four problems affecting students in the school.

The demands of the question:

- (i) All the formal conventions of letter-writing.
- (ii) Discussion of four problems e.g. inadequate classrooms, water shortage, lack of teachers, teachers' poor attitude towards teaching, poor feeding, etc.
- (iii) Expression of optimism that the headmaster help solve the problems so as to enable students enjoy their stay in the school, etc.

### Question 3

**Write a speech to be delivered to a Youth Association in your community on the topic “The benefits of environmental cleanliness in the community”.**

Candidates were required to write a speech on “the benefits of environmental cleanliness in the community.

Demands of the question

- (i) Introduction – Addressing the chair and acknowledging the presence of distinguished personality at the function.
  - Appreciation to the organisers for the opportunity given him/her
  - Commendation to the organisers for the theme.
- (ii) Body: Benefits of environmental cleanliness
  - Good health
  - Prevention of diseases
  - Reduction of mortality rate
  - Tourist attraction, etc.
- (iii) A good conclusion e.g. a call on all and sundry to help ensure environmental cleanliness within the community, etc.

Candidates were able to discuss the benefits of environmental cleanliness and thus satisfied the demands of the question.

### Question 4

**Write a story that ends “Once bitten, twice shy”.**

Candidates were required to write a story – real or imaginative, to illustrate the proverb “Once bitten twice shy”.

Demands of the question

- (i) Any suitable introduction e.g. a vivid explanation of the proverb.
- (ii) Body: Narration of a story real or imagined, to illustrate the proverb.
- (iii) A good conclusion.

### Question 5 - Translation

Candidates were required to translate a passage from English into Akuapem Twi.

Demands of the question

Candidates were to translate the passage bringing out the main ideas in a very coherent manner. They were required to break the passage into fifteen ideas comprising sentences, clauses and phrases.

The translated version was expected to be as near as possible to the original English passage when translated back.

A few candidates were able to translate the passage as expected. However, many of them were unable to do justice to the question.

### **Question 6 - Comprehension**

Candidates were required to answer ten (10) questions on a given comprehension passage.

Demands of the question

Candidates were required to

- (i) recall some stated facts in the passage – questions (a), (c), (d) and (g)
- (ii) state the grammatical name of a given expressions – (b)(i) &(ii)
- (iii) explain certain idioms/expression – questions (e)(i) & (ii)
- (iv) inference questions – questions (h) and (i)
- (v) title/summary – question (j)
- (vi) Literary devices – Question (f)

Candidates were able to answer all the questions that needed recall of facts. However, they performed poorly on the following:

- (i) grammatical function
- (ii) idiom and meaning
- (iii) literary device
- (iv) title

### **Question 7**

- (a) **Explain the following: Voiced consonants and Voiceless consonants**
- (b) **Write down four voiced consonants and four voiceless consonants of your language.**
- (c) **With two examples of words each, demonstrate the distribution of the following consonants in your language: [ s ] and [ m ].**

Demands of the question

- (a) To state the manner of articulation of voiced and voiceless consonants stating the state of the glottis during their production so as to clearly differentiate between voiced and voiceless consonants. Example

- During the production of voiced consonants the vocal cords get close together so as the speech air forces its way through them, they vibrate hence 'voiced'.
  - During the production of voiceless consonants the vocal cords stay apart so as the speech air passes through them. There is no vibration hence voiceless.
- (b) To give four examples of voiced consonants e.g. [ b ], [ d ], [ g ], [ m ], [ n ], [ ŋ ], [ r ], etc.  
Four examples of voiceless consonants e.g. [ p ], [ t ], [ f ], [ h ], [ s ], etc.
- (c) Explain/discuss the distribution of [ s ] and [ m ] and illustrate same in words.  
Candidates were expected to state that [ s ] occurs at
- (i) word initial position as in [ sua ], [ s4s4 ], [ sika ], etc.
  - (ii) word medial position as in [ as4 ], [ as1m ], [ 4sofu ], etc.
  - (iii) but it does not occur at word final position.

[ m ] occurs at

- (i) word initial position as in [ maakyɪ ], [ mako ], [ mmaa ], [ mmarima ]
- (ii) word medial position as in [ amua ], [ kwæmɪ ], [ pampuro ], [ 4bærɪma ]
- (iii) word final position as in [ as1m ], [ pam ], [ apɪm ], [ sum ], etc

A few candidates were able to explain what voiced and voiceless consonants are. They were able to give good examples of both voiced and voiceless consonants as well as discuss the distribution of [ s ] with good examples.

However, the majority of candidates could not discuss the distribution of [ m ]. They failed to state that it occurs at word final position.

### Question 8

- (a) **What is syllable?**
- (b) **State four types of syllable structure in your language.**
- (c) **Give two examples each of the four syllable types.**

A few candidates were able to state that in speech, the speech air does not come out in a continuous flow but they come out in puffs. Some of the candidates were able to state all the 4 syllabus types in Akan i.e. A, !, A!, AAC and give examples.

### Question 9

- (a) **Indicate the word class of the underlined word in each of the ten sentences.**
- (b) **State the function of the underlined words in each of the five sentences.**

Candidates were able, generally, to state the word class in subquestion (a). However, they were unable to state the function of the words in subquestion (b).

### **Question 10**

**(a) What is a clause?**

**(b) With two sentences each, give examples of the following clauses:**

**(i) Declarative clause**

**(ii) Imperative clause**

**(iii) Adverbial clause**

**(iv) Adjectival clause**

(a) Candidates were to explain only a main clause and left a subordinate clause.

(b) (i) Candidates were able to explain a main clause (statement) with good examples;

(ii) Candidates were able to explain main clause (imperative) with good example;

(iii) Candidates were unable to state what a subordinate adverbial clause is let alone giving example;

(iv) They were also unable to explain adjectival clauses.

## **TWI (AKUAPEM) 2**

### **1. GENERAL COMMENTS**

The standard of the paper and candidates' performance this year (2017), is generally good, because many of the candidates were able to present a good exercise that can yield appreciable grade.

### **2. A SUMMARY OF CANDIDATES' STRENGTHS**

The good candidates provided precise and concise answers to all the questions they attempted and therefore scored very good marks. They adhered to all the rubrics for each section of the paper. Their handwriting was also legible and this enhanced the processing of their work.

### **3. A SUMMARY OF CANDIDATES' WEAKNESSES**

The following were the weaknesses of some candidates.

- (1) Many candidates ignored the importance of punctuation marks. They failed to use upper cases at the initial position of very important lexical items, for example, names of persons and towns that they mentioned in their presentation. The examples below ran through the work of many candidates.

<b>s/n</b>	<b>Candidates' Errors</b>	<b>Correct Rendition</b>
1	4sei bonso	\$sei Bonsu
2	akyer1	Akyer1
3	antiri	Antiri
4	akonn4bea	Akonn4bea
5	aburi	Aburi
6	mamp4n	Mamp4n
7	kofi brenya	Kofi Brenya
8	afua brago	Afua Brago
9	sawakyi	Sawakyi
10	abena agyem	Abena Agyem
11	kwaku diawuo	Kwaku Diawuo

- (2) One other weakness of candidates is non-adherence to rubrics. Candidates were required to answer one question only from each of the four (4) parts of the paper. But some weak candidates answered two questions that alternate in the same section.
- (3) Twi pronouns and verbs: it is quite disheartening that at this level, many a candidate have not mastered the “Golden Rule” in Twi which demands that the pronouns subjects and verbs are written together as single units. The following are examples that ran through a lot of candidates’ exercise:

s/n	Errors	Correct version
1	4k4 t44	\$k4t44
2	W4 y11	W4y11
3	W4k4 pra	W4k4pra
4	4nk4 sua	4nk4sua
5	Wo tuu	Wotuu
6	Ab1 tene	Ab1tene
7	W4 saa	W4saa
8	W4 ayi	W4ayi
9	B1se saa	B1sesaa
10	Y1 k4b44	Y1k4b44

#### 4. **SUGGESTED REMEDIES**

- (1) Tutors who handle candidates should draw the attention of candidates to the morphology of these important lexical items during the reading exercise of the prescribed textbooks. Tutors must be more meticulous when vetting candidates’ exercises.
- (2) Candidates must be exposed to past question papers which carry the rubrics for each section.
- (3) Tutors should make conscious effort to teach the structural differences between English and Twi pronouns subjects and their verbs.
- (4) The class must read very good Twi textbooks and make efforts to study the structures these books provide.

- (5) Copious exercises is also very helpful and more importantly, tutors must vet candidates' assignments meticulously.

## 5. DETAILED COMMENTS

### Question 1

- (a) **What is a folktale?**
- (b) **Discuss the structure of a folktale.**
- (c) **Give four importance of folktales.**

The very good candidates were able to meet the requirements of the question and therefore scored excellent marks. However, there was a group of candidates who fumbled with subquestion (b) because they listed only *beginning*, *medial* and *final* without explanation and therefore scored very low marks.

The four importance of the genre such as providing advice, enjoyment, eloquence, knowledge about creation, values in the society and others were merely listed without explanation by the weak candidates, though the question explicitly demanded this. Thus they lost a good deal of marks.

### Question 2

- (a) **What is traditional marriage?**
- (b) **Give three reasons why people marry**
- (c) **Discuss three rites performed in the marriage process.**

The candidates who tackled this question were able to define marriage as the formal union of a man a woman, typically as recognized by Akan traditional law, by which they become husband and wife. The question also demanded full notes on any three of the practices associated with Akan marriage such as *k4k44k4* (knocking), *Danta* and *Tamboba* for the father and mother respectively; *Akonta sekan* for the brothers-in-law; *Trinsa* (Dowry); *AdwankIse* (the maiden dish) that the bride prepares for the husband's family.

Candidates were required to give and explain any three reasons why people marry in the Akan society. The good candidates gave tangible reasons, such as procreation, respect, protection, union of families, job opportunities for livelihood. On the other hand, the same weak candidates failed explain their answers and scored low marks. On the whole candidates failed to explain their answers and scored low marks. On the whole candidates' performance was above average.

### Question 3

- (a) **Discuss the role of the major character in the novel “!nn1 Nso Bio”.**

Candidates were expected to discuss all the various activities about Kofi Brenya in three main stages – his birth to his childhood activities, his primary education at Sawakyi and Bekwae his secondary education at Mfantsepim in Cape Coast and his waywardness making it impossible for him complete his secondary education. He was enlisted in the army and worked in Burma as a staff of the Military Health Services. He trained as a medical doctor in Britain, he returned and offered services to his community and finally married Afua Birago who had also become a qualified nurse.

As usual, the good candidates met the requirements of the question while the weak ones could not and scored low marks.

#### **Question 4**

**(a) Discuss the plot of the novel “Nso Bio” sequentially.**

Like question 3, the events should be discussed in three main stages such as the initial which involve the birth of Kofi Brenya, his childhood activities which also include the attitude of his parents, peer groups and other adult neighbours. The second stage dwells on Kofi Brenya’s education at Sawakyi, Bekwae and Cape Coast and his inability to complete his secondary education as a result of his own misbehaviour that caused the withdrawal of the scholarship he had enjoyed from his community. The final stage deals with Kofi Brenya’s enlistment, his employment in Burma, study tour in Britain as medical student, Kofi Brenya’s arrival home and services offered to the community. His marriage with Afua Birago was the climax.

Few candidates attempted this question. Their performance was above average.

#### **Question 5**

**(a) Discuss two major themes of the drama.**

**(b) Explain four literary expressions as used in the drama.**

Candidates were able to discuss the first encounter of Osei Bonsu and Akosua Akyer1 which developed a serious relationship. The two persons went to their respective home towns to solicit their parents’ endorsement. Thus Osei Bonsu was in Asante Mampon while Akosua Akyer1 visited hers in Aburi.

The second event: having succeeded in convincing their parents, Osei Bonsu married Akyer1 in a grand fashion. Things later proved that he exceeded the normal limits in the society as far as the wedding was concerned.

Another major event: As the marriage was based on false hopes, it nearly collapsed. But strange enough, the situation was saved, this time by Akyer1, Osei Bonsu’s wife. She gave out of her hard-earned savings an amount of ₵400.00 to Osei Bonsu to settle all his debts.

The performance of candidates who attempted the subquestion (b) was good.

### **Question 6**

This was a context question which comprised three subquestions:

- (a) Who made the statement and who was the addressee?**
- (b) When and where did this interaction take place?**
- (c) State the outcome of this interaction.**

It was Antiri who made the statement. The addressees were Akosua Akyer1 and Akon4bea, the mother of Akyer1. It happened in the morning at the living room of Antiri in Aburi. It was the time Akyer1 and Akonn4bea appeared before Antiri to discuss Akyer1's marriage to Osei Bonsu. After this, Osei Bonsu had the opportunity to marry Akosua Akyer1 in a grand fashion which proved that he exceeded the normal limits in the society. This landed the marriage in a mess, but the situation was saved by Akyer1 who gave out of her hard earned savings an amount of ₵400.00 to Osei Bonsu to settle all his debts.

Candidates' performance was okay.

### **Question 7**

- (a) What is the theme of the poem "Dua Kor4 Gye Mframa a, !bu"?**
- (b) (i) What is the mood of the poet?**  
**(ii) Quote a line from the poem to support the response.**
- (c) State any three structures of the poem.**

Candidates who attempted subquestion (a) provided very good answers. Many candidates met the requirement of subquestion b(i) but a few others fumbled with b(ii) because their responses were not explicit. With the structure of the poem, the poem has four stanzas, each stanza has nine lines, each line is composed of short sentence, literary devices such as repetition, proverbs, idioms and rhetoric questions were used.

Many candidates were able to give these relevant examples. Therefore their performance was good.

### **Question 8**

- (a) What is the theme of the poem "Asase Yaa"?**
- (b) State any three structures of the poem.**
- (c) Discuss the function of each of the following literary devices as used in the poem.**

(a) Candidates mentioned one of these good answers: Asase Yaa is generous to mankind, animal kingdom and plants. All creation benefits from Asase (the Planet

Earth), despite the over dependence of creation on Asase Yaa, she is not perturbed.

- (b) - The poem has only one stanza.
- The stanza has forty one (41) lines.
- Each line has short sentence.
- Literary devices include personification, contrast, simile, hyperbole, proverb and appellation.

The good candidates met the requirements of this section and scored full marks.

- (c) (i) Repetition: reinforces the poet's recognition of the benefits creation enjoys from Asase Yaa (the Planet Earth).
- (ii) Hyperbole: depicts the stable condition of Asase Yaa (the Planet Earth) in spite of supporting the various activities of mankind, animal kingdom, rivers and plants.

These good points were provided by many of the candidates and they scored good marks.

## **TWI (ASANTE) 1**

### **1. GENERAL COMMENTS**

The paper compared favourably with those of the previous years. The questions were well framed, concise and devoid of any ambiguity.

Generally, candidates' performance was not as good as that of last year. A number of candidates scored less than ten (10) ten and even zero (0) out of the total marks of one hundred and twenty (120).

### **2. A SUMMARY OF CANDIDATES' STRENGTHS**

(1) Composition: Generally, candidates were able to write the required number of words. Most of them were able to raise very good points and discussed them well, especially those who selected Questions 1 and 2. Question 1 asked candidates to discuss four (4) causes of corruption in Ghana and suggest four (4) ways to curb the situation. Question 2 was letter writing. It asked the candidates to take himself/herself as the head of prefect of his/her school and write a letter to the school headmaster telling him/her four (4) problems that affect students in the school.

(2) Comprehension: Candidates' performance in this section was very encouraging. Most of them were able to give a suitable title to the passage as well as handling both inference and stated fact questions well.

### **3. A SUMMARY OF CANDIDATES' WEAKNESSES**

(1) Mechanical Accuracy: A large number of candidates scored zero (0) in this area. In addition to poor spelling and punctuation, some candidates began their sentences with lower case letters.

(2) Language Structure: Generally, candidates performed very poorly in this area. It seemed most candidates gave it very little or no attention at all during the preparation for the examination. It must be noted that a large number of candidates had very little or no knowledge at all with respect to adverbial clause and adjectival clause.

### **4. SUGGESTED REMEDIES**

(1) Teachers of the language should not overlook the importance of orthography in language teaching and learning.

(2) Teachers of the language should give the teaching of the language structure (phonology and syntax) the premium it deserves. They should be very mindful of the books they recommend for their students as most of the books, especially the 'Questions and Answers' ones in the market are substandard.

- (3) Students must be encouraged to read a lot of Twi literature books and write more essays.
- (4) Workshops, seminars and in-service training should be organized for teachers of the language as it was observed that, most of them has problem with regard to the language structure.

## 5. **DETAILED COMMENTS**

### **Question 1**

**Discuss four (4) causes of corruption in Ghana and suggest four (4) ways of curbing the situation.**

It was the second most popular question. Candidates who selection it performed well. Most of them were able to give good introduction and very suitable conclusions.

As expected, most of the candidates gave the following causes and remedies:

Causes:

- The lust to get rich quickly
- Inadequate remuneration for workers
- Insatiable human needs
- External pressure e.g. demand from family members, society, institution, etc.
- Temptation of people to live beyond their means (showmanship)
- Job insecurity (especially political appointees an political interference)
- Inadequate social security after pension or retirement for public and civil servants

Suggested remedies

- Public education on probity and accountability
- Punitive measures should be meted out to offenders
- Adequate remuneration for work done
- Better or attractive social security scheme to cater for Ghanaian workers after retirement (pension)
- Honest public workers should be identified and given good awards for others to emulate
- Religious bodies and the media houses and other institutions should shun people who amass wealth through bribery and corruption

### **Question 2**

**You are the head prefect of your school. Write a letter to your school's headmaster and tell him about four (4) problems that affect students in the school.**

This was the most popular question. Most candidates who selected it performed relatively well. As expected most of them used formal language, titled the letter, presented their facts in an orderly manner and gave the appropriate valediction.

With respect to content, candidates were expected to give a very good introduction. Candidates were expected to discuss the problem and give a good conclusion.

As expected most of them identified the following:

Problems identified facing the school:

- Utilities such as water, sanitation, electricity, etc.
- Accommodation – living quarters for teachers, overcrowded dormitories, inadequate classrooms
- Inadequate teaching and learning materials, such as text books (suitable), library books, etc.
- Lateness and unpunctuality on the part of students and teachers
- Absenteeism
- Poor feeding
- Immorality among teachers and students
- Unnecessary or unjust punishment by prefects and teachers, etc.

Conclusion: Candidates were expected to make an appeal (urgent/earnest) to the headmaster and school authorities to heed to the request made on behalf of the students to bring about improvement in the school as a whole.

### **Question 3**

**Write a speech to be delivered to a Youth Association in your community on the topic “The benefits of environmental cleanliness in the community”.**

This was the least attempted question. It required candidates to write a speech on the theme “the benefits of environmental cleanliness in the community”.

Introduction: Candidates were expected to address the chair and observe protocol; show of appreciation to deliver the speech and mention of the topic as well and its definition in brief.

As expected the few candidates who attempted this question came out with the following benefits:

- Good health
- Accessibility during emergencies – free movement among houses
- Reduction in illness and frequent deaths
- Reduction in expenditure on hospital bills
- Increased productivity – more food, more income, etc.
- Happy moments in the community to bring about social cohesion and unity
- Increase in the life-span of the people
- Attraction of tourists and other visitors

Conclusion: Candidates were expected to thank the executive and audience for the opportunity and listening to him/her.

## Question 4

### Write a story that ends “Once bitten, twice shy”.

This essay was the third most patronized question. Most candidates who selected this question wrote very nice stories but a large number of them failed to write the required number of words. It was expected that the story would end with the statement appropriately. Any story which failed to do so scored very low mark for content.

Candidates were expected to use informal language. The body of the story was expected to take this structure;

Introduction: Any suitable introduction that directs the mind to an episode capturing some experiences.

Body:

- Narration of incident(s) – about himself/herself, a friend or any other person (protagonist)
- Possible causes: laziness, disobedience, truancy, procrastination, negligence, deceit by somebody, lackadaisical attitude, etc.

Consequences

- Loss of properties such as money, personal effects, etc.
- Failing examinations
- Punishment/sanctions
- Putting oneself into trouble
- Humiliation, etc.

## Question 5 - Translation

An English passage of one hundred and seventy (170) words was given to candidates to translate into Twi (Asante) for twenty marks.

Generally, candidates’ performance was average. It is worth noting that almost all the candidates scored zero with respect to the Mechanical Accuracy which was two marks. Also, most candidates found it very difficult to translate the following words or expressions – “midnight”, “snoring”, “hurdle”, “novice”, “graveled walkway”, “gravel” and “the shrill sound of a cricket”.

## Question 6 - Comprehension

Relatively, candidates performed very creditably in this section. They did well in answering both the ‘stated fact’ and ‘inference’ questions. It must be stated, however, that most candidates had the question on the grammatical name and the grammatical function of the expression “*Nnipa a Ik44 twi k44 breman*” wrong.

Also, a number of them could not indicate the kind of literary device of the following sentence: “Owuo puee kuro no mu”. Though the answer is personification, most of the candidates wrote either idiom or exaggeration.

### **Question 7**

- (a) Explain the following: Voiced consonants and Voiceless consonants**
- (b) Write down four voiced consonants and four voiceless consonants of your language.**
- (c) With two examples of words each, demonstrate the distribution of the following consonants in your language: [ s ] and [ m ].**

Question 7 was in three parts. The first part required candidates to explain ‘voiced consonant’ and ‘voiceless consonant’. The second part asked candidates to give four examples of each. The third part asked them to use two examples each to show the distribution of the following sounds - | s | and | m |.

Generally, candidates who selected this question found it very difficult answering the first and the last part.

### **Question 8**

- (a) What is syllable?**
- (b) State four types of syllable structure in your language.**
- (c) Give two examples each of the four syllable types.**

Question 8 was in three parts. The first part asked candidates to explain the term ‘syllable’. The second part requested them to state four types of syllable structure in Asante Twi and the third part asked them to give two examples each.

Like question 7, this question was poorly answered. Quite a number of them were unable to explain the term appropriately. Also, very few of them were able to get the examples correct.

### **Question 9**

- (a) Indicate the word class of the underlined word in each of the following sentences.**
- (b) State the function of the underlined words in each of the following sentences.**

Question 9 was in two parts: (a) and (b). The (a) contained ten questions and the (b) five questions. Relatively, candidates who selected this question performed well in (a) than in (b).

### **Question 10**

- (a) What is a clause?**
- (b) With two sentences each, give examples of the following clauses:**
  - (i) Declarative clause**
  - (ii) Imperative clause**
  - (iii) Adverbial clause**
  - (iv) Adjectival clause**

This question was poorly answered. Not many of the candidates were able to explain the term 'clause' appropriately. Candidates must be reminded that the adverbial clause is not the same as the adjectival phrase and adjectival clause is different from adjectival phrase. Adverbial clause and Adjectival clause contain a verb but Adverbial phrase and Adjectival phrase do not.

## **TWI (ASANTE) 2**

### **1. GENERAL COMMENTS**

Generally the paper was a standardized one. Candidates who prepared well were able to answer the question they chose nicely. Writing the in an essay form where the questions demanded. Those who did not prepare well tabulated the points without any explanation.

The performance of candidates was below expectation. Performance ranged between 6 – 7 marks out of the 80 marks with a few falling between 45 and 59 marks. Surprisingly, some candidates scored zero (0).

### **2. A SUMMARY OF CANDIDATES' STRENGTHS**

Candidates' strength was on questions 1(a) & 1(c), 2(a) & 2(b), 7(a) & 7(c) and 8(a) & 8(c).

In questions 1(a) and 2(a) candidates were able to give the definitions nicely except a few candidates who left some important aspects of the definition out. Most of them use the right register in giving the explanation.

On questions 7(a) and 8(a), they were able to give the main themes in the poem rightly which is very commendable.

### **3. A SUMMARY OF CANDIDATES' WEAKNESSES**

Candidates' weakness were on questions 1(b), 2(c), 7(b)(ii) and 8(c).

In question 1(b) which was on the structure of Akan folktales (Ananses1m), candidates could not follow the right procedure. Most of them left the major aspects out.

In question 2(c) they could not differentiate between “*Tiri Nsa*” and “*Tiri Adel*” in performing marriage rites. Some candidates wrote the investigation before marriage (Amare1 Nhwehw1mu) as part of the customary rites. Others spent their time writing about the Western type of marriage being practiced by Ghanaians these days.

Candidates could not quote some lines to support the answer they gave in question 7(b)(ii).

In question 8(c), they could not show how the poet used repetition (Ntimu) and Hyperbole (Anihanehane) in the poem. They rather gave examples of these two literary devices.

In some instances, candidates just wrote down points without explaining them which earned them ½ of the marks to be awarded.

It was observed that some of the students had not read the set books on their own.

#### 4. **SUGGESTED REMEDIES**

Language (Twi) teachers should be given in-service training to help them teach all the aspects of the language to enable students answer questions in every area of the language.

Students are advised to buy and read the set books well. They should be taught how to analyse the structure and other literature aspects of the book as well as how to answer literature questions. Classroom teachers should pay more attention on the written literature to help students know how to answer questions from the book.

Poetry appreciation should be treated well in class to help the students know how to answer such questions well.

#### 5. **DETAILED COMMENTS**

##### **Question 1**

- (a) What is a folktale?**
- (b) Discuss the structure of a folktale.**
- (c) Give four importance of folktales.**

More than sixty percent (60%) of the candidates answered this question. Candidates were able to define folktale (Ananses 1m) well to obtain the full mark. However, a few candidates who attempted the question could not define it well. They left some of the main ideas in the definition unmentioned, such as “designed by our forefathers based on their knowledge, wisdom and experience in life”. Another significant point some candidates left out was “pass on from one generation to another.

Candidates did not answer subquestion 1(b) well which indicated that they did not understand that part of the question. The question demanded the structure of Ananses 1m (Akan folktale) which is the beginning (*YInsesese nsese o*), the middle which is the main story (*Ananses 1m no nankasa*) and the ending (*m’ananses 1m a metoe 1 yi, s 1 1y 1 dlo!, s 1 ny 1 d 1 o!, ebi nk 4 na ebi mmra, mede soa asomasi*)

Candidates just mentioned the teller (4tofo4) and the listeners (atiefo4). They also mentioned when, where and how people gather themselves in either circle or semi-circle form to listen to folktale telling leaving the details of the structure.

In subquestion 1(c) all those who answered it had it halfway right because they did not explain the points they raised. They just tabulated them.

##### **Question 2**

- (a) What is traditional marriage?**
- (b) Give three reasons why people marry**
- (c) Discuss three rites performed in the marriage process.**

Most candidates who answered this question – Akanfo4 Aware 1 defined it well to attract the full marks for that part. Some candidates left out marriage as “being a union between two people from different families” which did not earn them the full marks. Such

candidates concentrated on the marriage being an agreement between two people who have decided to lie together as husband and wife.

In question 2(b), the candidates were able to give reasons why we marry but most of them did not explain the points they gave. Others who tried to explain could not explain them correctly. Just a handful answered it well.

On the question 2(c) most of the candidates could not differentiate between “Tiri Nsa” and “Tiri Ade1” which are two different things. Others added *Aware NhwewhwImu* (Marriage investigation) which is not part of the marriage rites to the explanation.

Some candidates wrote about the western type of marriage being practiced these days in Ghana so they mentioned things like the Rev. Minister/Pastor blessing the marriage, giving out rings and Bible and cutting of cakes, etc.

### Question 3

(a) **Discuss the role of the major character in the novel “!nn1 Nso Bio”.**

More than 90% of candidates answered this question but deviated in a way. Instead of them to write on the role the main character “Kofi Brenya” played, they described him. For example “*Kofi Brenya na ne maame ne Eno Abena Agyem na ne papa ne \$panin Kwaku Diawuo*”.

- \$no na 4k4hw11 ne mfidie a 4reba 4kum anomaa a w4fr1 no p4de11 a 11k4t44 d4t4 bi mu a 4rek4yi no a mm4bor4 hwee no no.
- \$no na w4retwer savakyi mm4fra din de w4n ahy1 suku ase a ne maame maa no k4hy11 mpa ase no, etc.

A few candidates who had an idea about the content of the question three could not string their points together to write it in an essay form but wrote just the points, e.g.

- Ne maame maa no k4hy11 mpa ase bera a na Maseta Nimade nenam afie mu retwer1 mm4fra din de w4n ak4hy1 sikuuase w4 Sawakyi.
- Wank4pra tiafi so memeneda an4pa bi nti nkwadaa a w4w4 korom h4 ban ne s1 w4reb1gye no mmmratode1, etc.

### Question 4

(a) **Discuss the plot of the novel “!nn1 Nso Bio” sequentially.**

Candidates did not answer this question at all. Just about 7% answered it but not to expectation.

### Question 5

(a) **Discuss two major themes of the drama.**

(b) **Explain four literary expressions as used in the drama.**

Candidates were not clear about the question 5 (a). The question required candidates to give the major events (NsIntitire) in the set book. Candidate mistook it to be ‘moral lessons’ (Adesuade1/Adesua).

Candidates gave answers like “!s1 s1 nn11maafo4 gyae ak1ses1m a w4y1 kyer1 nipa bi a w4ne w4n nanu” i.e. The youth of today must abstain from boasting.

Again, some said that “Mmerante1 a aduru aware1so ntie afutuo mfiri mpanimfo4 h4 ansa na w4ay1 w4n adwene s1 w4ret4ware”. Youth of marriage age must adhere to advice from the elderly.

In question 5(b), most of the candidates did not give the meaning of the idioms they were to explain as they have been used in the book, but they gave another idioms similar to what they have to answer. Those who tried to answer it did not give meanings to show how they have been used in the Drama. For example, an idiom like “Akyene anim da h4 a w4nyan nky1n”, candidates gave the answer as “As1m nokor1 da h4 a ylka” which is wrong because this is not how it has been used in the story. A second example is “K4 nna kra nna”. Candidates wrote “ne y4nko br1bo4 pa ara a 4ne no y1 biribiara bom”.

### **Question 6**

This was a context question which comprised three subquestions:

- (a) **Who made the statement and who was the addressee?**
- (b) **When and where did this interaction take place?**
- (c) **State the outcome of this interaction.**

Candidates who answered Question 6 did well in the 6(a) which was a two-in-one question but in the 6(b), the answers given were partially right. Most of the candidates could not give the time but were able to mention the place the conversation went on. The question was “Ber1 b1n ne hefa saa nkutahodie yi k44 so?” candidates wrote ‘Aburi’ as their answer without mentioning the exact place the conversation took place.

Candidates answered the question 6(c) well to attract the marks awarded.

### **Question 7**

- (a) **What is the theme of the poem “Dua Kor4 Gye Mframa a, !bu”?**
- (b)
  - (i) **What is the mood of the poet?**
  - (ii) **Quote a line from the poem to support the response.**
- (c) **State any three structures of the poem.**

Candidates who answered this question did well in the 7(a). They were able to give the main theme in the poem to attract the required marks.

In question 7(b)(i) candidates gave more than the required answer. Candidates were to write the mood of the poet and most of them wrote three or four answers at the same time. For example

- Na 4nwomfo4 no w4 4haw mu
- Na 4nwomfo4 no w4 awerlho4 mu
- Na 4nwomfo4 no w4 anibere mu
- Na 4nwomfo4 no w4 ahohiahia mu

In question 7(b)(ii) they were to support their answer with quote lines from the poem but most of them could not quote and those who attempted to quote, quoted wrongly.

Candidates answered the 7(c) well by describing the structure of the poem.

### **Question 8**

- (a) What is the theme of the poem “Asase Yaa”?**
- (b) State any three structures of the poem.**
- (c) Discuss the function of each of the following literary devices as used in the poem.**

Candidates were able to answer question 8(a), which is the main theme in the poem well.

In 8(b) they were to give the structure of the poem and it was also answered well but in

the 8(c) where candidates were to explain how Repeation (Ntimu) and Hyperboly (Anihanehane) were used by the poet in the poem, candidates rather gave examples of these literary devices. For example “\$nwomfo4 no de Ntimu y11 adwuma Asese Yaa.”

- \$nwomfo4 no de Anihanehane y11 adwuma
- Asase Yaa a apo amene wo4
- Asase Yaa a woso mmep4 ne nkoko4

# **RESUME OF HUMANITIES**

## **1. STANDARD OF THE PAPERS**

The Chief Examiners of all subjects handled in the Section unanimously reported that the standard of the question papers was comparable to that of previous years. There were no ambiguities in the questions and all fell within the scope of the syllabus with well researched marking schemes.

## **2. CANDIDATES' PERFORMANCE**

The Chief Examiners' reports on the assessment of the candidates' performance were varied. While the Chief Examiners for Government 2, History 2, Christian Religious Studies 2, Economics 2, Music 2, and Music 3B reported an improvement in candidates' performance over the previous year, that of Social Studies 2, Geography 2 and Geography 3, Islamic Studies 2, Music 3A reported a decline.

## **3. A SUMMARY OF CANDIDATES' STRENGTH**

The Chief Examiners of the various subjects handled in the section identified the following

as commendable features of this year's candidates performance:

- (1) The Chief Examiners for Government, Social Studies 2, Economics, History 2 and Christian Religious Studies commended most of the candidates for their ability to keep to the rubrics of the papers.
- (2) The Chief Examiners for History, Government 2, Economics 2, Social Studies 2, Christian Religious Studies 2, observed that quite a good number of the candidates demonstrated good command of the English Language; they presented their answers in clear comprehensible language.
- (3) Some candidates were reported to have presented their answers in very clear and readable handwriting - History 2, Government 2, Social Studies 2, Geography 2, Geography 3 Islamic Religious Studies 2 and Christian Religious Studies 2.
- (4) It was also reported that a good number of the candidates for Government 2, History 2, Christian Religious Studies 2, Economics, Social Studies 2, Music 3A and 3B, Geography 2 and Geography 3 demonstrated indepth knowledge of the various topics in the respective syllabuses.

## **4. A SUMMARY OF CANDIDATES' WEAKNESSES**

- (1) The Chief Examiners for Christian Religious Studies 2, History 2, Government 2,

- and Islamic Religious Studies observed that most candidates exhibited poor command of the English Language; bad grammar, poor tenses coupled with bad spellings.
- (2) It was also reported by the Chief Examiners for Geography 2 and Geography 3, Islamic Religious Studies, History, Government and Social Studies 2 that some of the candidates failed to obey the rubrics of the papers.
  - (3) The Chief Examiners for History 2, Government 2, Christian Religious Studies, Islamic Religious Studies 2, and Economics 2, reported of deviations by some of the candidates as well as points raised without explanation. Candidates were reported to have introduced a lot of irrelevant points into their answers as well as exhibited total lack of knowledge of the subject matter they were dealing with.
  - (4) The Chief Examiner for Geography 3 reported of poor sketching of maps and drawing of diagrams. He also reported of the inability of candidates to draw cross profile of the area specified. Majority of the candidates could not establish the relationship of relief and transportation network on topographical maps among others.
  - (5) The Chief examiners for Economics 2, Social Studies 2, Geography 2, Geography 3, Government 2 and History 2 reported that some candidates stated points without explaining them.
  - (6) Candidates for Music were reported to have exhibited poor knowledge of chord Progression and cadences and misinterpreted some of the rhythms in the pieces. Other candidates could not pitch accurately and thus lost the tonal centre.

## **5. SUGGESTED REMEDIES**

All the Chief Examiners recommended, among other things that:

- (1) Candidates should be encouraged to devote time to the reading of relevant literature and novels to enrich their language and knowledge on the various subjects.
- (2) Tutors are enjoined to urge their candidates to stick rigidly to the rubrics of the various papers.
- (3) Candidates should be encouraged to read questions thoroughly to know their requirements for their responses. This would enable them keep to the points and refrain from deviating from them.
- (4) Candidates should be advised to expand their points in order to earn good marks for each point.
- (5) Candidates should do well to answer each question on a new page with well numbering and stop juggling question numbers which create a lot of confusion for

the examiners.

- (6) Teachers need to engage students in sight reading lessons from the early stages of the course.
- (7) Teachers of Music must ensure students belong to ensembles to enable them learn to pitch and perform in groups.
- (8) Music teachers must engage students in frequent and serious rhythmic activities to build confidence and mastery in them.
- (9) Geography teachers are requested to assist candidates to practice map work more regularly.
- (10) Geography teachers and students should show more interest in the teaching and learning of climatology as it forms an essential part of the study of geography.
- (11) Geography students should be taught to understand concepts of settlement and population.
- (12) Again students should be taken through comparative reasoning on general topics.
- (13) On the whole, candidates must learn the terminologies relating to their various subjects of study.

## **DIFFICULTIES OF CANDIDATES**

### **GOVERNMENT**

Candidates had a lot of difficulty answering questions drawn from

Section A:

of the Government syllabus: ELEMENTS OF GOVERNMENT

This Section requires candidates to answer two questions. The general performs of candidates for questions drawn from this Section was poor.

Questions were drawn from the following topics;

1. Basic concepts and Principles of Government:
  - (i) Legitimacy
  - (ii) Fundamental Human Rights
2. Political Parties And Party Systems
  - (i) Party System

Teachers and students should do well to attach seriousness to the teaching and learning of this Section of the syllabus as it forms the foundation for the study of the subject.

### **DIFFICULTIES OF CANDIDATES**

#### **HISTORY**

Candidates had difficulty answering questions drawn from Section B of the History Syllabus: Ghana And The Wider World:from Earliest Times to AD. 1900.

(b) The rise of States and Kingdoms.

(i) Northern zone

(ii) Forest zone

West Africa - Civilizations and Cultures

(a) General Characteristics of West African Sudanese states and Kingdoms; Location, Social and political organizations, economic, religious, technological developments etc.

Social and Political Development

AD 1500 - 1900

(b) Political Developments:

(ii) The Bond of 1844

### **DIFFICULTIES OF CANDIDATES**

#### **CHRISTIAN RELIGIOUS STUDIES**

Candidates had difficulty answering questions drawn from the following areas of the syllabus;

1. The Epistle of James

(a) Faith and works

(b) Impartiality

(c) Effective prayers

2. The Epistle of 1 Peter

(a) Good Citizenship

- (b) Christians living among Non-Christians
- (c) Interpersonal Relationships among Christians

### **DIFFICULTIES OF CANDIDATES**

#### **SOCIAL STUDIES**

Candidates had problem answering questions drawn from Section A and B of the syllabus.

##### SECTION A: The Environment

Discuss five Social Control measurers employed in the Ghanaian tradition Society to correct anti-social behaviours

##### SECTION B: Governance, Politics and Stability

- (a) What is NEPAD?
- (b) Outline four benefits African Countries hope to achieve from membership of NEPAD

### **DIFFICULTIES OF CANDIDATES**

#### **ECONOMICS**

Candidates had difficulty answering questions drawn from

The following topics in the Economics syllabus:

- (i) Cooperative Society
- (ii) Inflation
- (iii) Public Finance (Taxation)
- (iv) Economic integration
- (v) Economic development
- (vi) International Trade.

### **DIFFICULTIES OF CANDIDATES**

#### **GEOGRAPHY 2 & 3**

Candidates had difficulty in answering questions from the following topics

in the syllabus:

- (1) Map work
- (2) Climatology
- (3) Concepts of settlement and population.
- (4) Establish the relationship of relief and transportation network on topographical maps.

# **CHRISTIAN RELIGIOUS STUDIES 2**

## **GENERAL COMMENTS**

### 1. **STANDARD OF THE PAPER**

The standard of the paper is not difficult from that of previous years. Questions set were spread across the syllabus and the diction used was simple.

### 2. **PERFORMANCE OF CANDIDATES**

There was a slight improvement in candidate's performance especially in the narration of Biblical stories and in the answering of application questions.

### 3. **A SUMMARY OF CANDIDATES' STRENGTHS**

- (1) Quite a number of the candidates showed mastery of the subject-matter with reference to the contents and moral values derived from them.
- (2) Some candidates, it was observed, have started studying the biblical texts recommended in syllabus.
- (3) In most cases, the presentation of material was orderly.
- (4) A major strength was in answering questions on the 'B' part of the paper.
- (5) There is also a slight improvement in the standard of English as far as this year's paper is concerned. Most candidates were able to articulate their views very well.

### 4. **SUMMARY OF CANDIDATES' WEAKNESSES**

#### (1) Lack of In-depth knowledge

- (a) Even though there is improvement in candidates' narration of biblical stories there is still room for improvement. This has been the bane of some candidates especially when it comes to answering questions in Section C of the paper.

#### (b) Poor grammar

The English language continues to pose a problem for many candidates such candidates had problems with spellings, tenses, grammar and lexis.

#### (c) Sequence of events

In answering questions, some candidates did not follow the sequence of events.

Thus, presentation of materials was not well-organized.

## 5. SUGGESTED REMEDIES

- (i) It is recommended that candidates make efforts to read the biblical text together with the recommended textbooks and the commentary books needed for the study of this subjects.
- (ii) Additionally, teachers should thoroughly discuss lessons that on be drawn from the topics taught and also teach candidates the significance of the topics. This will go along way to enable candidates answer questions on the ‘B’ part of the questions asked.
- (iii) Teachers should assist candidates to improve upon their standard of the English Language and also help them to properly plan their work when answering questions.

## 5. DETAILED COMMENTS

### SECTION A: THEMES FROM THE OLD TESTAMENT

**Q1. (a) Narrate the dreams of Pharaoh [9 marks]**

**(b) In what *three* ways did the interpretation of the dreams affect Joseph and his people? [6 marks]**

This was a very popular question answered by candidates. The two dreams were narrated by those who answered this question. However, some candidates could not narrate the second dream well. Most candidates failed to state that Joseph acknowledge God as interpreter of dreams. Some students also went beyond the narration of the two dreams and added the story of how Pharaoh commended Joseph and how he reconciled with his brothers and the entire family which were not requirements for the particular question. The ‘B’ part was also answered well. All in all candidates who answered this question did very well.

The candidates stated among other things that

- (i) Pharaoh made Joseph the leader of his household and people.
- (ii) Joseph was appointed next in rank to Pharaoh/governor.
- (iii) He used his position to save his people during the period of famine.
- (iv) The episode brought reconciliation between Joseph and his brothers.

**Q2. (a) Trace the circumstance that led to the call of Deborah to battle with Jabin. [12 marks]**

**(b) Mention *three* ways women can contribute to national development [3 marks]**

This was also a popular question. Most candidates handled the ‘a’ part well except that the historical antecedent to the call of Deborah was not handled well. The circumstances that led to the appointment of the judges was not tackled well by most of the candidates who answered this question.

Candidates should have mentioned that

- (i) The Israelites in the time of Joshua took a covenant/oath that they would not mix the worship of Yahweh with the worship of other gods.
- (ii) But, Israel defected from worshipping God alone and instead, served Baal and Ashtoreth, the gods of the Canaanites.
- (iii) Yahweh was displeased by this behaviour and thus, delivered Israel into the hands of their enemies who oppressed them severely and plundered them.

The ‘b’ part was also handed well except that most candidates did not state that women as full time housewives may be involved in keeping the family together and also that in the area of religion, women may engage in evangelism and other church activities.

**Q3. (a) Outline the circumstances that led David to serve in the house of Saul. [9 marks]**

**(b) What three lessons can leaders learn from the causes of Saul’s downfall? [6 marks]**

This was not a popular question and the few candidates who attempted it did not answer it well. Some candidate deviated and wrote on Saul’s attempt to kill David and some even wrote on the David-Goliath affair. Some also could not link the Amalekite war with David’s introduction to Saul’s court to play the lyre to smooth his mental malady.

Candidates should note that Saul disobeyed God’s instruction to embark on a Holy war (to utterly destroy the Amalekites and everything on the land by sparing Agag the king and the best of his livestock to sacrifice to the Lord.

The spirit of the Lord therefore departed from Saul and was tormented by an evil spirit from the Lord. Saul’s servant suggested a man skilled in playing the lyre should be employed. David was recommended and he started working in the service of Saul.

The 'b' part of the question was also poorly answered. Leadership lessons from the story were not comprehended by most candidates. They should have mentioned among other things that leaders must be obedient and loyal, disobedience can terminate God's plan for one's life, disobedience leads to suffering, etc.

- Q4. (a) Describe King Josiah's religious reforms in Israel. [11 marks]**
- (b) State *four* ways Christians can maintain the purity of their religion. [3 marks]**

This was also not a popular question answered by candidates. Candidates who answered this question could not state the reforms carried out by King Josiah. They also deviated by writing on the political and religious circumstances that led to the reforms especially the political circumstances.

The 'b' part was however answered well. But the following points should have been considered by the candidates.

- (i) Proper training of religious leaders.
- (ii) Monitoring of moral standards expected of believers.
- (iii) Change of negative attitude to the environment eg. Sanitation, work ethics etc.

## **SECTION B - THEMES FROM THE SYNOPTIC GOSPELS AND THE ACTS OF THE APOSTLES**

- Q5. (a) Describe the temptations as recorded in the gospel of Matthew.**
- (b) In what *three* ways were the temptations significant to Jesus in His ministry?**

The majority of the candidates had no problem in answering this question. By far it was the most popular question in Section B. however, some candidates wrote on the temptation narrative in the Synoptic Gospels and not specifically Matthew's account. Some candidates also incorporated the significance of the temptation into the narrative aspect and therefore could not answer the 'b' part well where the significance mattered most.

The 'b' part which required comments on the aspect of Jesus being economic, political messiah and wonder-worker not discussed.

Mentioned should have been made about the fact that the first temptation was that make Jesus an economic messiah, one who would satisfy the physical and material needs of the people. Jesus however rejected the idea of bribing the people with material things or performing a miraculous feeding of hungry and thereby gaining a large following.

In the second temptation, Jesus rejected Satan's suggestion because it meant lack of absolute faith and trust in God. It was to make Jesus appear as a wonder-worker confounding the people with his super natural power/gaining cheap popularity by performing miracles and wonders.

The third temptation was to show Jesus as a political messiah who would wrestle power from the Roman authorities and restore the Davidic Kingdom. Jesus however rejected the common and corrupt messianic ideas and choose the path of a spiritual suffering servant to establish his kingdom.

**Q6. (a) Highlight the activities of each of these characters during the crucifixion of Jesus Christ**

- (i) The Two Robbers;
- (ii) Joseph of Arimathea.

[12 marks]

**(b) In what *three* ways are the behaviour of the robbers significant to Christian?**

[3 marks]

This was the second most popular question answered by candidates. The question on the two robbers was well answered by candidates except that a vital point that Matthew recorded that they joined the Chief Priest and those who passed by to revile Jesus was not stated by most candidates.

On the question of Joseph of Arimathea, most candidates were able to write on his activities. However, most candidates were not able to present these facts;

- (i) That Joseph of Arimathea was a respected member of the Council/Sanhedrim.
- (ii) That he was a good and righteous man and a secret disciple of Christ who was after the Kingdom of God.

Some candidates also deviated and wrote on Simon of Cyrene who carried Jesus' cross. The sub-question (b) was not well understood by candidates. There was some sort of ambiguity in this question.

**Q7. (a) Describe the Communal Living of the Early Church.**

[12 marks]

**(b) What three lessons can be learnt from the life of the Early Church?**

[3 marks]

Very few candidates answered this question and those who did performed abysmally. They narrated the story of Ananias and Sapphira instead of dwelling on communalism in the Early Church. Candidates should take note of the following points

- (i) The early church was characterized by a strong bond of fellowship because they were of one heart and soul.
- (ii) They devoted themselves to the apostles' teachings and fellowshiping together.

- (iii) Their togetherness was shown in the practice of joint ownership of possessions/properties.
- (iv) They shared the proceeds among themselves according to their needs, and there was no needy person among them.
- (v) They devoted themselves to the breaking of bread from one house to another with gladness and sincerity of mind.
- (vi) They praised God and had favour with all the people. They prayed together. etc.

Some of the lessons to be learnt from the life of the early church included.

- (i) Need to evangelize the word of God
- (ii) Fellowship was held in people's homes. No need to build expensive meeting places.
- (iii) The spirit of giving and taking was in existence. Oneness and unity of purpose

### **SECTION C**

- Q8. (a) Recount James's advice to Christians on how the poor and the rich should be treated in the church. [11 marks]**
- (b) State four reasons why people should not discriminate against each other. [4 marks]**

Candidates who answered this question lacked adequate information on James's teaching on impartiality. It seems most of the candidates were not taught on this aspect of the syllabus.

Some candidates also deviated by writing on James' teaching on faith and works and how Christians should relate to non-Christians.

Candidates should have mentioned that

- (i) James admonished Christians to show no partiality to anyone (rich or poor) but to accept others as they are equal before God.
- (ii) They are ambassadors of Christ and hold the faith of the Lord Jesus Christ
- (iii) If preferential treatment is given to the rich man over the poor man then one is guilty of partiality.
- (iv) No distinction should be made among Christians, for God does not make distinctions.
- (v) In showing partiality, the poor man has been dishonoured.

For the (b) part, candidates should have noted some of the following;

- (i) Discrimination brings about disunity among various groups.
- (ii) It does not foster sense of belonging.
- (iii) It encourages sycophancy, eye service and praise singing.
- (iv) It prevents acceptance of the gospel.
- (v) It retards progress and co-operation among people.

- (vi) It stifles people's imagination/creativity/innovation/initiative.
- (vii) It leads to underdevelopment.
- (viii) It does not encourage equal opportunity for all.
- (ix) It creates acrimony/conflicts.
- (x) It breeds tribalism/sectionalism.
- (xi) It encourages greediness and selfishness.

- Q9. (a) Outline Peter's teaching on Christians' attitude to civil authorities [12 marks]**
- (b) State three reasons for submission to civil authorities [3 marks]**

This question was attempted by only a few candidates but performance was very poor. Most of them wrote 'sermons' or deviated completely. This aspect of the syllabus need teachers' attention.

Peter taught that

- (i) Christians should be law abiding and have respect for constituted authority
- (ii) Christians should discharge their civic duties and responsibilities promptly to all men.
- (iii) A good Christian should submit himself to every human institution and respect them, including the authorities of the state eg. Governors etc.
- (iv) For it is God who appointed kings to punish wrong doers and to reward those who do good.
- (v) He should live as an obedient servant of God.
- (vi) He should fear God and honour the kings and rulers.

Reasons for submission to civil authorities, candidate should note the following;

- (i) It enhances peace and orderliness,
- (ii) It ensures development in the country.
- (iii) Obedience to authorities is obligatory because authorities are ordained by God.
- (iv) Christians enjoy protection and security when laws are made and obeyed.
- (v) It creates harmonious environment for the worship of God.

# ECONOMICS 2

## 1. GENERAL COMMENTS

Performance was reasonably good as compared to that of last year. Candidates' responses to questions have improved.

## 2. SUMMARY OF CANDIDATES' STRENGTHS

- (1) The answers of most candidates were in well-arranged paragraphs.
- (2) Candidates in their answers, indicated the unit of measurement eg. \$.
- (3) With the data-response questions, candidates were able to substitute figures correctly.
- (4) Most candidates showed clear understanding of economic concepts.
- (5) Candidates adhered to the rubrics of the paper.

## 3. SUMMARY OF CANDIDATES' WEAKNESSES

- (1) Some candidates raised points and either failed to explain them, or explained them in just a sentence.
- (2) Candidates should begin answers to questions on fresh pages.
- (3) Some candidates did not write the question number on top of the page.
- (4) Some candidates answered both data-response questions.
- (5) Some candidates used jargons in their essays.

## 4. SUGGESTED REMEDIES

- (1) Candidates should endeavour to explain any points they raise.
- (2) Candidates should begin the answer to questions on fresh pages.
- (3) Question numbers are supposed to be written on top of the page.
- (4) Candidates should answer **only one** data-response question.
- (5) Jargons and certain local expressions are not allowed in essays.

## 5. DETAILED COMMENTS

**Q.1** The following represent the income data of a hypothetical country. Use the information to answer the question that follow.

Items	Amount (\$)
Indirect business tax	2,000,000
Income from paid employment	60,000,000

<b>Income from self-employment</b>	<b>28,000,000</b>
<b>Public sector profits</b>	<b>15,000,000</b>
<b>Private sector profits</b>	<b>35,000,000</b>
<b>Depreciation allowance</b>	<b>2,500,000</b>
<b>Stock appreciation</b>	<b>1,500,000</b>
<b>Income paid abroad</b>	<b>8,000,000</b>
<b>Interest</b>	<b>4,000,000</b>
<b>Rent</b>	<b>2,200,000</b>

From the data above, calculate:

- (a) **Gross Domestic Product (GDP);** [9 marks]
- (b) **Gross National Product (GNP);** [5 marks]
- (c) **Net National Product (NNP);** [3 marks]
- (d) **National Income (NI).** [3 marks]

This was least attempted by candidates and those who attempted it, scored below average. It was on the income approach to measuring the national income. Very few candidates had it right. After summing up income from the various sectors, stock appreciation is deducted because rising prices would cause the year's production to appear greater than it actually is. To get GDP, sum up all incomes less stock appreciation. Add net factor income from abroad to GDP to get GNP. Subtract depreciation from GNP to get NNP. Finally, subtract indirect tax from NNP to arrive at the National Income.

**Q2. If the demand and supply functions of a firm are given as:**

$$Q_d = 200 - 0.25P \text{ and } Q_s = 80 + 0.15P,$$

where  $Q_d$  is quantity demanded,  $Q_s$  is quantity supplied and  $P$  is the price.

- (a) **Determine the:**
- (i) **market equilibrium price;** [3 marks]
- (ii) **market equilibrium quantity.** [2 marks]

- (b) Calculate the quantity demanded and supplied when the price is:
- (i) \$ 400.00; [2 marks]
  - (ii) \$ 500.00; [2 marks]
  - (iii) \$ 600.00. [2 marks]
- (c) Draw a demand and supply schedule from your calculation in (b) above. [3 marks]
- (d) (i) Calculate the coefficient of price elasticity of demand when price increases from \$500.00 to \$600.00. [4 marks]
- (ii) What type of elasticity do we have? Give a reason for your answer [2 marks]

This was on demand and supply functions and candidates were to arrive at an equilibrium.

It was more popular of the two data-response questions and most candidates scored the full marks required. In determining equilibrium, candidates were to equate the functions of Qd and Qs. This gives an equilibrium price of \$300. Correctly substituting this figure gives an equilibrium quantity of 125 units.

Candidates were to substitute prices \$400, \$500 and \$600 into both equations.

They were to draw a schedule as follows:

Price (\$)	Qd	Qs
400	100	140
500	75	155
600	50	170

Some candidates drew demand and supply curves which was not demanded of them. Finally, candidates were to calculate elasticity when price rises from \$500 to \$600. This gives 1.6 or 1.7. Candidates were expected to state that demand is elastic because the coefficient of elasticity is **greater than one**.

Candidates are to note that in calculating own-price elasticity, the **absolute value** is taken and the negative sign ignored. It is in cross elasticity that the sign is considered.

- Q3. (a) What is production? [2 marks]**
- (b) Describe each of the following sectors of the economy:**
- (i) primary; [3 marks]**
- (ii) secondary; [3 marks]**
- (iii) tertiary. [3 marks]**
- (c) Highlight any three contributions of the primary sector to the economic development of your country. [9 marks]**

This was a question on production designed to test candidates' understanding on the various sectors of the economy. It was very popular among candidates and performance was encouraging.

Some candidates defined production in the (a) part as the production of goods and services or simply, the distribution of goods and services. But production is the creation of goods and services for human wants.

In the (b) part, the definition of the primary, secondary and tertiary sectors of the economy very well done by candidates.

In the (c) part, candidates were able to state correctly three contributions of the primary sector to Ghana's economic development. Eg. provision of food, provision of employment, earning of revenue by farmers, earning of foreign exchange and royalties etc.

- Q4. (a) Define co-operative society. [2 marks]**
- (b) State any *three* advantages of a cooperative society. [9 marks]**
- (c) Identify any three sources of funds available to a cooperative society. [9 marks]**

This was designed to test candidates' knowledge on co-operative societies. They were to explain advantages of a co-operative society and the sources of funds available to them.

It was not popular among candidates and performance in it was poor. Some candidates defined co-operative society as a union between people living in an area, or people coming together to endure common good. But a co-operative society is a business organisation where people with a common interest, pool their resources together

for their mutual benefit.

In the (b) part, advantages candidates could have mentioned include providing hiring facilities, jointly marketing or purchasing items, easy acquisition of loans and keeping prices low among others.

In the (c) part, sources of funds such as members' contributions, plough - back of profits, hire purchase, government loans were raised by candidates, but they could not explain them thoroughly to earn the desired marks.

- Q5. (a) What is division of labour? [2 marks]**
- (b) Explain any *three* advantages of division of labour. [9 marks]**
- (c) Identify any *three* disadvantages of division of labour. [9 marks]**

This was on division of labour and its merits and demerits. It was quite popular among candidates and performance was really encouraging. Some candidates stated that division of labour is skilled and unskilled, but it is the practice of breaking down a job/production process into distinct operations with each operation undertaken by a worker or group of workers.

With the (b) part, candidates were to state the advantages of division of labour. Some candidates raised points like respect to themselves, making decision-making easier which are irrelevant. They should have raised points like it increases production, saves time, leads to standardisation of products and lowers unit cost of production. Some candidates were able to raise some good points, but could not explain them thoroughly.

With the (c) part, candidates could have raised points like decline in craftsmanship, can result in unemployment, greater interdependence among others. A few mentioned lack of funds, leads to nepotism etc which are irrelevant.

- Q6. (a) What is demand-pull inflation. [2 marks]**
- (b) Identify any *three* positive effects of demand-pull inflation. [9 marks]**

(c) **Outline any *three* negative effects of demand-pull inflation.** [9 marks]

This was designed to test understanding of candidates on demand-pull inflation with its positive and negative effects. It did not attract most candidates and for the few who participated in it, performance was below average. Most candidates just defined inflation **without** relating it to aggregate demand. But demand-pull inflation is persistent rise in prices caused by aggregate demand of goods and services exceeding aggregate supply of goods.

In the (b) part, candidates were to state the positive effects of demand-pull inflation. Some candidates raised points like increase in wages and salaries and causing unemployment which are irrelevant. Points candidates could have raised include increase in sales leading to higher profits, increase in government tax revenue and increase in investment among others.

In the (c) part, candidates were to outline three negative effects of demand - pull inflation. Some candidates avoided this part of the question altogether. Those who attempted it raised points like low productivity, leads to hoarding which are wrong. Point candidates could have raised include loss of confidence in the currency, fixed income earners lose, fall in savings among others.

**Q7. (a) What is a tax?** [2 marks]

**(b) Describe the following taxes:**

**(i) excise duty;** [3 marks]

**(ii) capital gains tax.** [3 marks]

**(c) Explain with a relevant example each, the following rates of taxation:**

**(i) progressive tax;** [4 marks]

**(ii) proportional tax;** [4 marks]

**(iii) regressive tax.** [4 marks]

This was on definition of tax, definition of excise duty and capital gains tax and explanation on the rates of taxation. Most candidates attempted this question and performance in it was satisfactory.

In the (a) part, some candidates stated that a tax is money government takes from individuals or a compulsory payment by government authority. But a tax is a **compulsory levy by government** on the incomes and profits of individuals and firms respectively.

In the (b) part, candidates were to explain excise duty and capital gains tax. Candidates stated that they are on **locally- produced** goods, but they are on **locally - manufactured** goods. Capital gains tax according to some candidates is the tax levied on the sale of an asset, but it is tax levied on **the profit made** on the sale of an asset.

In the (c) part, candidates were to explain the rates of taxation with relevant examples.

For progressive tax, candidates stated that it is a tax which takes more from the rich than the poor. But progressive tax is a tax in which the **tax rate increases** as income increase eg. income tax (PAYE).

In proportional tax, some candidates stated that it is one in which the income of consumers is proportional or equal to the tax rate. But in this tax type, **the rate of tax is the same** for all income earners eg. corporate tax.

With regressive tax, some candidates stated that the poor pays more than the rich. But with regressive tax, as income increases, **the tax rate decreases**.

- Q8. (a) Define foreign trade. [2 marks]**
- (b) Highlight any three gains from foreign trade. [9 marks]**
- (c) Describe any three artificial barriers to foreign trade. [9 marks]**

This was a question on international trade. Candidates were to discuss gains from international trade and barriers to trade. It was popular and performance was good. In part (a), the definition of foreign trade was well done by candidates.

In the (b) part, candidates were to highlight three gains from trade. Performance was very high as candidates mentioned points like wider market, improvement in living standards, increase in world output and establishing of friendly relationships among others.

In the (c) part, candidates were to state the barriers to trade. Some stated differences in currencies, language barriers, Aflao barrier, Burkina barrier which are wrong. Candidates were to mention artificial barriers like tariffs, quotas, embargoes, devaluation, administrative controls, exchange control as barriers against foreign trade.

# **GEOGRAPHY 2**

## 1. **GENERAL COMMENTS**

The standard of the paper is the same as previous years and very suitable for all manner of candidates. The questions were widely spread that all shades of candidates had questions to attempt.

Questions were selected from the syllabus and had no ambiguity to distract candidates' responses.

However the performance of candidates was poor compared with last years'.

## 2. **SUMMARY OF CANDIDATES' STRENGTHS**

- (i) Legible handwriting of some candidates facilitated smooth reading and marking
- (ii) Rubrics were also observed by a large number of candidates this time
- (iii) Candidates provided meaningful sentences
- (iv) They were able to support their work with relevant examples
- (v) A good number could provide outline maps

## 3. **SUMMARY OF CANDIDATES' WEAKNESSES**

- (i) A large number of candidates were not able to provide relevant information in the sketch maps they were able to draw very well.
- (ii) Majority of the examinees could not draw free hand sketch maps of Ghana and Africa
- (iii) Names of towns were spelt wrongly
- (iv) Location of features and places were generally faulty
- (v) Questions which demand the establishment of relationships between two items were difficult for candidates as in question 2.

## 4. **SUGGESTED REMEDIES**

- (i) Teachers are requested to assist candidates to understand concepts of settlements and population
- (ii) Teachers should assist students to Practice some amount of comparative reasoning on general topics
- (iii) Encourage students to suggest solutions and to relate them to problems already identified
- (iv) A good number of topics in the syllabus must be given enough attention for candidates to perform creditably

## DETAILED COMMENTS

- Q1. (a) In three ways, explain how each of the following factors has affected World population:**
- (i) advanced technologies; [6 marks]**
  - (ii) improved medical care. [6 marks]**
- (b) Highlight *four* factors which account for the high density of population in Java. [8 marks]**

This question was one of the least answered by candidates and the few who attempted the question particularly the (a) part performed poorly.

The (b) part which required candidates to highlight factors that account for the high population density in java was fairly answered but candidates had the challenge of explaining the points listed.

Secondly candidates merely made wrong assumptions in attempt to provide answers which were in fact not real causes of the java population phenomenon.ie marriage, polygamy etc.

- Q2. (a) State three functions each of the following settlement:**
- (i) urban; [6 marks]**
  - (ii) rural. [6 marks]**
- (b) Outline four areas of interdependence between rural and urban centres [8 marks]**

This question was the most answered by candidates however some performed badly on the (a) part as candidates merely listed the main points in single words and phrases. The main points should have been expanded to earn full marks.

On the (b) candidates also listed the main points in single words and phrases without explaining them.

- Q3. (a) Explain five reasons why the production of consumer goods is common in developing countries. [10 marks]**
- (b) Outline five factors which influence industrial locations [10 marks]**

This question was poorly answered by candidates. Candidates made wrong assumptions such as availability of capital, fertile soils, favourable, weather, source of employment etc which were a complete departure from expectation, for the (a) part of the question.

On the (b) part however candidates were able to outline the factors which influence the location of industries and scored full marks.

- Q4. (a) Draw an outline map of Ghana. [1 mark]**  
**On the map, locate and name:**
- (i) Cape Coast, Bolgatanga and Sunyani; [3 marks]**
  - (ii) Dawhenya irrigation area and River Pra [2 marks]**
- (b) Outline four factors that encourage tourism in Ghana. [8 marks]**
- (c) Highlight three problems hindering tourism in Ghana. [6 marks]**

Question 4 was a country specific question on tourism in Ghana where candidates were to draw a sketch map of Ghana and locate specific places in Ghana.

Challenges identified among a large group of candidates include the following:

Outline map of Ghana was poorly drawn

Insertions were badly done

Locations were wrong.

Rivers were drawn with straight lines.

The (b) part was properly answered by a good number of candidates, however some candidates deviated and wrote on the benefits of tourism to the country instead.

The (c) part was poorly answered as candidates could not expand relevant points listed.

- Q5. (a) Draw an outline map of Ghana. [2 marks]**  
**On the map, mark and name:**
- (i) the railway line from Takoradi to Kumasi. [2 marks]**
  - (ii) the main road from Accra to Kumasi. [2 marks]**
- (b) Highlight four contributions of transportation to the economics development of Ghana. [8 marks]**
- (c) Outline three problems limiting rail transportation in Ghana.**

This question was on transportation in Ghana, where candidates were expected to draw

a sketch map of Ghana and to locate railway lines, major roads and to highlight the economic benefits and the problems limiting rail transportation.

Outlines map of Ghana was poorly drawn

Most candidates could not locate Takoradi, Accra and Kumasi

Road net works were drawn with straight lines

These were the challenges candidates faced in answering the (a) part of the question

The (b) was well attempted with candidates scoring the full marks.

However in the (c) part of the question, candidates could not outline the problems limiting rail transportation in Ghana.

The problems include the high cost of spare parts, competition from other efficient modes of transportation, frequent breakdown of coaches, production of bulky goods such as timber  
minerals etc have declined, patronage challenges etc.

**Q6. Write a geographical account of the south-western coastal lowland  
Under the following headings.**

- |                                     |                  |
|-------------------------------------|------------------|
| <b>(a) climate;</b>                 | <b>[6 marks]</b> |
| <b>(b) economics activities</b>     | <b>[8 marks]</b> |
| <b>(c) problems of development.</b> | <b>[6 marks]</b> |

The south western coastal lowland section of the country was selected for candidates to show their knowledge of the area in terms of its climate, economic activities and problems of development.

Candidates did not have enough knowledge on this regional part of Ghana and therefore performed badly.

The area include the coastal areas of Takoradi -Axim stretch which has the South Western Equatorial type of climate. The major towns in the area include Takoradi Sekondi and Axim.

Economic activities apart from farming include Tourism, petroleum-production , Government work mining etc.

Problems of development include deforestation due to excessive lumbering, soil infertility  
due to excessive leaching, illegal mining and soil impoverishment, the collapse of rail transportation, pollution of rivers through illegal mining, incidence of pest and diseases etc.

**Q7. (a) Draw a sketch map of Africa. [2 marks]**

**On the map, locate and name:**

- (i) **One irrigated area in the River Nile Basin;** [2 marks]
  - (ii) **One irrigated area in the River Niger Basin;** [2 marks]
  - (iii) **One major town in 7 (a)(i);** [2 marks]
  - (iv) **One major crop cultivated in 7(a) (ii)** [2 marks]
- (b) **List two irrigation methods used in the River Nile Basin.** [2 marks]
- (c) **Outline four problems affecting irrigation farming in the Nile Basin.** [8 marks]

This question was on irrigation farming in the Nile and Niger basin and the problems affecting irrigation farming.

Sketch map of Africa was poorly drawn

Location of the irrigated areas were wrong

The crops cultivated with irrigation in these basins were listed wrongly.

However the (b) part of the question was well attempted by nearly all the candidates

Some of the irrigated areas are the Gezira and the mannequin in Sudan the delta region and around the Aswaan high dam in Egypt:Nile basin.

Crops cultivated are mainly desert condition thriving crops such as cotton, millet, maize, onion, rice cotton etc.

**Q8. Write a geographical account of petroleum production in Nigeria under the following headings:**

- (a) **production areas;** [2 marks]
- (b) **method of production.** [8 marks]
- (c) **five ways in which the petroleum industry has contributed to the economic development of Nigeria.** [10 marks]

Question 8 was on the topic petroleum production in Nigeria. Candidates were expected to mention areas of petroleum production in Nigeria, describe method of production and to describe ways in which the industry has contributed to the economic life of Nigeria.

The question was popular with only a few candidates who scored very good marks.

The main challenge was their inability to list at least 4 production areas in Nigeria.

These include Warri, Port Harcourt, Afam, Ugelli, Oguta, Egbema etc.

**Q9. Write a geographic account of population distribution in West Africa under the following headings;**

- (a) **areas of dense population;** [2 marks]
- (b) **areas of sparse population;** [2 marks]

- (c) reasons for dense population in 9 (a); [8 marks]  
(d) four disadvantages of sparse population. [8 marks]

Question 9 was on the topic population distribution in West Africa. Candidates were to mention areas of dense population and areas with sparse population, to advance reasons for the dense population identified and also to explain four disadvantages of sparse population.

Candidates challenge identified were their inability to mention areas of dense population density in West Africa. Candidates could not mention areas of sparse population density either.

The densely populated areas include south eastern Nigeria, South Western Nigeria Southern Ghana etc.

The sparsely populated areas include the middle belt of Ghana, la cote Ivoire Sahel region, the Niger delta etc.

In the (c) and (d) part of the question, candidates merely listed the good points but failed to expand them to attract full marks.

# **GEOGRAPHY 3**

## 1. **GENERAL COMMENTS**

Comparatively, the standard of the paper was maintained in the light of the previous year's examination.

Questions set conformed to the syllabus and had no ambiguity to distract candidates' responses. However the performance of candidates was poor than last year.

## 2. **SUMMARY OF CANDIDATES' STRENGTHS**

- (i) Legible handwriting of some candidates facilitated smooth reading and marking
- (ii) Rubrics were observed by a large number of candidates this time
- (iii) The use of geographical terminologies by candidates has improved
- (iv) A number of candidates planned their work and supported them with well labeled diagrams.

## 3. **SUMMARY OF CANDIDATES' WEAKNESSES**

- (i) A large number of candidates were unable to draw cross profile of the area specified.
- (ii) Majority of the examinees could not provide annotations to the cross profile.
- (iii) Candidates could not suggest measures for the control of water pollution.
- (iv) Candidates could not interpret relief of an area using topographical maps.
- (v) A lot more candidates could not bring out the relationship between relief and settlements on the map.
- (vi) Could not establish the relationship of relief and transportation network on topographical maps.
- (vii) Candidates could not also apply the use of scales provided for them, instead they adopted their own scales.
- (viii) A good number of candidates could not show how answers were derived for the calculation and drawing of flow line chart and therefore lost marks.
- (ix) Unit measurements in the calculation of data was omitted to their disadvantage
- (x) A number of candidates did not understand the concept of latitude, aspect and slope and how these factors influence temperature.
- (xi) Candidates performed badly in topics that relate to climatology.

## 4. **SUGGESTED REMEDIES**

- (i) Teachers are requested to assist candidates to practice map work more regularly
- (ii) Teachers and students should show some amount of interest in climatology as it forms an essential part of the study of geography

- (iii) A good number of topics in the syllabus must be given enough attention for candidates to pass very well.

### **DETAILED COMMENTS**

**Q1. Study the map extract provided on a scale of 1.50,000 and answer the questions that follow:**

- (a) **Using a vertical scale of 1 cm to represent 200 feet, draw an annotated cross profile of the area marked A - B in the southern part of the map. [9 marks]**
- (b) **Describe the influence of relief on:**
- (i) **settlements in the mapped area; [6 marks]**
- (ii) **transportation network in the mapped area; [8 marks]**
- (c) **What is the drainage pattern of the mapped area? [2 marks]**

Question 1 was on map interpretation and compulsory for all candidates according to the rubrics of the paper.

The question was crafted to assess candidates' ability to apply the understanding of map scale and to interpret a section of the map using the annotated cross profile, method.

Candidates were expected also to demonstrate understanding of relief and its influence on settlement, and transportation.

In addition candidates were assessed on drainage patterns.

Nearly about 50% of the candidates did not attempt this question and candidates who attempted it scored very low marks ranging from 0-6 out of 25 marks.

Candidates scored low marks due to the following reasons:

Failure to use the scale provided for them in the question.

Title for the cross profiles was not provided.

Shapes of the cross profiles were over exaggerated because candidates used their own scales Could not annotate the cross profile

Could not get the horizontal distance of the cross profile right.

On the (b) part of the question, candidates had difficulty in the following areas

Candidates could not relate relief to settlement i.e. how relief has influenced settlement location, settlement patterns and types etc.

Could not relate relief to transportation networks, i.e. transportation network distribution and how relief has influenced construction and lay outs etc on the topographical maps.

The (c) part was well identified as dendrites river pattern by almost all candidates.

- Q2. (a) Use the data in the table below and detach the map on page 3 to answer the questions that follow:**

<b>DESTINATION</b>	<b>NUMER OF PASSENGERS</b>
<b>Maiduguri</b>	<b>20,000</b>
<b>Kano</b>	<b>30,000</b>
<b>Lagos</b>	<b>60,000</b>
<b>Port Harcourt</b>	<b>40,000</b>

**[12 marks]**

- (b) List three advantages of flow charts** **[3 marks]**

The second question was on flow line chart which came under the statistics component of the paper. About 90% of the candidates did not attempt this question. The candidates who attempted it scored very high marks ranging between 10 to 15. The challenges candidates faced with the question were as follows:

- (i) Candidates did not show working.
- (ii) Candidates failed to fix the unit measurement (mm) to their answers and lost marks.

For the (b) part of the question, candidates were able to list three advantages of flowcharts to score the full marks of 3.

- Q3. (a) State the difference between erosion and mass movement. [2 marks]**
- (b) List four agents responsible for modifying lands forms [4 marks]**
- (c) Outline three factors that influence mass movement. [9 marks]**

The question was in three parts a,b and c. The question was crafted from the topics erosion and mass movement.

Candidates were to state the difference between mass movement and erosion in the (a) part. The challenges to students were their in ability to state the difference.

The key element of gravity in mass movement and the wearing away element in erosion were missing in candidate's statements.

The (b) part was well attempted as candidates could list the agents responsible for modifying land forms eg surface running water, underground running water, volcanoes etc.

The (c) part of the question was equally well attempted.

- Q4. (a) List three characteristics of metamorphic rocks (3 marks)**
- (b) Describe three modes of formation of metamorphic rocks. (6 marks)**
- (c) Outline three economic benefits of rocks (6 marks)**

The question was on metamorphic rocks, the character, mode of formation and the economic benefits.

Candidates had difficulties using the right diction to describe the character of the rocks. Examples of the wrong diction include: they are in lines they are hard or soft, they contain animal bones and skeleton of plants etc. Strata and fossils are the right terms for such idea.

Some candidates had challenges with the (b) part as sedimentary rocks were described instead of the metamorphic rocks.

The (c) part was well executed as nearly all candidates scored high marks.

- Q5. (a) With the aid of annotated diagrams, describe the characteristics of the various stages of a river course. [12 marks]**
- (b) List three ways by which rivers are beneficial [3 marks]**

Question 5 was quite popular with candidates as nearly all candidates attempted it and scored very good marks.

Candidates who scored low marks for this question failed to support the narratives with the aid of suitable diagrams and lost 3 marks outright.

- Q6. (a) Define an outline of the Earth and show the following:**
- (i) Equator, [1 mark]**
- (ii) Tropic of cancer; [1 mark]**
- (iii) Antarctic circle. [1 mark]**

- (b) Describe three characteristics of lines of longitude, [6 marks]
- (c) A football match is scheduled for 5.45 pm local time on Saturday in Onitsha, Nigeria (Longitude 7° E). Calculate the local time football fans in Mambola, Sierra Leone (Longitude 130°W) can tune their radio set for the commentary. [6 marks]

Question 6 was multifaceted, as it tested ability of candidates to apply knowledge to solve a problem such as time. Candidates were also tested on longitude and latitude. Some candidates who attempted this question had the following challenges:

Lines of latitudes were drawn without indicating their corresponding degrees and lost marks:

Could not locate the latitudes correctly on the Earth outline;

Could not describe the characteristics of lines of longitudes.

The (c) part which was on calculation of time was well attempted with some candidates scoring full marks

- Q7. (a) List five sources of water pollution [5 marks]
- (b) Highlight five measures that can be taken to control water pollution. [10 marks]

Question 7 was crafted on the topic water pollution under environmental issues in the syllabus.

This question was popular with candidates but nearly 70% scored low marks. The (b) part of the question which requested for measures that can be taken to control water pollution, demanded specific approaches such as educating people on the dangers of water pollution, enforcing laws, recycling waste into fertilizers and biogas for energy, instead of dumping them into water bodies etc.

Mere rhetorics such as to avoid throwing waste into water bodies, etc did not amount to specific control measures

- Q8. With the aid of diagrams, explain how the following factors affect temperature of place:

- (a) **Latitude;** [7 marks]  
(b) **Aspect and slope** [8 marks]

This question was the least attempted and the few who did attempt the question scored low marks. The question was on climatology and candidates did not show enough knowledge on the topic: Temperature and factors that influence temperature of a place in their syllabus.

Candidates could not explain latitude, aspect and slope concept in relation to temperature and could not support them with suitable diagrams either.

# **GOVERNMENT 2**

## **1. GENERAL COMMENTS**

On the whole the normal standard of the Test Paper was not only maintained but it was improved considerably due to the following observations:

- (i) The Paper tested a number of 'Levels of Thinking namely Recall, Comprehension, Analysis and Evaluation.
- (ii) The questions were clearly worded to enable candidates to understand the demands of the questions.
- (iii) The questions fall within the scope of the syllabus and its marking scheme well researched.

Candidates' performance as compared with previous years did not show much difference. Diligent candidates who prepared adequately towards the examination responded positively and answered the questions creditably.

A substantial number of candidates put up poor performance.

Generally, the overall performance was satisfactory.

## **2. SUMMARY OF CANDIDATES' STRENGTHS**

### **(i) PARAGRAPHING**

Almost all Team Leaders commended some candidates for presenting their answers in concise and reasonable short paragraphs.

This enabled Examiners to identify the required points and awarded marks accordingly.

Good paragraphing also facilitated easy marking.

### **(ii) EXPLANATION OF POINTS**

Both Team Leaders and Assistant Examiners also observed that some brilliant candidates explained their points clearly and supported them with tangible examples.

(iii) ENGLISH EXPRESSION

It was observed that a sizeable, number of candidates exhibited effective control over the use of the English Language in terms of sentence construction and grammatical usage.

Outstanding candidates correlated their answers with the demands of the questions and hence kept a linking between questions and answers. The Linkage between questions and answers minimised the possibility of deviation and digression.

(iv) LEGIBLE HANDWRITING

Some candidates produced neat work and good handwriting.

**3. SUMMARY OF CANDIDATES' WEAKNESSES**

(i) SPELLING MISTAKES AND GRAMMATICAL ERRORS

Almost all Team Leaders as well as Assistant Examiners complained bitterly about unpardonable spelling mistakes, clumsy English & grammar and sentence construction.

(ii) MERE MENTION OR POINTS

Majority of the candidates resorted to sketchy presentation of points possibly due to their inability to express themselves in the English Language or lack of knowledge about the subject matter.

(iii) ILLEGIBLE HANDWRITING

It was extremely difficult to mark the scripts of some candidates due to poor handwriting.

(iv) FAILURE TO FOLLOW EXAMINATION INSTRUCTIONS:

Some Candidates ignored the DIRECTION TO CANDIDATES at the Front Page of the Answer Booklet.

**4. SUGGESTED REMEDIES**

- (i) Teachers of the subject should get themselves involved informally in the

teaching of the English Language through techniques of answering essay questions.

- (ii) Project works, class debates, gathering information at the School Library and Class symposia can help improve English Language proficiency among students.
- (iii) Periodic vocabulary drill in Government and giving enough Essay writing exercises could help students master the subject.

## **5. DETAILED COMMENTS**

- Q1. (a) What is a legitimate government? [3 marks]**  
**(b) Outline any four features of legitimacy [12 marks]**

A question testing comprehension which requires candidates to explain and identify features of a legitimate government.

A number of good candidates raised the issues of legality, acceptability, recognition, Rule of Law and several others in the Marking scheme. Candidates played down the points on External Recognition. Popular Participation was not adequately explained. Many of them resorted to mere mention.

On the whole, it was a popular question tackled by candidates and the overall performance was satisfactory.

- Q2. (a) What are rights? [3 marks]**  
**(b) Highlight four limitations on the rights of a citizen. [12 marks]**

Some candidates fumbled with the explanation of rights. Traditional definition such as 'Inalienable or natural rights unrestrained by law' was quoted'. Other candidates tabulated the types of right.

The question requires candidates to explain 'Rights' in terms of opportunity created by Law or legal and constitutional entitlements which the individual citizen enjoys.

For the 'b' part on the limitation on the rights of a citizen, candidates performed extremely well. Points stated such as State of emergency, imprisonment, insanity, infections, state security and several others were mentioned and well explained.

On the whole, candidates who attempted performed above average.

- Q3. (a) Differentiate between 'a de jure' and 'defacto' one-party system. [3 marks]**  
**(b) Outline four advantages of a multi-party system [12 marks]**

This question testing Analysis received favourable response from candidates with exception of the 'A' part demanding the differences between 'a de jure' and 'de facto' one party system. Few candidates were able to state the differences.

Candidates excelled in answering the advantages of the multi-party system as points were satisfactorily amplified.

- Q4. (a) What is a simple majority system? (3 marks)**  
**(b) Outline four demerits of the system. (12 marks)**

A fewer candidates attempted this question testing Evaluation while a sizeable number of candidates were able to explain the simple majority system, many of them could not give any meaningful answer.

Common answers given on the negative effects of the Simple Majority System were the possibility of rigging; smaller parties not winning election; working against majority of voters and election of mediocre candidates.

Candidates failed to provide solutions such as gerrymandering; wrong impression about the popularity and the legitimacy of the winner and 'et cetera'.

- Q5 Identify five ways by which the central government can improve upon local government system in West Africa. (15 marks)**

This question which involves application of knowledge was effectively answered by a lot of candidates. The question expects candidates to find solutions to problems facing local Governments in West Africa. Almost all points stated in the marking scheme were highlighted by candidates: Adequate funding; internal generation of funds, internal and external auditing, checking misallocation, misappropriation and misapplication of funds and several others were stated.

Points were clearly amplified by several candidates. However, candidates who were not up to the task deviated by writing on the functions of Local Authorities.

On the whole candidates performed creditably.

- Q6. (a) In what two ways can the Akan traditional political system be described as centralized? (6 marks)**  
**(b) Identify three functions of a traditional ruler in the Akan pre-colonial era. (9 marks)**

Candidates responded poorly to the 'Part (a)' of the question possibly due to the wording of the problem and its Level of Difficulty.

The 'Part (b)' on the functions of a traditional ruler was well answered but some Candidates could not differentiate the roles of chiefs in the pre-colonial era and the Colonial period.

**Q7. (a) What is a crown colony? (3 marks)**

**(b) Highlight four functions of the Secretary of State for the colony under the British colonial system.**

Level of Thinking – Recall

Few candidates were able to explain Crown Colony in terms of the British Hierarchy of colonial Administrative system.

Candidates gave good answers to the functions of the Secretary of state but some of them confused the functions of the Secretary of State with that of the colonial governor.

The overall performance was quite good.

**Q8. State five factors that led to the electoral victories of the Convention Peoples Party (CPP). (15 marks)**

Majority of candidates answered this question successfully and earned good marks.

Almost all points that appeared in the marking scheme were satisfactorily explained.

The only points which were missing in candidates scripts were the incumbency advantage after the 1951 elections and the use of dictatorial laws to silence the opposition.

Only a handful of candidates deviated by writing on the manifesto of the Party. On the whole, an excellent performance.

**Q9. (a) What is foreign policy? (3 marks)**

**(b) State four factors that influence Ghana's foreign policy (12 marks)**

This question also attracted several candidates. Only few brilliant candidates were able to define foreign policy in terms of principles, guidelines and strategy adopted by a country in pursuing its relationship with other states.

Most candidates gave haphazard meaning of foreign policy.

For the factors influencing Ghana's foreign policy, they produced satisfactory answers but in most cases presented general factors which are not particularly or specifically linked with Ghana's foreign policy. In a nutshell candidates performed fairly Good.

**Q10. Outline any five contributions of Ghana towards the growth of Economic Community of West African States (ECOWAS).**

Generally, this question was well answered. Candidates cited classic instances to support their points Eg. Dr. Ibn Chambas as a former Executive Secretary of the ECOWAS, Ghanaian Heads of State such as President Kuffour and President Mahama chairing the organisation and several other valid points.

Irrespective of this good performance some candidates deviated by writing on the benefits which Ghana derives from her membership of the ECOWAS.

The overall performance of candidates was very good.

# HISTORY 2

## 1. GENERAL COMMENTS

The standard of the paper compared favourably with that of the previous years. The questions fall within the scope of the syllabus and its marking scheme well researched.

## 2. SUMMARY OF CANDIDATES' STRENGTH

1. **Work plan:** Many candidates did plan their essays by listing the points needed in their answers. By this method, they were able to weave their facts and thoughts in coherent and logical essays. This practice is very commendable.
2. **Rubrics:** Several candidates selected and answered the four questions from the three sections. This is a clear indication that the rubrics of the examination are being adhered to, it also shows how broad- minded students have become in their preparations.
3. **Clear writing:** The handwriting of many candidates has improved. The time examiners spend to decipher the writings of students and follow the logical flow of information has reduced. This should be sustained.

## 3. A SUMMARY OF CANDIDATES' WEAKNESSES

1. **Choice of questions:** Questions booklet were based on various member countries of WAEC. All candidates were expected to answer questions on their own countries. For this reason candidates from Ghana were to select and answer questions on Ghana. But interestingly some candidates in Ghana chose and answers questions on Nigeria.
2. **Answers in bits:** A few candidates produced their answers to a question on several pages without any indication to examiners to continue their assessment on those pages. This unacceptable behaviour has resulted in partial marking and untidy assessment of candidates performance.

## 4. SUGGESTED REMEDIES

1. **Alerting candidates:** Candidates should be reminded that several countries are members of WAEC and each country has its own questions. They should refer to their country, Ghana, and select questions on Ghana. Even though some questions cut across the member countries, the facts and figures are not the same. There are peculiarities.

2. **Orderly arrangement:** The orderly arrangement of answers should be drummed into the ears of candidates so that their answers are not written in bits and pieces. They should fully complete the answer to one question before they tackle another. Where it becomes necessary to refer to a page for the continuation of an answer, the examiner should be alerted or directed. Again pages should not be reserved for questions they are not ready with answers.

### **DETAILED COMMENTS**

- Q1. (a) Name any three sources used in writing the history of Ghana. [3 marks]**
- (b) Outline any *four* disadvantages of Oral Tradition as a source of Africa history [12 marks]**

This question was chosen by many candidates. They were able to mention the sources of history as demanded. But many of the candidates were unable to spell Archaeology correctly. A few candidates also misunderstood the question and explained the methodology of getting historical information. The ‘b’ part was correctly answered and they effectively highlighted the points.

The overall performance of candidates was above average.

- Q2. (a) State any *two* economic activities of the Stone Age Man. [6 marks]**
- (b) Identify any *three* reasons that accounted for the movement of the Stone Age Man from the Savannah to the Forest zone. [9 marks]**

Several candidates answered this question. They identified the economic activities of the stone age man but left them as one or two- word answers. They did not elaborate, for example, describing the type of tools and method used in hunting and fishing.

In the ‘b’ part, the candidates were able to explain the factors that made them move into the forest zone. It was a good question and the overall performance of candidates was good.

- Q3. (a) List any *three* groups of people who formed the Western Sudanese States. [3 marks]**
- (b) Identify any *four* roles played by the Mande-Dyula in the conduct of trade in West Africa. [12 marks]**

Many candidates avoided this question. The few who answered it got the 'a' part right. They identified the people who formed the Western Sudanese states. In the 'b' part the candidate confused the role of the Mande Dyula with that of the Tuareg. The Mande- Dyula's role was outstanding. They brought essential items of trade, developed trade routes and helped the growth of the kolanut trade especially in Salaga. The overall performance of candidates was poor.

- Q4. (a) Name any three indigenous inhabitants of the Northern zone of Ghana. [3 marks]**
- (b) Identify any *four* roles played by Sumaila Ndewura Jakpa Lanta in the expansion of Gonja State. [12 marks]**

This question was not popular. Those who attempted it were able to mention some indigenous inhabitants of the North e.g. the Sisala, Vagala, Koma and Nafeba. With the 'b' part, candidates were not specific on the wars and conquests of Ndewura Jakpa, his organizational ability and the towns he founded. The question was poorly handled and candidates performed poorly.

- Q5. (a) List any three towns whose Kings signed the Bond of 1844 [3 marks]**
- (b) Highlight any *four* ways in which the Bond of 1844 was significant. [12 marks]**

Majority of the candidates chose this question. The 'a; part was correctly done. The towns whose rulers signed the Bond of 1844 were listed. There were however some errors in spelling, also, some candidates simply wrote Assin, they did not specify whether Assin Apemanin or Assin Attan dansu. Candidates were able to highlight significance of the Bond in the 'b' part. The bond laid the foundation of British colonial rule, provided official evidence of British agreement with the chiefs gave legal backing to Macleans administration and gave recognition to British legal system and justice in the coastal areas.

- Q6. (a) Name any three coastal states of Ghana. [3 marks]**
- (b) Identify any *four* factors that gave rise to coastal states in Ghana[12 marks]**

A few candidates who answered this question rightly indentified the coastal states like Fante, Fetu , Anlo, Agona, Asebu etc. Majority of the candidates mentioned states that were inland like Denkyira, Asante or towns and not coastal states. For the 'b' part, candidates were able to identify some of the factors for the rise of the coastal states which included powerful leaders, good army, use of firearms, unified political setup and endowment of natural resources among others.

- Q7. (a) Mention any three British Governors who served in Ghana between 1900 and 1957. [3 marks]**
- (b) Highlight any *four* roles played by local chiefs in the indirect Rule System [12 marks]**

This question was very popular and candidates did well. The names of the governors were identified but some found difficulty with the spellings. The roles of the local chiefs in the indirect rule system was sufficiently explained. The chiefs liaised between the colonial government and the local people, collected taxes, supervised projects, judged some cases and enforced rules and regulations from the colonial government.

- Q8. Highlight any five causes of the 1948 disturbances as identified by the Watson Commission. [15 marks]**

Many candidates chose this question. It was straight forward and candidates explained the factors that led to the 1948 disturbances. Among them were the unemployment situation in the country, foreigners control of the economy, unacceptable compensation, the problems of the ex servicemen and the shooting incident. Indeed candidates performance was appreciable.

- Q9. Identify any five ways by which Ghana has benefited from her membership of the Economic Community of West African States (ECOWAS). [15 marks]**

This was a popular question. Many candidates did not read the question well, instead of benefits, they wrote Ghana's contributions to ECOWAS. Of course Ghana has contributed troops to maintain order in war torn member countries of ECOWAS but the financial benefits and the rich experience the troops who go on such expeditions gain should be stressed to answer the question. On the whole the question was well addressed and the overall performance of candidates was good.

## **ISLAMIC STUDIES 2**

### **1. GENERAL COMMENTS**

The standard of the paper compares favourably with those of previous years. Candidates' performance is not encouraging as compared to the previous year.

### **2. SUMMARY OF CANDIDATES' STRENGTHS**

- (i) Some candidates quoted relevant Qur'anic verses in their answers.
- (ii) Most candidates obeyed the rubrics of the paper.

### **3. SUMMARY OF CANDIDATES' WEAKNESSES**

- (i) Some candidates ignored question one which was compulsory and answered four questions excluding question one.
- (ii) A few candidates deviated completely in their answers.

### **4. SUGGESTED REMEDIES**

- (i) Candidates are to note that **question one is mandatory** and should not be left out.
- (ii) Candidates should understand the demands of the questions before attempting them.

## **DETAILED COMMENTS**

### **Q.1 Discuss the contributions of 'Umar b. 'Abdul Azīz to the development of Hadith.**

This was a question that demanded candidates to discuss the contributions of Umar b. Abdul Aziz to the development of Hadith. Even though this was a compulsory question, some candidates avoided it completely. Performance was not encouraging. Some candidates wrote on personalities like Umar Ibn al- Khattab and Abdullah Ibn Umar.

The first was a companion of the Prophet who devoted much time to the preservation of the Hadith, and the second was the son of Umar al Khattab. These personalities were not required of candidates to write about. Candidates were required to note that Umar Ibn Abdul Aziz was an Umayyah caliph who ruled the Ummah eighty- eight years after the demise of the Prophet. He was affectionately called Umar the second. He was also the first leader in Islam to issue definite orders for the collection of Ahadith. He sent circulars to prominent traditionists to collect and compile this Ahadith.

The main concern of his was to prevent the extinction of the knowledge of Hadith and also the disappearance of Muhodithin. Besides, the collection and compilaton of Ahdith was a personal and individual enterprise embarked on by him.

- Q2. (a) Define Tafsīr.**  
**(b) Mention the various types of Tafsīr.**  
**(c) Highlight the significance of Tafsīr.**

This was a question on definition of Tafsir, the types and significance of Tafsir. It was a popular question but sadly, performance in it was not encouraging. For the (a) part that demanded definitions of Tafsir, some candidates wrote that it is a process by which people accept Islam; it is a prayer performed in Ramadan among others. But Tafsir is a way of commentary or interpretation on the meanings of Qura'nic verses from different dimensions.

In the (b) part on the types of Tafsir, some candidates wrote Al- Taurah, al Injil (scriptures before the Qu'ran); Muftari, Mutawāhr and Mawqūf (options for the question four at the objective paper )and Daif and Sahih.

But types of Tafsir are Tafsir Al Qu'ran bil- Qu'ran, Tafsir bil ma'thūr (using the Qu'ran to explain the Qu'ran; Tafsir al Qu'ran bir Ra'y by companions and scholars of Islam.

In the (c) part on the significance Tafsir, candidates rightly wrote that it leads to a better understanding of Islam as a total way of life and goes a long way to distinguish between genuine and fabricated traditions among others.

**Q3. Outline the criteria for authenticating the Matn of an Hadith**

This was on the criteria for authenticating the Matn of an Hadith. It was not popular among candidates, and performance was abysmal.

Some definitions candidates gave for Matn are it refers to the chain of Allah in a Hadith, the chain of transmitters of an Hadith and so on.

But Matn is simply text of an Hadith. Hile some candidates discussed Hadith generally, others also discussed Hadith 16 of an- Nawwawi and others still discussed the classification of Hadith into Sahih, and Daif. Other candidates also discussed the classification of Hadith.

Candidates are to note that Matn is the text of an Hadith, that is the subject matter of an Hadith. The Matn of an authentic Hadith must not contradict any verse in the Qu'ran. Ahadith already accepted as authentic must follow reasoning and common experience, and the laws of nature among others. The Matn must not give the time and date of future events in precision. It must also not sanction very severe punishment for slightest faults, nor promise high rewards for small virtues.

**Q4. Explain the social benefits of Sawm.**

This was on the social benefits of Sawm. It was a very popular question and performance was average. Some candidates defined Sawm as the starvation of Muslims from dawn to dusk, a form of prayer during hajj among others.

But Sawm is complete abstinence from eating, drinking, having sexual intercourse and other things which vitiate fasting from dawn till sunset

Sawm has spiritual, economic, moral, medical as well as social benefits. The question was limited to Sawm's social benefits.

Fasting enhances unity and brother hood among Muslims, brings about calmness and decorum in society, promotes kindness and generosity among Muslims, affords Muslims the opportunity to meet and interact during Ramadan, puts Shaytan and his agents in chains, promotes love and affection between couples and children, increases the level of spending by wealthy Muslims on the poor and needy and finally, gives room for mutual exchange of love between the rich and the poor.

**Q5. Describe the essentials for a valid marriage in Islam.**

This was on the essentials of a valid marriage in Islam. This was very popular among candidates and performance was encouraging, though there were a few challenges.

A few candidates defined marriage simply as an agreement between a man and woman (TALAQ). Others discussed the responsibilities of the couple as procreation, respect, sexual satisfaction and socialization. Others also discussed forbidden marriages in Islam. Candidates are to note that marriage is a union between a man and woman according to the principles of Islam. Celibacy is **not** allowed in Islam. For a marriage to be valid in Islam, candidates are to note the following:

- (1) Ijab Waqubul- This is an offer and acceptance between husband-to-be and wife-to-be.
- (2) The consent of parents or guardians should be sought.
- (3) Saduqah- Payment of dowry must be made by the groom to the bride to legalise the union
- (4) A minimum of two upright witnesses should be involved to publicise the relationship.
- (5) The couple should not fall foul of the prohibited degrees of marriage.
- (6) A marriage feast should be provided by the groom.

**Q6. Highlight the role of Hajj in the spread of Islam in West Africa.**

This was on the role of Hajj in the spread of Islam in West Africa. It was popular but performance was bad. Most candidates seemed to have misunderstood the question's demands and so discussed antecedent conditions to be satisfied before embarking on Hajj, independent security of the journey the treaty of Hudabiyyah and destruction of idols in the Ka'ba among others.

Candidates are to note that Hajj is the 5<sup>th</sup> pillar of Islam which should be embraced on at least once in one's life time.

Candidates are also to note that pilgrimage to Makkah and Madinah was a major factor that attracted some West Africans to Islam.

Others embraced Islam to enable them visit historic sites, others also did so to enable them buy cheap materials in Arabia.

Still for others, the religious titles of Alhaji and Hajiah was a factor.

In some cases, farewell and welcome parties were organised in the honour of those who went on Hajj and this attracted some people to it. The preaching activities of scholars and the famous historic pilgrimage of Mansa Musa was a major factor in the spread of Islam.

# **SOCIAL STUDIES 2**

## **GENERAL COMMENTS**

### **1. STANDARD OF THE PAPER**

The standard of the paper compares favourably with that of the previous years. The questions were within the scope of the syllabus and the requirements of the questions were appropriate for the level. The questions were clear and within the understanding of the candidates.

### **2. SUMMARY OF CANDIDATES' STRENGTHS**

The overall general performance of the candidates however, was a little lower than that of the previous year.

### **3. SUMMARY OF CANDIDATES' WEAKNESSES**

- (1) Most of the candidates adhered to the rubrics of the paper and answered the required number of questions from each of the sections.
- (2) Most candidates presented their points in orderly manner and develop them well in appropriate paragraphs.
- (3) A good number of candidates expressed themselves well in their own words showing their preparedness for the paper.
- (4) A good number of the candidates presented correct answers showing they understood the questions.
- (5) Majority of the candidates presented their essays in legible hand writings.

### **4. SUGGESTED REMEDY FOR THE WEAKNESSES**

- (1) Some candidates did not obey the rubrics of the paper and answered more than the required number of questions from the sections.
- (2) Some candidates are weak in their understanding of the English Language. They therefore did not understand the questions hence provided wrong answers.

- (3) There were unnecessary repetitions of points by some candidates and this led to loss of marks by those candidates.
- (4) Some candidates displayed total ignorance of the topics and therefore scored zero marks.

## **5. SUGGESTED REMEDIES TO THE WEAKNESSES**

- (1) Teachers must explain the rubrics of the paper very well to candidates before they sit for the paper. This will help them to know the number of questions they are required to answer for the paper.
- (2) Candidates must ensure they read and understand the focus and demands of questions before they provide their answers.
- (3) Candidates must ensure the avoid repetition of points and provision of unnecessary material that do not earn them marks.
- (4) Candidates need to do a thorough study of all the topics in the syllabus before sitting for the paper. This will make them have mastery over the topics.

## **6. DETAILED COMMENTS**

### **Q1. Justify five reasons why adolescents need to know about their reproductive features.**

This question was a straight forward one. It reacquired candidates to justify reasons for having knowledge of their reproductive features. It was not a popular question among the candidates. Some of the candidates gave wrong answers which earn them no marks. Example of such answers were:

- (i) Knowledge about reproductive features makes the husband have respect for the adolescent girl.
  - (ii) It makes you to become beautiful.
  - (iii) You can easily get a scholarship.
- Some candidates provided correct points and scored good marks. The responses candidate could have considered were as follows:
- (i) It reminds them of their gender;
  - (ii) It helps them take good care of their reproductive parts;
  - (iii) It helps them gain knowledge of the physical and physiological changes in the adolescents;
  - (iv) It helps them in the prevention of sexually transmitted infections;
  - (v) It helps them in the prevention of teenage pregnancies;
  - (vi) It helps them in the prevention of unwanted pregnancies;
  - (vii) It helps them to cope with emotional stress;

(viii) It helps them acquire knowledge of family planning and its benefits;

(ix) It helps to maintain good health e.g. through good nutrition.

The overall performance of candidates on this question was not good enough.

**Q2. Explain five ways by which the celebration of festival in Ghana promote the development of the nation.**

This was a very popular question answered by almost all the candidates. The question required candidates to explain ways by which the celebrations of festivals in Ghana promote the development of the nation. This means candidates were expected to write on the benefits derived from celebrating festivals which help in enhancing the efforts of development. Most of the candidates gave the correct answers and scored very good marks. However, few candidates provided wrong answers such as ‘pouring libation and dancing’ and scored no marks for them. Candidates could have considered the following points as answers to the question:

- (i) Promotion of tourism for recreation and leisure purposes.
- (ii) Generation of foreign exchange earnings from tourists.
- (iii) Enhancement of local economies; - trade activities among the local people.
- (iv) Promotion of unity and good relationship among families and community members.
- (v) Offering of opportunities for citizens travelling back home to make contributions towards development of their communities.
- (vi) Provision of opportunity for environmental sanitation activities to be embarked upon.
- (vii) Offering of opportunity for old relationships to be rekindled and new ones established.
- (viii) Promotion of the image of Ghana in the international community.
- (ix) Offering of opportunity for communities to initiate development projects.
- (x) Opportunity for age-long disputes to be settled amicably.
- (xi) Creation of avenues for preserving cultural heritage.
- (xii) Opportunity for government policies to be explained to the people.
- (xiii) Opportunity to inculcate social values and morals into the younger generation.
- (xiv) Opportunity for local and foreign investment.

The overall performance of candidates on this question was good.

**Q3. Highlight five benefits of the extended family to the individual for which it must be sustained.**

This question required candidates to highlight benefits of the extended family to the individual for which it must be sustained. This was a popular question among the candidates and it was well answered by majority of the candidates. Marks scored by candidates was good.

**Q4. Discuss five social control measures employed in the Ghanaian traditional society to correct anti-social behaviours.**

This question required candidates to discuss five social control measures employed in the Ghanaian traditional society to correct anti-social behaviours. The question was unpopular

hence answered by very few candidates. The focus of the question was the traditional society but some candidates did not direct their understanding to it. They gave a wrong answers like

- (i) The traditional society corrects anti-social behaviours by arresting criminals and prosecuting them. This is rather a feature of modern society.
- (ii) Provision of jobs;
- (iii) Implementation of laws;
- (iv) Guidance and counselling;
- (v) Training;
- (vi) Education.

Candidates could have considered the following points as answers to the question:

- (i) Songs of ridicule;
- (ii) Trial by ordeal;
- (iii) Gossip;
- (iv) Ostracism - refusal of membership in a group/isolation;
- (v) Banishment - punishment of being sent away from town/community;
- (vi) Corporal punishment;
- (vii) Institution of taboos - fear of supernatural forces;
- (viii) Public education;
- (ix) Fines and warnings;
- (x) Stigmatization: - e.g. labelling someone with disgraceful or shameful tags;
- (xi) Counselling.

The performance of candidates for this question was not good enough.

**Q5. (a) State five challenges associated with political independence.  
(b) Discuss four measures your country should take to overcome the challenges of political independence.**

This question was in two parts; (a) and (b) and candidates were expected to answer all. It was a popular question answered by most candidates. The (a) part required candidates to state challenges associated with political independence. Some candidates stated the correct points and went ahead to discuss or explain them, which however, was not the requirement of the question. This made them not to have sufficient time for the (b) part. Some candidates also gave such wrong answers as; Multi-party democracy, political instability, free and fair elections which earn them no marks.

The points the candidates were expected to state were:

- (i) How to develop human resource base of the nation;
- (ii) How to utilize human resource effectively;
- (iii) How to engage in international relations without compromising the sovereignty of the state;
- (iv) How to manage or eliminate ethnic conflicts;
- (v) How to generate funds for development;
- (vi) How citizens would exhibit positive attitudes in society and at work places/e.g. how to do away with arrogance;
- (vii) How to generate employment for the people;
- (viii) How to ensure good governance and political stability;
- (ix) How to reduce high rate of illiteracy;
- (x) How to diversify the economy and expand it;
- (xi) How to effectively manage/utilize state resources without waste;
- (xii) How to ensure political leaders do not amass wealth for themselves at the expense of the state/How to eliminate corruption;
- (xiii) How to exercise political will to initiate and implement policies;
- (xiv) How to apply modern technology for development;
- (xv) How to reduce the taste for and dependency on foreign goods (self reliance);
- (xvi) How to reduce emphasis on knowledge based education.

The (b) part required candidates to discuss measures that their countries should take to overcome the challenges of political independence. It was a well answered question and marks scored by most of the candidates were very good. However few candidates did not understand the question and provided wrong answers which earned them no marks. Some of the wrong answers were:

- (i) Government should provide training and retraining;
- (ii) Government should provide adequate resources to satisfy human needs.

Candidates could have considered the following points as answers to the question:

- (i) Initiation and implementation of long term development plans;
- (ii) Drawing and implementation of comprehensive programme for human resource development/Reorientation of the educational system;

- (iii) The use of qualified and skilled personnel in job execution;
- (iv) Ensuring the effective utilization of managerial skills;
- (v) Citizens must resolve and exhibit positive attitudes in life;
- (vi) Ensuring healthy but uncompromising relations with the international community;
- (vii) Leaders must exhibit the political will to implement policies;
- (viii) Transformation of the economy through massive industrialization;
- (ix) Maintaining the territorial integrity of the state by ensuring our borders are safe from external aggression;
- (x) Allowing the rule of law to operate freely;
- (xi) Citizens must ensure that the constitution is protected and not overthrown;
- (xii) Re-orientation of the citizens to understand that political independence means taking the destiny of the country into their own hands;
- (xiii) Encouraging people to patronize made in Ghana goods;
- (xiv) Promoting research and use of modern technology;
- (xv) Ensuring effective ways of generating funds for development;
- (xvi) Ensuring the existence of law and order in the country.

The overall performance of candidates on this question was good.

- Q6. (a) Explain the term rule of rule**  
**(b) Explain four ways of making rule of law effective in Ghana.**

This was a question in two parts; (a) and (b). The part (a) of the question required the candidates to explain the term rule of law. Some candidates provided good explanation to the question and score high marks. However, a good number of the candidates gave wrong explanation to the term and scored no marks. Their explanations were:

- (i) The process of setting forth a law to be carried by the individual in the country.
- (i) Rule of making decisions among a good citizen in the country.

Candidates could have considered explanation that have give same meaning as below;  
 The rule of law is a legal principle which states that, the law must rule in all things. This means that all persons in a country are subject to the law and must obey the law of the state. No one is above the law. It also means the law is supreme over everybody.

For the (b) part, candidates were expected to explain ways of making rule of law effective in Ghana. A good number of the candidates understood the question, provided good points, attempted to explain them and score good marks for them. Some candidates misunderstood the question and gave wrong answers that did not earn them any mark. Some of the wrong answers were:

- (i) By allowing the president to exercise the prerogative of mercy;
- (ii) Rule of law prevent conflict;
- (iii) The rule of law prevent self reliance;
- (iv) Equality before the law;
- (v) Supremacy of the law.

The correct points expected of the candidates were:

- (i) Enforcement of fundamental human rights entrenched in the constitution;
- (ii) Safeguarding the liberty of the individual by the judicial system features mandamus, certiorari etc.;
- (iii) The judiciary must be allowed to be independent and operate freely;
- (iv) Citizens should be allowed to enjoy all their basic freedoms;
- (v) Provision of basic social facilities to all without discrimination;
- (vi) There should be equal opportunities for employment to all in the public sector;
- (vii) Public education for citizens to know their rights and responsibilities;
- (viii) Resourcing the security services to adequately provide security and maintain law and order;
- (ix) Ensuring legal institutions work effectively for all citizens, e.g. DOVVSU, CHRAJ, FIDA, Legal Aid etc.;
- (x) Ensuring the amendment of the constitution and other laws when the need arises;
- (xi) Ensuring there is press freedom.

- Q7. (a) What is the New Partnership for Africa's Development (NEPAD)?**  
**(b) Outline four benefits African countries hope to achieve from their membership of NEPAD.**

This question was in two parts; (a) and (b). Candidates were expected to answer all. It was the most unpopular and difficult question for the candidates. Part (a) of the question required the candidates to explain New Partnership for Africa's Development (NEPAD).

Some of the candidates' saw NEPAD as an organisation and provided such explanations as;

- (i) It is an organization made up of Britain and her former colonies;
- (ii) It is an organization that has solutions to problems of other countries etc

Candidates did not know that NEPAD is an initiative of Africans geared towards Africa's development. Few candidates provided the right explanation of NEPAD and scored good marks. Candidates could have considered the following as the explanation of NEPAD:

- (i) It is a programme of action embodying the vision and strategic framework for Africa's renewal.
- (ii) Also It is a comprehensive document which contains African solutions to African problems.

The (b) part of the question required candidates to outline benefits African countries hope to achieve from their membership of NEPAD. It was a difficult question for the candidates so they provided wrong answers which earn them no marks. Some of the wrong answers were:

- (i) Building educational institutions;

- (ii) Provision of financial assistance;
- (iii) Easy transportation, etc.

Candidates could have considered the following points as answers

- (i) Identification of current challenges facing African countries in their march to economic and political freedom;
- (ii) Identification of collective solution to common African problems;
- (iii) African leaders would be conscious of their responsibilities and obligations to their people;
- (iv) Promotion of democracy and good governance in Africa;
- (v) Avenue for resource mobilization through industrialization and improved trade initiatives that benefit African countries;
- (vi) Platform for regional cooperation and integration;
- (vii) Provision of vision for African leaders to develop strategies for solving their problems;
- (viii) Becoming more effective in conflict prevention and resolution;
- (ix) Establishment of joint projects e.g. Road networks, West African Gas Pipeline etc.;
- (x) Creating more opportunities for the empowerment of women.

The performance of the candidates on this question was not good at all.

**Q8. Discuss five factors that in your view hinder the efforts of Ghana to develop.**

This was a popular question and many candidates answered it. It required candidates to discuss factors that in their view hinder the efforts of Ghana to develop. They displayed good knowledge of the question by providing good points and scored very high marks. However, few candidates misunderstood the word *hinder* to be synonymous with *promote* and therefore gave the following answers and scored no marks:

- (i) Good attitude towards work;
- (ii) Proper planning;
- (iii) High level of technology;
- (iv) High capital formation.

These candidates could have considered the following points as answers to the question:

- (i) Poor attitude to work by citizens.
- (ii) High dependency burden.
- (iii) Low income of workers.
- (iv) Low savings by workers/Low capital formation.
- (v) High rate of illiteracy.
- (vi) High cost of living.
- (vii) Inadequate technical and managerial skills.
- (viii) Inordinate taste for foreign goods.
- (ix) Heavy dependency on primary products and production.

- (x) Improper planning
- (xi) Excessive bureaucracy.
- (xii) Nepotism and favouritism.
- (xiii) Bribery and corruption/selfishness
- (xiv) Depreciation of the national currency.
- (xv) Ignorance.
- (xvi) Unjust world economic order.
- (xvii) Brain drain/leaving to other countries for greener pastures.
- (xviii) Intolerance
- (xix) Low level of technology.
- (xx) Ineffective supervision.
- (xxi) Political apathy/indifference in decision making process.
- (xxii) Apathy towards public property.

The performance of the candidates was very good.

**Q9. Highlight five factors that hinder the sustainability of growth and development in Ghana.**

This was a straightforward question that required candidates to highlight five factors that hinder the sustainability of growth and development in Ghana. It was a popular choice of many candidates. While most candidates who answered it scored very good marks, few of them who did not understand the word *hinder* deviated and provided wrong answers which earned them no marks. The wrong answers include:

- (i) Effective supervision;
- (ii) Good maintenance culture;
- (iii) Adequate skilled personnel;
- (iv) Good attitude towards work;
- (v) High level of education etc.

What those candidates could have considered as factors that hinder the sustainability of growth and development in Ghana are as follows:

- (i) Using low quality materials for projects.
- (ii) Poor maintenance culture.
- (iii) Apathy towards public property.
- (iv) Improper planning/Inability to plan well
- (v) Negative attitudes to work.
- (vi) In-adequate skilled personnel.
- (vii) Low level of technology.
- (viii) Brain drain/leaving to other countries for greener pastures
- (ix) Political apathy/Indifference in decision making process.
- (x) Bribery and corruption.
- (xi) Ineffective supervision.
- (xii) High dependency burden.
- (xiii) Low income of workers.

- (xiv) Low savings by workers/Low capital formation.
- (xv) Low level of education.
- (xvi) High cost of living.
- (xvii) Inordinate taste for foreign goods.
- (xviii) Inability to diversify the economy.
- (xix) Excessive bureaucracy.
- (xx) Nepotism and favouritism.
- (xxi) Depreciation of the national currency.
- (xxii) Inability to access information.
- (xxiii) Unjust world economic order.
- (xxiv) Brain drain/leaving to other countries for greener pastures.
- (xxv) Intolerance

The overall performance of candidates on this question was however very good.

**Q10. Examine five negative social implications of Ghana's population structure.**

This question required candidates to focus on the negative implications of Ghana's population structure and examine them in respect to how they affect Ghana's development. Very few candidates answered this question. Some did very well and scored good marks. However, few candidates rather examined the positive social implications and provided the following answers:

- (i) Large market size
- (ii) Increase in tax base
- (iii) Large supply of labour

These candidates deviated and scored no marks for these points raised. Ghana's population structure shows it is youthful with a lot of males and females. Candidates were expected to consider the following points as answers to the question.

- (i) High fertility and growth leading to over population.
- (ii) High dependency burden for breadwinners.
- (iii) High level of unemployment.
- (iv) Pressure on social amenities.
- (v) Congestion and development of slums.
- (vi) Low standard of living.
- (vii) Urbanization with its attendant problems e.g. accommodation, waste management etc.
- (viii) Pressure on governments to provide social amenities and jobs.
- (ix) Emergence of high level of social vices and crime e.g. drug abuse, prostitution etc.
- (x) There would be high level of bribery and corruption.

- (xi) Struggle for land and property may lead to conflicts and wars.
- (xii) Inadequate food supply to feed the people.
- (xiii) Pressure on natural resources, e.g. land, rivers etc.
- (xiv) Environmental pollution e.g. fumes, noise etc.

The overall performance of candidates on this question was however good.

# MUSIC 2

## 1. GENERAL STANDARD OF THE PAPER

The questions were based on the syllabus and represent the various sections in the syllabus.

There was no vagueness in the questions and all were within the comprehension of candidates.

## 2. PERFORMANCE OF CANDIDATES.

The overall general performance of candidates in the paper was good and it was an improvement over that of the previous years .

## 3. A SUMMARY OF CANDIDATES' STRENGTHS

A very good number of candidates who answered question 4 did quite well.

A few numbers of candidates who answered questions 3 and 5 perform well. Most of the candidates knew much about African Music drum classification.

A few candidates showed adequate knowledge in African Music in the Diaspora and Western Music History.

Notes were written in the confines of the convention and that is an indication that Music teachers are now improving in their lecture delivery.

## 4 A SUMMARY OF CANDIDATES' WEAKNESS

(1) Melody Writing: As has been the case, candidates did not exhibit a thorough knowledge of balance, form and modulation to the dominant. A few who made the attempt to modulate did not show adequate knowledge in their modulations. All they did was to raise the fourth degree but what happens afterwards was missing.

(2) Candidates also displayed a very poor knowledge of chord progression and cadences. Spacing in parts was poor, more than octave. In a few cases candidates jammed notes on the staff.

(3) Set Works: Most candidates could not notate the predominant rhythm in the bass part. Those who made the attempt scored the bass part on the staff inaccurately.

(4) Most candidates identify the form of the piece

- (5) Candidates continue to express a poor knowledge of Music theory though an improvement over the performance of past years.

5 **SUGGESTED REMEDIES TO THE WEAKNESSES**

- (1) Candidates should upgrade their knowledge in Music by spending adequate time reading and practicing the art of harmony.
- (2) Trained music teachers should be appointed to prepare students for the examination.
- (3) Music teachers should help the candidates by getting them well prepared ahead of time for their proficiency.
- (4) Candidates must study the set work thoroughly and gain adequate knowledge of it before sitting for the paper.

6. **DETAILED COMMENTS**

**Q1. (a)(i) Melody Writing**

Candidates were required to continue a given melody to form a passage of not less than 12 and not more than 16 bars. Candidates were also to modulate to the dominant in the course of the passage and return to the original key. The given melody was in simple quadruple (4/4) time with a length of two-bar phrase.

Many candidates wrote melodies which were shapeless in most cases without any form and structure. Some neglected the time signature and wrote notes less or more than necessary in the bar. Many candidates could not modulate to the dominant as required. A few who modulated indicated no understanding of how to modulate. They only had the idea that the dominant should be raised. Almost all candidates did not show any phrasing. Due to these weaknesses candidates could not score very good marks.

- (ii) Setting melody to a given text: Candidates were required to set a given text to a suitable melody, indicating tempo, phrasing and dynamic marks. Credit was to be given to originality of the composition and proper alignment of texts to the notes.
- Generally, a few candidates attempted this question and performed poorly. Candidates did not set the given texts to a suitable melody. In most cases two or more syllables were assigned to a single pitch. Texts were set without recognition of their importance in the melody. Important texts

were inappropriately placed on weak beats. Performance of candidates on the question was not good enough.

(b) Two part writing-

Candidates were required to write or add a bass part above a given melody of eight bars and in key C major in 2/4 time. Candidates showed a noticeable evidence of insufficient preparation for this question. Many candidates duplicated the correct key signature, time signature, clef and barred appropriately. However, they demonstrated a poor understanding of two part writing. The counter melody did not stand on its own. There was no independence in melodic curves as well as melodic interest.

Contrasting and rhythm or contour, harmonic interest, and final cadence could not be spelt out. In addition, phrasing and alignment were poor. Performance of candidates was very poor.

(c) Four part harmony

Candidates were required to harmonize a given melody in C major. They were required to add alto, tenor and bass parts. Although all candidates wrote the correct time signature, key signature, clef and barred appropriately, the harmonic interest (progression), final cadential progression, phrase marks and alignment were poorly done. The performance is however an improvement over that of the previous years.

**Q2.** This was a question on set work already available to candidates to study for the examination.

Moment Musical by Franz Schubert

Majority of candidates answered this question. They were required to:

- (a) State the key of the piece;
- (b) State the tempo of the music;
- (c) State any four compositional devices used in the music;
- (d) List any three dynamics used in the music;
- (e) Indicate the period of Western music history the composer lived;
- (f) State the form of the music;
- (g) In not more than two bars, notate the predominant rhythm in the bass part.

Candidates displayed enough understanding of the questions and provided good responses to them. Most candidates could however not notate the predominant rhythm in the bass part. The predominant rhythm candidates were to quote was Performance of the candidates on this question was good.

OR

*Kiniun* by Ayo Bankole

Few candidates answered this question. They were asked to:

- (a) State the nationality of the composer;
- (b) State the tempo of the music;

- (c) The media the music was written for;
- (d) Indicate the time signature of the piece;
- (e) Indicate what dynamic mark begins the music;
- (f) The language the music is written;
- (g) List any four terms used in the music;
- (h) List any four compositional devices used in the music;

Few candidates answered this question and perform well. Even though candidates provided correct answers to most of the questions, the one on compositional devices was difficult for them. In attempt to identify compositional devices as used by the composer candidates went outside the piece to mention general compositional devices. Others could not differentiate between compositional devices and dynamic marks, and used them interchangeably. This made them lose some marks. There was a clear evidence that candidates have not adequately mastered musical terms and signs. The devices to be considered by candidates as provided in the piece were: repetition, sequences, scale wise, modulation, imitation, articulation, polymeter, chromaticism, call and response and parallel 3rds. Candidates' performance was generally average.

**Q3.** Western Music - Candidates were required

To write short notes on any two of the following Western musicians:

G. F. Handel, W.A. Mozart, L.V. Beethoven and J. F. Haydn

Focusing on:

- (i) Date of Birth;
- (ii) Nationality;
- (iii) The musical period he lived in;
- (iv) Any two instruments he wrote for;
- (v) Date of death.

Candidates' performance on this question was not good enough. Candidates could not provide adequate information on the composers listed. It was an indication that they have not adequately read on Western Musicians.

**Q4.** African Music- Candidates were required to

- (a) State the classification of African traditional instruments
- (b) Group the following into the classification stated in 4.(a) above

*Kidi, Atenteben, Apentema, Gyile, Wia, Dawuro, Atumpan, Lulanga, Seperewa, Goje, Gakogui*

Many candidates attempted this question and performed creditably well. A few candidates however, could not identify the classes appropriately. Teachers are therefore requested to cover a wide range of instruments in Ghana to encompass

all ethnic groups. On the whole the performance of candidates was good

**Q5.** This question was on African-American Music in the Diaspora.

Candidates were required to:

- (a) Mention any two notable exponents each of the following musical genres:
  - (i) Rhythm and Blues;
  - (ii) Jazz;
  - (iii) Reggae;
- (a) Mention the place of origin of each of the genres listed in 5. (a) above;
- (b) Name a figure of above; (a set of percussion instruments)
- (c) Name the five components labeled I, II, III, IV and V in the set of the percussion instruments in (b).

On the whole, candidates' performance was good. Candidates were able to provide correct answers to the question and score good marks.

# **MUSIC 3A (AURAL)**

## **1. GENERAL COMMENTS ON THE PAPER**

The standard of the paper compared favourably with that of the previous year.

## **2. CANDIDATES' PERFORMANCE**

The overall performance of the candidates in the Aural Test was not good enough. The performance for last year was not good but extremely better than that of this year. About 65% of the candidates scored below 50% of the total mark allocated for this component of the Music papers.

## **3. A SUMMARY OF CANDIDATES' STRENGTHS**

- (1) Most candidates were able to identify the cadences played as in question 5.
- (2) Majority of the candidates identified the themes played as in question 7.

## **4. A SUMMARY OF CANDIDATES' WEAKNESSES**

- (1) Most candidates could not write clefs, time signatures and key signatures in the correct order of presentation on the staves.
- (2) Candidates were unable to notate rhythms in compound duple time an indication that the musicianship competency of our candidates is gradually sinking.
- (3) Some candidates could not spell simple musical terms
- (4) Some candidates did not number their questions well.

## **5. SUGGESTED REMEDIES TO THE WEAKNESSES:**

- (1) Teachers need to do a lot of work to deal with the fundamentals of music and assist students right from year one, term one. The holistic approach to teaching is important to make significant impact in building the musicianship of the students.
- (2) Teaching of rudiments could be combined with Aural exercises. As students are taught melodies and chords, they should be given the opportunity to listen to melodies and chords either using a keyboard, guitar or even voices.
- (3) Candidates must learn musical terms and know how they are spelt.

- (4) Candidates must read the rubrics of the paper and provide the numbers of questions they answered.

## 6. DETAILED COMMENTS

### Test 1: Rhythmic Dictation

Candidates were required to listen to a four-bar melody in  $\frac{6}{8}$  and notate the rhythm accordingly on monotone for 8 marks with each bar carrying 2 marks. Candidates did not do well in this question. Even though candidates adhered to writing the rhythms on monotone, most of them were not mindful of the time signature given and therefore missed the pulse of the melody given. The correct answer for the rhythmic dictation was:



### Test 2: Melody Writing

Candidates were required to listen to an 8-bar melody in simple triple time as played, and write it on a treble staff in Key B flat major. Candidates performed poorly in the melody writing. The order of arrangement of clef, the key signature and the time signature was poorly done. Only few candidates were able to write the clef, key signature, time signature, and barred correctly. Most candidates did not attempt the question at all. Melody writing is basic to any Aural test. Teachers need to be serious about them.

### Test 3: Two-Part Writing

Candidates were expected to write the lower upper part of a two-part musical piece of four bars in simple duple time using the treble staff and Key G major. There was generally poor performance in the two-part writing as well. Candidates rather scored marks for correct clef, correct time signature, correct barring and the correct key signature. Other candidates also used the bass clef instead of the treble clef. They could not comprehend and notate the lower melody.

### Test 4: Chords Progression

Eight Chords were played for candidates to identify and write accordingly using Roman numerals or technical descriptions for 8 marks. Candidates performed creditably in this question even though most found it difficult to identify the inversions. None of the candidates used technical descriptions this year for the identification of chords progressions.

## TEST 5: CADENCES

Candidates were required to identify four cadences in the order they were played. The order was Perfect, Imperfect, Perfect and Plagal. Most of the candidates did well but some had challenges in spelling the terms well.

## Test 6: Modulations

Candidates were expected to listen to excerpts of musical pieces and identify the modulations as Subdominant, Dominant or Relative minor and then indicate the new key of the modulation. Performance in this area was average. Four modulations were played and candidates were asked to identify them in the order they occurred. Almost all the candidates could not identify the new key of the modulation.

## Test 7: Identification of Themes

Three different themes or excerpts of musical pieces were played and candidates were asked to identify any two instruments in excerpt 1, the title of the piece in excerpt 2 and the time signature in excerpt 3. Although candidates performed better here, most of them could not spell simple musical terms. We still suggest that teachers do dictation from time to time to improve candidates' ability to spell musical terms in the future.

# **MUSIC 3B (PERFORMANCE TEST)**

## **1. STANDARD OF THE PAPER**

The standard of the paper compares well with that of the previous years. The pieces were the same and were suitable for the level of the candidates. They were selected from the syllabus and represented the various sections of the syllabus.

## **2. PERFORMANCE OF PAPER**

The overall general performance of the candidates in the performance test was encouraging. There were improvements in the performance of candidates who played instruments such as trumpet and flute more than that of voice.

## **3. A SUMMARY OF CANDIDATES' STRENGTHS**

- (1) Candidates rehearsed the technical exercises very well and presented them accordingly.
- (2) Most candidates were confident and presented their pieces with seriousness.
- (3) Fingering skills of candidates were good

## **4. A SUMMARY OF CANDIDATES' WEAKNESSES**

- (1) Some candidates found it difficult to do the sight reading pieces.
- (2) The breathing skills of some candidates were poorly executed.
- (3) Some candidates misinterpreted some of the rhythms in the pieces.
- (4) Some candidates could not pitch accurately and at time they lost the tonal centre.

## **5. SUGGESTED REMEDIES TO THE WEAKNESSES**

- (1) Teachers must engage students in sight reading lessons from the early stages of the course.
- (2) Teachers should expose students to correct breath control to ensure they rehearse it very well during lessons.
- (3) Teachers must engage students in frequent and serious rhythmic activities to build confidence and mastery in them.

- (4) Teachers must ensure candidates belong at least an ensemble to learn to pitch and perform in group.

**6. DETAILED COMMENTS**

(1) Technical Exercises

Candidates were required to perform two technical exercises already given; one in a major key and the other in a minor key. Many candidates were able to perform the exercises accordingly using the tonic solfa or otherwise. In some cases, candidates spelt the tonic solfa instead of singing them. It is advisable that teachers use some non-lexical words such as “la”, “ah”, “oo” to teach the technical exercises apart from using the tonic solfas. Generally, candidates performed very well in this aspect.

(2) Set Pieces

Candidates were required to perform two pieces from given Set Pieces. All the candidates performed from the selected performance Set Pieces. Some of the Voice candidates lacked precision of knowledge with the accompanist and could not attack pieces as expected. Phrasing, dynamics, articulations and dictions were not properly exhibited. The performance of candidates on the Set Pieces was good.

(3) Sight Singing

Candidates were required to sing from two unseen pieces. Candidates performed poorly. Only a few candidates were able to read the pieces correctly. Others were able to read the notes without correct pitches.

# **RESUME OF MATHEMATICS**

## **1. STANDARD OF THE PAPER:**

The Chief Examiners for Mathematics (Core) 2 and Mathematics (Elective) 2 agreed that the standard of their respective papers compared favourably with that of the previous years.

## **2. PERFORMANCE OF CANDIDATES**

The Chief Examiners for Mathematics (Core) 2 and Mathematics (Elective) 2 indicated that the performance of candidates was not encouraging. However that of mathematics (Core) 2 was slightly better than last years performance.

## **3. CANDIDATES' STRENGTHS:**

(1) The Chief Examiner for Mathematics (Core) 2 cataloged some of the strengths of candidates as ability to:

- (i) use venn diagram to solve probability problem,
- (ii) simplify and express trigonometric expression in a surd form,
- (iii) complete table of values of a quadratic relation and drawing the graph of the relation using a given scale and interval,
- (iv) use a given mean to find the value of a variable of a statistical data, evaluate a given binary operation defined on a set of real numbers,
- (vi) find the midpoint of a given vector and expressing it as column vector .

The Chief Examiner for Mathematics (Elective) 2 itemized some of the strengths of candidates as ability to:

- (i) find inverse and composite functions;
- (ii) find the equation of a circle;
- (iii) find the first term, common difference and the sum of the first ten terms of an Arithmetic progression (A.P);
- (iv) find the values of an unknown variable in a polynomial expression;
- (v) draw a cumulative frequency curve for a given distribution;

- (vi) express polynomial functions in partial fraction.

#### **4. CANDIDATES WEAKNESSES**

1. The Chief Examiner for Mathematics (Core) 2 recorded some of the weaknesses of the candidates as difficulty in:
  - (i) finding the values of a logarithmic expression;
  - (ii) translating word/ story problem into mathematical statement and solving them;
  - (iii) solving problems involving geometry such as, cyclic quadrilaterals, tangent and chord theorem;
  - (iv) using completing the square method in solving a quadratic equation;
  - (v) finding the product of two matrices;
  - (vi) solving problems involving financial mathematics.
  
2. The Chief Examiner for Mathematics (Elective) 2 enumerated some of the weaknesses of candidates as difficulty in:
  - (i) simplifying trigonometric expression;
  - (ii) solving probability related problems;
  - (iii) applying the laws of logarithms;
  - (iv) finding the integration of a function using trapezium rule;
  - (v) finding the angle between two vectors;
  - (vi) resolving forces to find the values of an unknown forces;
  - (vii) drawing histogram with unequal class interval.

#### **5. SUGGESTED REMEDIES**

The Chief Examiners for both subjects suggested that teachers should refrain from helping students in solving questions during examination period. Rather. They should encourage students to learn and understand the concepts of the mathematics topics in the syllabus. They recommended that teachers should make the teaching of mathematics lively and interesting for candidates to appreciate the topics in the syllabus.

# **MATHEMATICS CORE**

## **1. STANDARD OF THE PAPER**

The standard of the paper compared favourably with that of the previous years and the performance of candidates was slightly better than last year's performance.

## **2. SUMMARY OF CANDIDATE'S STRENGTHS**

Candidate's strength were cataloged in the following areas as ability to:

- (i) use Venn diagram to solve probability problem;
- (ii) simplify and express trigonometric expression in a surd form;
- (iii) complete table of values of a quadratic relation and drawing the graph of the relation using a given scale and interval;
- (iv) use a given mean to find the value of an unknown variable of a statistical data;
- (v) evaluate a given binary operation defined on a set of real numbers;
- (vi) find the midpoint of a given vector and expressing it as a column vector.

## **3. SUMMARY OF CANDIDATES' WEAKNESSES**

Candidates' weaknesses were recorded as difficulty in,

- (i) finding the values of a given logarithmic expression;
- (ii) translating word/story problem into mathematical statement and solving them.
- (iii) solving problems involving geometry such as cyclic quadrilaterals, tangent and chord theorem;
- (iv) using completing the square method in solving a quadratic equation;
- (v) finding the product of two matrices;
- (vi) solving problems involving financial mathematics.

## **4. SUGGESTED REMEDIES**

The Chief Examiner suggested that:

- (i) teachers should encourage students to learn and understand the concepts of the topics in the syllabus;
- (ii) teachers should make the teaching of mathematics lively and interesting for candidates to appreciate and take the lessons serious,

- (iii) teachers should refrain from helping students in solving questions during examination period since it affect their performance.

1. (a) **Given that  $\log_{10}x = \bar{1}.3010$  and  $\log_{10}y = 1.6021$ , find  $\log_{10}\sqrt{\frac{x}{y}}$**

In part (a), most candidates were able to use the laws of logarithm to rewrite  $\log_{10}\sqrt{\frac{x}{y}}$  as  $\frac{1}{2}[\log_{10}x - \log_{10}y]$ , while others could not apply the laws to simplify it. Having obtained the correct expression most candidates substituted the given values into the expression correctly but some were not able to simplify it. It was observed that some of the candidates could not differentiate between mantisa and characteristics so they added the terms together and had wrong answers. However few candidates showed mastery in solving the question.

- (b) **A man bought some shirts for GH¢720.00. If each shirt was GH¢2.00 cheaper, he would have received 4 more shirts. Calculate the number of shirts bought.**

In part (b) was attempted by few candidates since most of them could not translate the story problem into required mathematical equation, hence their inability to solve the problem.

However, few candidates who were able to solve the problem wrote the required equation as  $= \frac{720}{n} - 2 = \frac{720}{n+4}$ . Which they manipulated to obtain the required quadratic equation as  $n^2 + 4n - 1440 = 0$  and solve it for the correct answer.

2. (a) **If  $\sin 30^\circ = \frac{1}{2}$ ,  $\cos 45^\circ = \frac{1}{\sqrt{2}}$  and  $\tan 60^\circ = \sqrt{3}$ , without using Mathematical tables or calculator, simplify:  $\frac{\sin 30^\circ + \cos 45^\circ}{\tan 60^\circ}$ .**

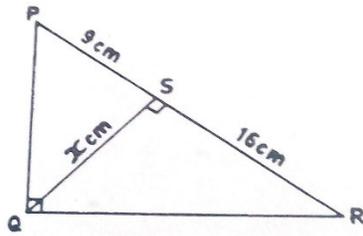
The part (a) was well answered by most candidates. Given that  $\sin 30^\circ = \frac{1}{2}$ ,  $\cos 45^\circ = \frac{1}{\sqrt{2}}$  and  $\tan 60^\circ = \sqrt{3}$ , most candidates were able to substitute into the trigonometric expression. They used varied methods to simplify the expression and obtained the required answer with ease. Again it was observed that some could not simplify completely while others also used calculators to simplify and then leaving their answers in a decimal form.

- (b) **Three interior angles of a polygon are  $160^\circ$  each. If the other interior angles are  $120^\circ$  each find the number of sides of the polygon.**

In part (b) most candidates could not translate the word problem into mathematical equation since they could not connect the known interior angles with the unknown interior angles and the sum of all the interior angles. They

required equation as  $(3 \times 160^\circ) + (n - 3) 120^\circ = (n - 2) 180^\circ$ . Having derived the equation, candidates were expected to solve for the value of  $n$ .

3.



In the diagram,  $\angle PQR = \angle PSQ = 90^\circ$ ,  $|PS| = 9\text{ cm}$ ,  $|SR| = 16\text{ cm}$  and  $|SQ| = x\text{ cm}$ . Find:

- (a) the value of  $x$ ;
- (b)  $\angle QRS$ , correct to the nearest degree;
- (c)  $|PQ|$ .

The question was poorly answered by most candidate since they could not analyse and deduce from the given diagram the correct trigonometric ratios to find the value of  $x$ . They were expected to deduce that  $\tan \theta = \frac{x}{9}$  and  $\tan \theta = \frac{16}{x}$ . Since they were all expressed in terms of  $\tan \theta$ , they were expected to equate them and solve for the value of  $x$

Obtaining the value of  $x$  would have enable the candidates to find  $\angle QRS$  and  $|PQ|$ , but most of them could not solve for the value of  $x$ , hence their inability solve the related questions.

4. (a) A trader purchased 10 dozen eggs at  $\square 300.00$  per dozen. On getting to his shop, he found that 20 eggs were broken. How much did he sell the remaining eggs if he made a profit of 10%?

In part (a), most candidates partially answered the question. They were able to find the cost price with ease but could not proceed to find the selling price as expected. It was observed that most candidates could not apply the concept of finding percentage profit, to find the selling price. Candidates were expected to apply the concept of percentage profit as:  $\left(\frac{x-3000}{3000}\right) \times 100 = 10$  and then solve for the value of  $x$  which is the selling price.

- (b) **Thirty five coloured balls were shared among four teams such that one team takes all the red balls. If the remainder is shared to the other teams in the ratio 4:3:2 and the smallest share was 6 balls, how many red balls were there?**

The part (b) was poorly answered by most candidates since they could not apply ratio to solve simple linear equation. Candidates were expected to derive the equation as  $\frac{2}{9} \times (35 - r) = 6$ , but unfortunately they messed up with the analysis.

5. (a) **The probabilities that Mensah will pass a Mathematics and Economics tests are  $\frac{3}{4}$  and  $\frac{5}{8}$  respectively. If the probability that he passes at least one of the subjects is  $\frac{7}{12}$ , what is the probability that he passes both subjects?**

The part (a) of the question was answered correctly by most candidates. They were able to draw two intersecting sets and labelled them properly. They used Venn diagram to find the probability of passing both subjects with ease.

It was also observed that some used De morgan's theory to solve the problem.

- (b) **In a class of 30 students, 25 offer Biology, 21 offer Physics and each students offers at least one subject. If a prefect is elected from the class, what is the probability that she offers one subject only?**

In part (b), most candidates showed mastery in using Venn diagram to solve the problem. Even though most of them answered it correctly, it was observed that some candidates did not label the Venn diagram while others labelled one of the sets and left the other unlabeled.

6. **A publisher 30,000 copies of a book at GH¢2.00 each and sold them for GH¢2.76 each. The publisher agrees to pay the author 10% of the selling price for the first 6,000 copies sold and  $12\frac{1}{2}$  % of the selling price for all copies sold in excess of 6,000. If 25,380 copies of the book were sold,**

- (a) **calculate, correct to the nearest Ghana Cedi, the:**
- (i) **total amount received by the author;**
  - (ii) **net profit the publisher makes after he has paid the author.**

- (b) find, correct to one decimal places, the publisher's net profit as a percentage of the total receipt.

most candidates performed poorly because they failed to analyse the problem and solve it systematically. Candidates were expected to use the concept of percentages and arithmetic to obtain the required answer.

7. A bag of food aid is released from an aeroplane when it is 1000 m above a military camp.  $h$  metres, of the bag above the camp at time seconds is given by the relation  $h = 1000 - 5t^2$

- (a) Copy and complete the following table for the relation  $h = 1000 - 5t^2$ .

<b>t (s)</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>5</b>	<b>7</b>	<b>9</b>	<b>11</b>	<b>13</b>	<b>15</b>
<b>h (m)</b>				<b>875</b>			<b>395</b>		<b>-125</b>

- (b) Using a scale of 2 cm to 2 seconds on the  $t$  – axis and 2 cm to 100m on the  $h$ -axis, draw a graph of the relation  $h = 1000 - 5t^2$  for  $0 \leq t \leq 15$ .
- (c) Use the graph to find, correct to one decimal place, the:
- time the bag takes to reach the ground;
  - time the bag takes to drop through the first 650 m;
  - height of the bag above the camp after falling for 7.5 seconds.

Most candidates showed mastery in copying and completing the table of the values for the given relation with ease. They plotted the ordered pairs correctly and drew a smooth curve depicting the exact graph as expected. Again relating the same principle to triangle RQM, It implies that  $\angle RQM + \angle QRM = y$ , from the diagram  $\angle RQM = 40^\circ$  and  $\angle QRM = 20^\circ$

$$\text{Therefore: } 40^\circ + 20^\circ = y$$

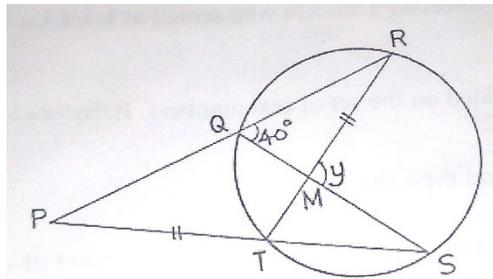
$$\Rightarrow y = 60^\circ$$

In part (b), candidates were specifically asked to illustrate the given information in a diagram, but unfortunately most of them could not do it, and their performance was poor. Candidates were expected to draw the diagram and show all the relative positions as:

From the diagram, candidates were expected to deduce that  $\angle NMY$  and  $\angle NLM$  are angles in alternate segments and therefore  $\angle NMY = \angle NLM = 65^\circ$ . Hence

$\angle MLX = 180^\circ - 65^\circ = 115^\circ$ . Again  $\angle LMX$  and  $\angle LNM$  are angles in alternate segments. However, some candidates could not use the given sale to draw the graph of the relation. Since some of the candidates were stereotyped and facy about Ox and Oy axes they could not adapt to the t- axis and h- axis as indicated in the question. It was also observed that some candidates plotted the points correctly but could not draw a smooth curve which affected the answers obtained for the related questions. It was also realized that some candidates found it difficult to use their graphs plotted correctly to solve the related problems.

8. (a)



In the diagram,  $\angle RQS = 40^\circ$ ,  $|RT| = |PT|$  and  $\angle RMS = y$ .

(a) Find the value of  $y$ .

(b)  $XY$  is a tangent to a circle  $LMN$  at the point  $M$ .  $XLN$  is a straight line,  $\angle NXM = 34^\circ$  and  $\angle NMY = 65^\circ$ .

(i) Illustrate the information in a diagram.

(ii) Find the value of:

( $\alpha$ )  $\angle MLX$ ;

( $\beta$ )  $\angle LNM$ .

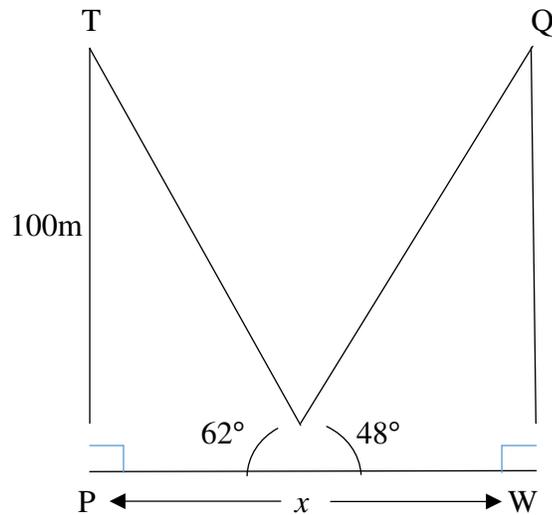
Most candidates who answered the question in part (a) demonstrated that their understanding of geometrical concepts was woefully inadequate. They could not apply the cyclic quadrilateral theory and other geometrical principals to solve the problem. Candidates were expected to deduce from the diagram that angles subtended by a chord  $\overline{RS}$  in a segment are equal. Therefore from the diagram  $\angle RQS = \angle RTS = 40^\circ$ . Again they were

expected to state that  $\Delta TRP$  is an isosceles triangle and therefore their base angles are equal. ie  $\angle TRP = \angle TPR$ .

Using the principle that an exterior angle of a triangle is equal to the sum of its two opposite interior angles then:  $\angle TRP + \angle TPR = \angle RTS = 40^\circ$ ,

Therefore:  $\angle TRP = 20^\circ$

Represent it in a diagram and then apply the appropriate trigonometric concepts to solve the problem. Candidates were expected to illustrate the information in a diagram as:



Once the correct diagram has been drawn solving the question becomes so easy. In order to find  $|QW|$ ,  $|PX|$  can be found so easily and then subtracted from  $|PW|$  to obtain  $|XW|$ . Once  $|XW|$  is found,  $|QW|$  would be obtained with ease.

$$\text{That is: } |PX| = \frac{100}{\tan 62^\circ} \Rightarrow |PX| = 53.17\text{m.}$$

$$\text{And } |XW| = |PW| - |PX|$$

$$\Rightarrow |XW| = 80 - 53.17 = 26.83\text{m.}$$

$$\therefore |QW| = 26.83 \tan 48^\circ = 30\text{m ( to the nearest metre).}$$

$$\text{But } \angle LMX = 180^\circ - 34^\circ - 115 = 31^\circ$$

Therefore  $\angle LNM = 31$ . Or considering  $\angle XNM$ , the sum of the two opposite is equal to its exterior angle. That is:

$$\angle NXM + \angle XNM = \angle NMY$$

$$\angle XNM = 65^\circ - 34^\circ = 31^\circ$$

Therefore  $\angle LNM = \angle XNM = 31^\circ$ .

It is pertinent to note that the concept of geometry can be varied and applied logically to achieve the same result, therefore candidates are expected to spend more time in learning the principles and theories of geometry.

9. (a) If  $T = WP [M^2 - (M - S)^2]$ , express  $M$  in terms of  $T, W, P$  and  $S$ .
- (b) A point  $X$  is between two towers  $TP$  and  $QW$  and are all on the same horizontal ground..

The angles of elevation of the tops  $T$  and  $Q$  from  $X$  are  $62$  and  $48$  respectively,  $|TP| = 100$  m and  $|PW| = 80$  m.

- (i) Illustrate the information in a diagram.
- (ii) Calculate, correct to the nearest metre  $|QW|$ .

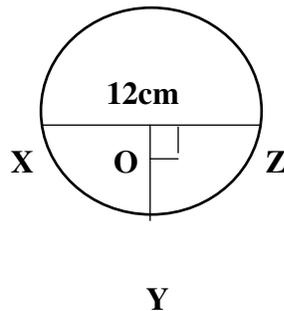
In part (a), most candidates were able to express  $M$  in terms of  $T, W$  and  $S$ . Initially they expanded the term  $(M-S)^2$  and then manipulated to obtain the required relation :  $M = \frac{T+WPS^2}{2SWP}$ .

It was also observed that most candidates did not see that the expression in the main brackets was difference of two squares so they did not make any attempt to apply the concept of difference of two squares to solve the problem.

Most candidates who answered the part (b) performed poorly because they could not draw the required diagram as expected. Their inability to solve the question was due to the fact that they did not analyse the problem so as to

10. (a) If  $(x - 1) \log_{10} 4 = x \log_{10} 16$ , without using Mathematical tables or calculator, find the value of  $x$ .

- (b)



In the diagram,  $XZ$  is a chord which is 12 cm long. If the perpendicular distance from the midpoint of the chord to a point  $Y$  on the circumference of the circle is 4 cm, calculate, correct to one decimal place, the sector  $OXYZ$ .  
[Take  $\pi = \frac{22}{7}$ ]

Most candidates answered the question in part (a) unfortunately they could not apply the laws of logarithm to transform the logarithmic equation to a linear equation and solve for the value of  $x$ .

In part (b), most candidates did not attempt to answer the question. However few candidates who attempted it used a wrong approach to solve it. They quickly affirmed that  $O$  was the center of the circle and therefore used the sector method to solve it. Their analysis was wrong and they were expected to find the angle at the centre before they use the sector method.

**11. The distribution of marks scored by some students in a test is as follows:**

<b>Marks</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Number of students</b>	<b><math>p + 2</math></b>	<b><math>P - 1</math></b>	<b><math>2p - 3</math></b>	<b><math>P + 4</math></b>	<b><math>3p - 4</math></b>

(a) If the mean mark is  $3\frac{5}{22}$ , find the value of  $p$ .

(b) Find the:

(i) interquartile range

(ii) probability of selecting a student who scored at least 4 marks in the test.

The question was well answered by most candidates. They were able to find the value of  $P$  so easily by applying the concept of finding mean.

Again, their approach of finding the interquartile range and the probability was in the right direction.

**12. (a) The operation  $*$  is defined on the set of real numbers,  $R$ , by:  $x * y = \frac{x+y}{2}$ ,  $x, y \in R$ .**

(i) Evaluate  $3 * \frac{2}{5}$ .

(ii) If  $8 * y = 8\frac{1}{4}$ , find the value of  $y$ .

(b) In  $\Delta ABC$ ,  $\overrightarrow{AB} = \begin{pmatrix} -4 \\ 6 \end{pmatrix}$  and  $\overrightarrow{AC} = \begin{pmatrix} 3 \\ -8 \end{pmatrix}$ . If  $P$  is the midpoint of  $\overline{AB}$ , express  $\overrightarrow{CP}$  as a column vector.

In part (a) the question was well answered by most candidates. They were able to substitute the given values into the binary operation and evaluate it. Again they substituted the given value and the variable into the binary operation and equated it to

the given value. They showed mastery in manipulating it to find the value of the variable (y). Candidates performance in part (b) was also quite good. They were able to apply the concept of finding midpoint of a vector and then use it to express  $\overline{CP}$  as a column vector.

It was observed that those who could not do it was as a result of weakness in their manipulative skills.

**13. (a) Using completing the square method, solve correct to two decimal places, the equation  $3y^2 - 5y + 2 = 0$**

**(b) Given that  $M = \begin{pmatrix} 1 & 2 \\ 4 & 3 \end{pmatrix}$ ,  $N = \begin{pmatrix} m & x \\ n & y \end{pmatrix}$  and  $MN = \begin{pmatrix} 2 & 1 \\ 3 & 4 \end{pmatrix}$ , find the matrix N.**

In part (a), most candidates could not use the completing the square method to solve the given quadratic equation. However, few candidates showed mastery in using the completing the square method to solve

# ELECTIVE MATHEMATICS

## **1. GENERAL COMMENTS**

The standard of the paper, compared favourably with those of previous years. The questions were unambiguous and within the scope of the Elective Mathematics syllabus

## **2. SUMMARY OF CANDIDATES' STRENGTH**

Some candidates are commended for being able to

- integrate rational function by means of algebraic substitution;
- express rational expression in partial fractions and also
- resolve forces into components.

## **3. SUMMARY OF CANDIDATES WEAKNESSES**

Most candidates were unable to

- integrate rational function by means of substitution
- calculate binomial probability
- draw cumulative frequency curve as well as histogram of unequal intervals
- simplify trigonometric expression
- resolve forces into components.
- deal effectively with vectors.

## **4. SUGGESTED REMEDIES**

- Candidates need to intensively and extensively read and digest relevant materials.
- Effective teaching and learning to ensure that various aspects of the Elective mathematics syllabus are completely covered before examinations.
- Both teachers and candidates should take note of the above weaknesses so that with the guidance of teachers, candidates could solve problems involving these weaknesses and be able to overcome them.

1. (a) **The function  $f$  and  $g$  are defined on the set of real numbers,  $\mathbf{R}$  by  $f(x) = 2x - 1$ ,  $g(x) = 5x$ . Find  $g \circ f$**

(b) **The point  $(-3, b)$  lies on the curve  $2y = 2x^3 + x^2 - 4x + 3$ , find the value of  $b$ .**

The question was attempted by almost all candidates. Most candidates responded correctly to the question. Only few candidates could not answer the question correctly. For example, in finding the  $f^{-1}(x)$  some candidates solve it the following way:

Let  $y = f(x)$

$$y = 2x - 1$$

$$y + 1 = 2x$$

$$\therefore x = \frac{y+1}{2}$$

Interchanging  $x$  and  $y$ :

$$\therefore y = \frac{x+1}{2}$$

For the (b) part, a number of candidates did not answer it at all.

2. **Evaluate:**  $\int_0^2 \frac{x}{\sqrt{1+x}} dx$ .

Only few candidates evaluated this problem correctly. Most candidates who attempted this question had no idea of integration by substitution

3. (a) **Given that  $\log_{10}c = z$ , express  $\log_{10} \sqrt{\left(\frac{10a}{b^5c}\right)}$  in terms of  $x$ ,  $y$  and  $z$ .**

(b) **The radius of a circle is 12cm. Find, leaving the answer in terms of  $\pi$ , the rate at which the area is increasing when the radius is increasing at the rate of  $0.2\text{cm s}^{-1}$ .**

Most candidates attempted this question with the majority successfully solving it correctly in both (a) and (b). only few candidates did not know what to do in both (a) and (b). only few candidates did not know what to do in both (a) and (b).

4. **If  $2x^2 - 7x - 15$  is a factor of  $6x^3 - 13x^2 - px - q$ , where  $p$  and  $q$  are constants, find the values of  $p$  and  $q$ .**

Most candidates attempted this question with a few answering the question correctly. However most of the candidates could not factorize the quadratic expression  $2x^2 - 7x - 15$ .

5. **Twenty percent (20%) of tricycles produced by a company is defective. If 5 tricycles are selected at random, calculate the probability that:**

- (a) **none is defective;**  
(b) **at least two are defective.**

Almost all candidates attempted this question with very few scoring full marks. However, most candidates couldn't solve the (a) part correctly but failed to solve the (b) part.

6. **The table shows the life span of some batteries manufactured by a company.**

<b>Battery life span (days)</b>	<b>26 – 30</b>	<b>31 – 35</b>	<b>36-40</b>	<b>41- 45</b>	<b>46 - 50</b>	<b>51 -55</b>
<b>Frequency</b>	<b>4</b>	<b>7</b>	<b>13</b>	<b>8</b>	<b>6</b>	<b>2</b>

- (a) **Draw a cumulative frequency curve for the distribution.**
- (b) **Using the curve in (a), find the interquartile range.**

This question was attempted by majority of candidates. However, most of them could only draw the cumulative frequency table without drawing the curve.

7. **A triangle  $PQR$  has vertices  $P(2, -3)$ ,  $Q(5,1)$  and  $R(4,8)$ . Calculate angle  $PQR$ .**

Very few candidates exhibited good knowledge in using scalar (Dot) product or the cosine rule in determining the angle  $PQR$ . Most of the candidates who attempted the question did not know what to do.

8. **The resultant force of  $F_1$  (150 N,  $030^\circ$ ) and  $F_2$  ( $x$  N,  $120^\circ$ ) is  $R$  ( $y$  N,  $090^\circ$ ). Find, correct to two decimal places, the values of  $x$  and  $y$**

This question was well answered by most of the candidates who attempted it. However few of the resolution of forces. For example, some resolve the forces as follows:

$$F_1 (150\text{N}, 030^\circ) = \begin{pmatrix} 150\text{Cos}30^\circ \\ 150\text{Sin}30^\circ \end{pmatrix} \text{ and } R \begin{pmatrix} y \text{Cos}90^\circ \\ y \text{sin } 90^\circ \end{pmatrix}$$

$$F_2 (x\text{N}, 120^\circ) = \begin{pmatrix} x \cos 120^\circ \\ x \sin 120^\circ \end{pmatrix}$$

9. (a) **Simplify:  $\frac{\cos\theta+\sin\theta}{\cos\theta-\sin\theta} - \frac{\cos\theta-\sin\theta}{\cos\theta+\sin\theta}$  and express the answer in terms of  $\tan\theta$ .**
- (b) **Find equation of the tangent to the curve  $y = 4x(x^2 - 12)$  at its maximum point**

Only very few candidates attempted this question. Most of these candidates exhibited lack of understanding in applying trigonometric identities and simplification as well as differentiation. As a result performed poorly in this question.

10. (a) Express  $\frac{x^2+1}{(x+2)^3}$  in partial fractions.

This question was well answered by most of the candidates who attempted it, especially the (a) part. However the (b) part was poorly answered.

11. (a) Given that  $f(x) = \int \left( \frac{1}{x^2} + 2x - 3 \right) dx$  and  $f(2) = 2$ , find  $f(x)$ .
- (b) The thirteenth term of an Arithmetic Progression (A, P) is 27 and the seventh term is three times the second term, find the:
- (i) first term;
- (ii) common difference;
- (iii) sum of the first ten terms.

Relatively few candidates attempted this question. Only few of them solved the question correctly for both (a) and (b) parts. Of those who could not solve the question correctly, some could not (1) even find  $\int \left( \frac{1}{x^2} + 2x - 3 \right) dx$

12. There are 11 girls and 9 boys in Form 10 and 9 girls and 9 boys in Form 1B in a school. Eight students are to be selected from each Form to take part in an essay competition. Find, correct to three decimal places, the probability that equal number of girls and boys will be selected from:
- (a) Form 1A;
- (b) each Form.

Very few candidates attempted this question. Only few of them could answer (a) correctly. The (b) part was a big challenge.

13. The table shows the frequency distribution of the ages of some patients in clinic.

Ages (year)	11 – 20	21 -25	26 - 30	31- 35	36 - 40	41 - 50
	8	16	22	19	25	10

- (a) Draw a histogram for the distribution.
- (b) Find, correct to two decimal places, the mean age of the patients.
- (c) Find the probability of selecting a patient who is at most 25 years

This question was attempted by most candidates. However most of them failed to draw the histogram correctly. They seem to have a challenge in drawing a histogram of unequal class intervals.

14. (a) **A uniform ladder rests at an angle of  $60^\circ$  with a rough horizontal ground and against a smooth vertical wall. The ladder weighs 60 kg and its length is 10m.**

- (i) **Sketch the diagram.**  
(ii) **Find the reactions at the wall and the ground.**

[Take  $g = 10 \text{ ms}^{-2}$ ]

- (b) **A particle starts from rest with uniform acceleration and attains a speed of  $48 \text{ m s}^{-1}$  covering a distance of 400 m. Calculate:**

- (i) **its acceleration;**  
(ii) **the distance covered when its speed is  $24 \text{ ms}^{-1}$ .**

Very few candidates attempted this question. None could sketch the diagram in (a) partly correctly. It is part (b) that candidates could solve the question correctly.

15. (a) **A vector  $pi + pj$  where  $p$  and  $q$  are scalars has its magnitude twice that of the vector  $i + 3j$  and is parallel to the vector  $3i - 4j$ . Find the vector.**

- (b) **Find, correct to the nearest degree, the angle between the vectors  $a = \begin{pmatrix} -3 \\ 4 \end{pmatrix}$  and  $b = \begin{pmatrix} -8 \\ -15 \end{pmatrix}$ .**

Just like question 14, only few candidates attempted this question. Of these candidates only few could find the angle between the vectors  $a$  and  $b$  – ie (b) part correctly. For the (a) part candidates were at a loss as what to do.

# **RESUME FOR THE SCIENCE SUBJECTS**

## **1. STANDARD OF THE PAPERS**

All the Chief Examiners reported that the standard of the papers of the various science subjects was appropriate and comparable to that of previous years.

## **2. CANDIDATES' PERFORMANCE**

The Chief Examiners expressed varied views on the performance of candidates for the various science subjects. Performance in Animal Husbandry and Forestry was good. Candidates for Fisheries, Crop Husbandry and Horticulture, Physics and Chemistry were reported to have performed averagely. In Integrated Science and General Agriculture candidates performed poorly.

## **3. CANDIDATES' STRENGTHS**

The Chief Examiners noted that candidates performed well in the following topics of the respective subjects.

### **Physics**

Projectile motion  
Gravitation  
Gas laws applications  
Nuclear Physics

### **Biology**

Classification of living things  
Digestion in mammals

### **General Agriculture**

Animal Improvement  
Poultry production  
Soil fertility

### **Chemistry**

Physical Chemistry  
Inorganic Chemistry  
Quantitative analysis (Titration)

### **Integrated Science**

Electricity  
Poultry production  
Seed dispersal  
Ecology  
Reproduction in humans

### **Animal Husbandry**

Animal nutrition

Poultry production  
Livestock production

### **Crop Husbandry and Horticulture**

Vegetables and their uses  
Propagation of crops

In addition, the Chief Examiners for Integrated Science, Physics, Biology, General Agriculture, Crop Husbandry and Horticulture, Fisheries and Forestry reported that candidates adhered to the rubrics of the papers in addition to exhibiting legible handwritings.

Candidates for Integrated Science, Biology, General Agriculture, Animal Husbandry, Crop Husbandry and Horticulture were commended by the respective Chief Examiners for the orderly presentation of their responses.

Improvement in the spelling and usage of scientific terms was a noted feature in the responses of candidates for Integrated Science, Chemistry and Animal Husbandry. Candidates for Integrated Science and Chemistry were singled out by the Chief Examiners for exhibiting improved computational skills.

Other strengths noted by the Chief Examiners include:

- (1) Provision of concise answers
- (2) Proper understanding of questions

## **4. CANDIDATES' WEAKNESSES**

Candidates were reported to have performed woefully in the following topics of the respective subjects.

### **Physics**

Temperature calculations  
Optics  
Current electricity  
Motion in inclined plane

### **Biology**

Biological relationships  
Features and characteristics of micro-organisms  
Genetic diagram construction

### **General Agriculture**

Agribusiness  
Land surveying  
Establishment of beds and borders

### **Chemistry**

Organic chemistry  
Qualitative analysis  
Electronic configuration

## **Integrated Science**

Magnetism  
Reproduction in flowering plants  
Circulatory system in humans  
Animal nutrition

## **Crop Husbandry and Horticulture**

Cropping systems  
Crop improvement

Furthermore, the Chief Examiners lamented that the responses of candidates for some of the subjects showed that they were not adequately prepared for the examination. This feature was reported for Integrated Science, Chemistry, Biology, General Agriculture, Animal Husbandry, Crop Husbandry and Horticulture and Fisheries.

Improper usage of the English language negatively affected the performance of candidates for Integrated Science, Animal Husbandry, Fisheries and Forestry. They were consequently unable to express themselves properly in their responses.

Candidates for Physics, General Agriculture, Animal Husbandry and Crop Husbandry and Horticulture seem not to have understood the demands of the questions and therefore provided shallow answers. This negative feature was compounded by the inability of candidates to spell and use scientific terms properly.

The Chief Examiners were disappointed with the poor drawing skills of candidates. Candidates could not draw proper outlines, draw to scale nor label diagrams properly. In addition improper interpretation of graphs and data was exhibited by candidates for most of the practical papers.

Other notable weaknesses reported in the sciences include:

- (1) Inability to carry out simple calculations
- (2) Inability to explain simple scientific occurrences
- (3) Use of abbreviations in presenting answers
- (4) Inability to assign proper units to figures

## **5. SUGGESTED REMEDIES**

The Chief Examiners for the science subjects generally recommended that candidates should be taken through enough practical lessons to improve their performance. Candidates should also be adequately prepared for the examination and also given the needed help to improve upon the usage of the English Language.

The Chief Examiners also made the following suggestions:

Candidates should:

- (1) be taken through calculation drills to improve upon their speed and accuracy.
- (2) learn the conventions of writing scientific terms
- (3) identify and understand the scientific principles underlying everyday occurrences
- (4) thoroughly read and understand questions before attempting them

# **ANIMAL HUSBANDRY 2**

## **1. GENERAL COMMENTS**

The standard of the paper was comparable to that of previous years. The questions were simple and straight forward with no ambiguities. The general performance of the candidates was the same.

## **2. SUMMARY OF CANDIDATES' STRENGTHS**

The following strengths were observed by the Chief examiner

- (1) Legible handwriting
- (2) Orderly presentation of answers
- (3) Provision of clear and straight forward answers

## **3. SUMMARY OF CANDIDATES' WEAKNESSES**

The Chief Examiner noted the following weaknesses:

- (1) Poor spellings skills e.g. stomach, for stomach, oesophagus for oesophagus, vitermines for vitamin
- (2) Poor definitions. Candidates had difficulty defining certain terms e.g. inbreeding, crossbreeding
- (3) Failure to cover the syllabus or to undertake thorough studies
- (4) Answering more than one question on a page
- (5) Failure to answer the number of questions specified in the rubrics. Candidates sometimes answer all the questions instead of 4 questions
- (6) Failure to write index number on the answer booklet

## **4. SUGGESTED REMEDIES**

The Chief Examiner made the following suggestions:

- (1) Candidates should be given exercises that will help them overcome spelling mistakes and master definitions of technical terms
- (2) Candidates should plan their studies in such a way that they would be able to cover the syllabus. Group studies is recommended
- (3) Candidates who failed to 'comply' with the rubrics should be penalized

## **5. DETAILED COMMENTS**

### **Question 1**

- (a) **State five problems of livestock production in West Africa.**
- (b) **State six causes of low egg production in layers.**
- (c) **Name three parts of the digestive system of pigs.**
  
- (d) **State two functions of each of the following hormones in animal production:**
  - (i) **testosterone;**

- (ii) oestrogen;
- (iii) oxytocin.

This question appears to be the most popular question. The general performance was good.

- (a) Candidates had little difficulty answering this sub-question. The problems of livestock production were clearly stated. Some of the candidates, however, discussed the problem and this was not required. Instead of stating the problems, some candidates provided solutions e.g. pest and disease control, provision of water to the animals etc and these were wrong. Scarcity of feed and water, poor breeds, inadequate storage facilities/capital/extension personnel, theft of animals, prevalence of pests and diseases are among the correct answers expected.
- (b) This sub-question was well attempted by candidates. Many of them were able to state the causes of low egg production e.g. high ambient temperature, pest/parasite infestation, incidence of diseases, poor breeds, old age of birds, inadequate feed and water, poor quality feed, irregular feeding etc. statements like weather condition, poor sanitation, inadequate feeding trough, type of feed, health of layer, clean eggs, oval eggs do not answer the question and so did not attract marks.
- (c) This sub-question was a simple one but some candidates confused the digestive system to pigs with that of ruminants. Generally, it appears candidates did not know where the digestive system begins and where it ends. Digestion begins in the mouth and ends in the intestines. It is important for teachers to emphasize the liver, pancreas and gall bladder as important parts of the digestive system of pigs.
- (d) (i-iii) This was the most important part of Question 1. The types of answers given suggest that candidates were ill-prepared for the question; some of them mistook the functions of one hormone for the others. Some candidates were careless in stating the answers e.g. “promotes spermatozoa” instead of “promotes spermatogenesis”. “the development of male characteristics” instead of “male secondary sexual characteristics”, “release of female semen” when females never produce semen”.

## **Question 2**

- (a) **State four functions of protein in farm animals.**
- (b) **Give two advantages and two disadvantages of the deep litter system of keeping poultry.**
- (c) **State five factors that affect milk yield in dairy cattle.**
- (d) **List five benefits of rearing pigs.**
- (e) **Mention two methods of mating in sheep.**

It was one of the most popular questions. General performance was very good.

- (a) A simple question that required candidates to state the functions of protein. Though simple, candidates gave unacceptable answers like: it gives energy, secretes enzymes, provides worn-out tissues; for egg shell formation; makes animals free from pests and diseases etc.

Correct answers included:- formation of sex cell

(gametes)/hormones/antibodies/digestive enzymes/hair/nails/animal products such as meat, milk and eggs; for growth; for repair of worn-out tissues.

- (b) The advantages and disadvantages of the deep litter system of keeping poultry did not pose much problem to candidates. It is, however, wrong for candidates to make direct comparisons in answering the questions. For instance, a candidate who states the advantages as “record keeping is easier” and goes on to give the disadvantage as “record keeping is difficult” cannot score for both.

The common answers provided by candidates to score were:

Advantages: Record keeping is enhanced. It does not require a large plot of land. Easy to carry out management practices. It reduces loss of eggs.

Disadvantages: Easy spread of diseases. It is capital intensive. Difficult to monitor performance of individual bird. Egg eating could occur

- (c) This sub-question required candidates to state five factors that affect milk yield in dairy cattle. Some candidates demonstrated poor understanding of the question, probably because of the use of the term “factor”. The variety of wrong answers provided also shows that candidates were generally ignorant of how to answer such questions. In a question like this, there is no need to qualify the factors in the answers provided, since the question did not ask for factors that could “increase or decrease” milk yield in dairy cattle.

Answers should be correctly stated as:

- temperature (and not high temperature or low temperature)
- diseases
- age of the cow
- plane of nutrition
- breed of animal
- efficiency of milking
- size of udder etc

- (d) Candidates did not have difficulty listing the benefits of pig rearing e.g. large litter size, ability to consume a wide variety of feed, efficient utilization of feed, high dressing percentage, source of income, meat etc.

- (e) Many candidates were able to mention the two methods of mating in sheep i.e. hand mating and pen mating. Candidates should note that tupping and servicing are simply acts of mating, and not methods of mating.

### **Question 3**

- (a) (i) **What is a zoonotic disease?**  
(ii) **Give two examples of zoonotic diseases.**
- (b) **List seven signs of ill-health in farm animals.**
- (c) **State three symptoms of each of the following diseases:**
  - (i) **redwater fever in sheep;**
  - (ii) **rinderpest in cattle;**
  - (iii) **coccidiosis in fowls.**

It was quite popular with candidates but the general performance was very, very poor.

- (a) (i) Most candidates gave wrong definition of zoonotic disease. A disease that affects both man and farm animals. It should be noted that a disease can affect both man and animals but may not be a zoonotic disease. E.g. mastitis. The correct definition is “a disease that can be transferred from humans to animals and from animals to humans”. Note the two-way transfer. The disease should be transferrable both ways before it can be termed a zoonotic disease.  
(ii) Anthrax and rabies were the common examples of zoonotic diseases given. Other correct answers are brucellosis, tuberculosis, bird flu, mad cow disease and tetanus.
- (b) A simple question but not well tackled. Some candidate listed signs of good health instead of signs of ill-health. Others also gave answers like faeces, urine, behavior, movement, appearance of the animal which are not correct. Since both sick and healthy animals produce faeces, urine and move etc. but hard, watery or blood-stained faeces is a sign of ill-health. Similarly, blood in the urine, or foul odour of urine and slow movement / difficulty in movement indicate ill-health.
- (c) A poorly answered sub-question. Candidates were not able to give the symptoms of (i) red water fever disease (ii) rinderpest in cattle (iii) coccidiosis in fowls. Some candidates mistook the symptoms of one disease for another; others did guesswork. Teachers and students must pay attention to diseases because of their importance in any animal production enterprise.

### **Question 4**

- (a) **Define each of the following terms as used in animal production:**
  - (i) **inbreeding;**
  - (ii) **cross breeding.**
- (b) **State four disadvantages of selection in animal production.**
- (c) (i) **Mention six effects of high ambient temperature on layers.**  
(ii) **State three ways of preventing high ambient temperature in a poultry house.**

It was an unpopular question and the performance was generally poor.

- (a) Many candidates could not define inbreeding and crossbreeding and therefore lost precious marks. It is important for teachers to emphasize the definition of terminologies.
- (b) Candidates also had difficulty answering this sub-question. It appears they did not understand the question. Instead of stating the disadvantages of selection in animal production, some candidates gave characteristics of animals to select; others described the different types of selection. Expected answers are: it is time-consuming (not time wasting); costly; tedious; requires expertise; requires accurate and up-to-date records; and also that it may result in the elimination of some desirable traits of parent stock.
- (c)
  - (i) A poorly answered question. Candidates failed to state the specific effects of high ambient temperature on layers. Consequently an answer like “it affects hatchability” is incorrect but “it reduces hatchability of eggs” is correct. Other correct answers included: reduced egg production, reduced egg size/feed intake; increased water intake; increased panting; weight loss; cannibalism.
  - (ii) Candidates were required to state ways of preventing high ambient temperature in a poultry house. It was a difficult question for candidates. Answers showed they were ill-prepared for this question. The solution to the high ambient temperature include proper orientation of the poultry house; adopting of recommended spacing of birds; provision of adequate ventilation; use of construction materials that will not increase the heat load; use of heat extracting fans.

### **Question 5**

- (a) Mention five uses of forage crops.**
- (b) State five characteristics of a good species.**
- (c) List five factors that affect the productivity of pastures in West Africa.**
- (d) State five signs of oestrus in a sow.**

This question was quite popular with candidates. Their performance was above average.

- (a) Candidates had difficulty stating the uses of forage crops. Candidates could easily give answers relating to feeding of livestock with fresh herbage, hay and silage. Other correct uses of forage crops which were not very popular with candidates included: used as bedding material; for roofing of farmsteads; for green manuring; for cover cropping; for fencing; for the control of soil erosion.
- (b) Performance in this question was not as encouraging as expected. Candidates gave a variety of answers which were wrong e.g.
  - resistance to weather condition
  - they have high fibre content
  - they should be green
  - should contain nutrients

Some characteristics of a good pasture species are:

- ability to grow fast
- ability to produce large quantities of seeds
- ability to survive during drought

- ability to withstand frequent cutting/grazing/trampling
  - high nutritive value
  - high digestibility
  - high leaf to stem ratio
- (c) This sub-question was poorly answered. Here again, the word “factor” in the question. “Factors that affect the productivity of pasture in West Africa” posed a problem to candidates. Instead of stating the factors, candidates stated activities that should be undertaken. E.g.
- application of fertilizer
  - planting of leguminous crops
  - practising of rotational grazing etc
- Some candidate deviated by giving reasons for low productivity  
The factors that affect productivity of pastures in West Africa include:
- soil fertility
  - climatic conditions of the area
  - type of plant species
  - topography
  - grazing pattern
  - incidence of pests
  - incidence of diseases
  - weed infestation
- (d) This question did not pose a problem to candidates. Some candidates were careless in stating their answers. For instance:
- animal becomes restlessness instead of animal becomes restless
  - mucous discharge from the vagina instead of vulva
  - reddened vulva or swollen vulva instead of reddened and swollen vulva
  - high temperature or abnormal temperature instead of high body temperature

### **Question 6**

- (a) (i) **Stat five characteristics of rabbit that makes it suitable for commercial production.**
- (ii) **Name six breeds of rabbits that are commonly used in commercial production in West Africa.**
- (iii) **List four diseases that affect rabbits.**
- (b) **State five ways in which poultry production is important.**

This is perhaps the most unpopular question. The general performance, however was fair.

- (a) (i) Candidates were asked to state the characteristics of rabbits that make it suitable for commercial production. Performance was above average. Candidates who stated physical features (e.g. long tails/ears) and importance of rearing rabbits (e.g. faeces for manure, source of income) got it wrong.

Rabbits are suitable for commercial production because they

- are prolific
- grow fast
- have short gestation period
- produces good quality meat which is highly marketable
- can efficiently convert a wide range of feed material into meat

- (ii) Candidates were able to mention Flemish giant, California white, New Zealand White, New Zealand red, Chincilla as correct breeds of rabbit but the spellings were poor. Local breed is not acceptable. Other correct breeds are Angora, Lop and Dutch.
- (iii) It is quite obvious that some of the disease of rabbits listed e.g. T.B, Anthrax were guesswork and are incorrect. The correct answers are ear canker (and not ear cancer), coccidiosis, pneumonia, enteritis.
- (b) Candidates were able to tackle this question very well. Poultry production is important not because the birds are prolific but because they are a source of meat, eggs, income, employment, manure etc.

# **ANIMAL HUSBANDRY 3**

## **1. GENERAL COMMENTS**

The standard of the paper for this year was comparable to that of previous years. The questions were clear and unambiguous. The performance of the candidates improved slightly.

## **2. SUMMARY OF CANDIDATES' STRENGTHS**

The Chief Examiner observed the following strengths:

- (1) good presentation of answers
- (2) good identification skills
- (3) clear and straight forward answers
- (4) answering of new question on fresh page

## **3. SUMMARY OF CANDIDATES' WEAKNESSES**

The following weaknesses were observed:

- (1) provision of more answers than required
- (2) wrong spelling of terms
- (3) poor mastery of the subject and hence provision of incomplete answers

## **4. SUGGESTED REMEDIES**

The Chief Examiner suggested the following remedies

- (1) Candidates must read questions well and understand its requirements before tackling them
- (2) Candidates must read text books and continuously practice the spelling of terms in the subjects
- (3) Teachers should guide students to complete the syllabus and prepare enough for the examination.

## **5. DETAILED COMMENTS**

### **Question 1**

- (a) Identify specimen A.**
- (b) Describe how specimen A is used on an animal farm.**
- (c) State four ways in which the management practice carried out using specimen A is important.**
- (d) Mention three equipment that could be used in place of specimen A to perform the same management practice.**

Expected solution:

- (a) Identification  
Specimen A - Burdizzo
- (b) Description of use of specimen A (Burdizzo) is used
- restrain animal
  - locate the spermatic cord
  - open the Burdizzo
  - place the scrotum in between the pliers
  - close the Burdizzo tightly to crush the spermatic cord
- (c) Importance of castration
- makes animal docile / easy to handle
  - controls indiscriminate mating
  - makes meat tender / improve meat quality
  - removes characteristic male odour in goats
  - animals grow fat
- (d) Farm animals that could be castrated using Burdizzo
- sheep
  - goat
  - cattle
- (e) Other equipment used for castration
- elastrator / rubber ring
  - sharp knife / blade
  - emasculator

### Comments

- (a) There was no problem with the identification of the specimen
- (b) A lot of the candidates were able to describe the process in the use of the specimen. However, it would have been good for the candidates to give the processes in a sequential manner. Some candidates also included practices used in carrying out the open castration.
- (c) Most candidates provided the needed answer since this specimen is often used
- (d) Some candidates mentioned that castration is carried out on cattle, dog, cats, grasscutters and rabbits.
- (e) Similarly they were able to mention other equipment used in carrying out the process.

### Question 2

- (a) **Identify each of specimens B, C and D.**
- (b) **Mention the major nutrient provided by each of specimens B, C and D in animal diet.**
- (c) (i) **Which of the specimens B, C and D forms the highest percentage in poultry diet?**
- (ii) **Give one reason for your answer in (c)(i).**

- (d) **Mention two ingredients that could be used to replace each of specimens C and D in animal diet.**
- (e) **State three deficiency symptoms of the nutrient supplied by specimen D in farm animals.**

Expected solution:

(a) Identification

- Specimen B - maize (crushed)  
Specimen C - fish (crushed) / fish meal  
Specimen D - Oyster shell / shellgrits

(b) Major nutrients supplied by specimens

- Specimen B (Maize) - Carbohydrate  
Specimen C (Fish) - Protein  
Specimen D (Oyster shell) - Mineral / calcium

(c) Highest percentage in diet

- (i) Specimen B (Maize)  
(ii) Maize (Specimen B) forms the highest percentage because it provides energy which is required by the animal for its everyday activity.

(d) Replacement for specimen C and D in animal diet

Specimen C (fish meal)

- blood meal
- meat meal
- feather meal
- soya bean cake / meal
- groundnut cake
- copra cake
- maggot
- cotton seed cake
- cashew nut

Specimen D (oyster shell)

- bone meal
- snail shell meal
- egg shell meal
- dicalcium phosphate
- gypsum salt
- rock phosphate

Deficiency symptoms of mineral / calcium

- poor egg shell formation
- poor teeth formation

- poor blood clotting
- poor nerve functioning
- rickets / weak bones / osteoporosis
- osteomalacia
- paralysis

Comments:

- (a) The specimens were properly identified.
- (b) Almost all of them were able to identify the major nutrients provided. However, some of them mixed up the nutrients with the specimens.
- (c) Most candidates were unable to give the reason for choosing maize
- (d) Some candidates mentioned only one replacement per specimen C which made them to lose marks.
- (e) Deficiency symptoms of calcium were adequately given by most of the candidates.

**Question 3**

- (a) Identify each of specimens E, F and G.**
- (b) Give two uses of each of specimens E, F and G.**
- (c) State three ways of maintaining specimen G.**
- (d) State three precautionary measures to be taken when using specimen E.**

Expected solution:

- (a) Identification
  - Specimen E - feeding trough
  - Specimen F - wood shavings
  - Specimen G - (Top loading) weighing scale
- (b) Uses
  - Specimen E (Feeding trough)
    - for feeding poultry
    - to administer drugs through feed
  - Specimen F (Wood shaving)
    - As litter material / bedding material
    - packaging material e.g. for egg
    - cushion material in nests
    - as fuel
  - Specimen G (Weighing scale)
    - weighing meat
    - weighing feed and feed ingredients
    - weighing live birds and eggs
- (c) Maintenance of specimen G (Weighing scale)

- clean the scale / wash the pan
  - oil / greese movable parts regularly
  - tighten loose screws
  - do not overload when using
- (d) Precautionary measures when using specimen E (Feeding trough)
- do not fill to the brim to avoid spillage of feed
  - adjust the height (from ground) to a convenient level for the birds to make feeding easy
  - provide rotating bar to prevent birds from soiling the feed
  - keep clean to prevent contamination and disease transfer from mouldy feed
  - mend any damaged part

Comments:

- (a) Most of the candidates were able to identify the specimens correctly. However, specimen G was identified by a number of candidates as “top loading *balance* instead of *scale*”.
- (b) Similarly, used of the specimens were given sufficiently by the candidates.
- (c) Candidates must be further educated to know the difference between maintenance of equipment and precautionary measures taken when using the equipment.
- Generally, answers provided were satisfactory in many cases.

**Question 4**

- (a) (i) **State two harmful effects of each of specimens H, J and K in livestock production.**
- (ii) **State two ways of controlling each of specimens H, J and K on livestock farms.**
- (b) **Mention three other storage pests of farm animals.**

Expected solution:

- (a) (i) Harmful effects of specimen H, J and K in livestock production
- Specimen H (Soldier ant)
- consumption of feed
  - cause injuries / predispose animals to diseases
  - reduce quality of stored feed
  - contaminate water and feed
  - disturb farm work
- Specimen J (weaver bird)
- consumption of feed / feedstuffs
  - contaminate feed with feaces / droppings
  - contaminate / pollute water with droppings
  - vectors / carriers of diseases / pathogens

- farm animals are disturbed by their presence

Specimen K (Weevil)

- consumes feed / feedstuff
- reduce quality of feed
- contaminate feed

(ii) Methods of controlling Specimen H, J and K

Specimen H (soldier ant)

- use of fire / smoke
- application of common salt
- use of hot water
- application of insecticides / fumigation
- use of spent engine oil
- destruction of abode

Specimen J (weaver bird)

- use of avicide / poison
- use of scare crows
- use of traps
- hunting / shooting

Specimen K (Weevil)

- use of insecticide
- handpicking
- application of heat / roasting
- boiling of feeds / feedstuffs
- drying of feeds / feedstuffs
- fumigation of stored feedstuff

Other storage pests

- cockroaches
- termites
- Rodents (rats, mice etc)
- beetle

Comments:

- (a) (i) A large majority of the candidates provided the right answers.  
(ii) The question was adequately answered by the candidates
- (b) Most candidates provided the right answers. However, some of them mentioned mites, grasscutters and a few other organism as storage pests which is incurrent.

# **BIOLOGY 2**

## **1. GENERAL COMMENTS**

The standard of the paper compared favourably with that of previous years. The general performance of candidates was better than that of previous years.

## **2. SUMMARY OF CANDIDATES' STRENGTHS**

- (1) Most candidates displayed some improvement in expressing themselves well in English.
- (2) Candidates provided answers of each questions on fresh page.
- (3) Candidates showed mastery of matching corresponding points in a tabular form.

## **3. SUMMARY OF CANDIDATES' WEAKNESSES**

- (1) Technical terms were wrongly spelt by many candidates. Technical name of species of organism started with small letter.
- (2) Few candidates showed lack of knowledge with regards to questions bothering on description.
- (3) Few candidates failed to comply with the Paper instructions. Some answered more than two questions from Section A. Also, candidates answered Question 5 in Section B in addition to Question 6 which was meant for candidates in Nigeria, The Gambia and Liberia.

## **4. SUGGESTED REMEDIES**

- (1) Candidates should read all instructions to the paper and follow them to the letter.
- (2) Teachers should take their students through spelling drills with respect to technical terms and names.
- (3) Teachers should encourage their students to work sufficient tutorials and assignments on how to provide concise and accurate answers.
- (4) Teachers should ensure that candidates know and understand the rubrics of the paper.

## **5. DETAILED COMMENTS**

### **Question 1**

- (a)
  - (i) **What is classification of living things?**
  - (ii) **Name the scientist that developed the Binomial System of Classification.**
  - (iii) **State three reasons why it is necessary to classify living things.**
  - (iv) **List seven major groups into which Taxonomists classify living things in order of hierarchy.**
- (b) **State two features each which viruses have in common with:**
  - (i) **living things;**
  - (ii) **non-living things.**

(c) Name two viral diseases each of:

- (i) plants;
- (ii) humans.

Candidates attempted the question and performance was quite satisfactorily.

- (a)
- (i) However, candidates must note that the classification of living things in the sorting/grouping/arranging of living things (in groups); according to their common/similar characteristics/features/shared qualities.
  - (ii) The name of the scientist who developed the Binomial system of classification is Carolus Linnaeus/Carl von Linné
  - (iii) Candidates were able to state the reasons for classification of living things which include the following:
    - to put everything organism into a systematic order/specific group/systematic naming of living things
    - for easy identification of similar living things
    - to indicate the relationship between different categories of living organisms
    - to show evolutionary trends in different groups of living organisms
    - to trace geographical distribution of living organisms
    - for easy reference
    - for easy research/study
  - (iv) Most candidates could list the major groups into which Taxonomists classify living things in order of hierarchy as Kingdom; Phylum/Division; Class; Order; Family; Genus. It must be noted that, listing of groups must be spelt correctly and in right sequence/order to score.
- (b) Candidates rather stated the characteristics of both living things and non-living things and not the features of viruses as presented below:
- (i) Living things
    - Some have protoplasm/ protein coat/ membrane
    - Contain DNA/RNA nucleic acid
  - (ii) Non-living things
    - Appear as crystals
    - Lack organelles
- (c) Candidates could name the viral diseases of the following organisms correctly as presented below:
- (i) Plants  
Cassava mosaic disease, bean mosaic disease; (cacao) swollen shoot disease; groundnut rosette; maize streak, cucumber mosaic etc.
  - (ii) Humans  
Poliomyelitis/polio; chicken pox; mumps; measles; influenza/flu; AIDS; Ebola disease; (infective) hepatitis; Lassa fever; Avian influenza (Bird flu); Swine flu; bovine flu; Rabies; Zika etc.

## **Question 2**

- (a) **State four characteristics of enzymes.**
- (b) (i) **List two digestive enzymes produced in the duodenum of humans.**  
(ii) **Name the substrate that each enzyme listed in (b)(i) acts on.**  
(iii) **State the products of each enzyme activity in (b)(i) above.**
- (c) (i) **State one way in which chlorophyll is important in plants.**  
(ii) **Name two macro elements that are required for the formation of chlorophyll in plants.**  
(iii) **State one deficiency symptom of each macro element named in (c)(ii).**
- (d) **Outline the procedure used for testing for starch in a leaf.**

Generally, candidates answered this question satisfactorily.

- (a) Candidates stated the characteristics of enzymes satisfactorily. Some of which are listed below:
- they are biological catalysts; they alter the rate of biological reactions
  - they remain chemically unchanged at the end of the reaction
  - their actions are reversible
  - they are specific in action as well as specific on substrates
  - they are required in small amounts
  - they are protein in nature
  - they act best at optimum temperatures; high temperature denatures them while low temperature inactivates them
  - they are specific/ sensitive to optimum pH
  - their actions are retarded by poisons/ inhibitors
  - some require co-enzymes to function
- (b) (i) The name of digestive enzymes produced in the duodenum of humans are
- Amylase;
  - Trypsin
  - Chymotrypsin
  - Lipase
- (ii) The name of substrates for each enzyme is
- Amylase - Starch  
Trypsin/Chymotrypsin – protein  
Lipase – fats and oils/ lipids
- (c) (i) The importance of chlorophyll in plants is that it absorbs sunlight for photosynthesis
- (ii) The macro-elements required for the formation of chlorophyll are Nitrogen, Magnesium and Iron.
- (iii) Candidates could state the deficiency symptoms of each macro-element as follows:
- Nitrogen

- Chlorosis/yellowing of leaves
- Stunted/ poor growth
- poor flower / fruit development

Magnesium

- Chlorosis/yellowing of leaves
- Stunted/poor growth

- (d) Few candidates had difficulty in outlining the procedure used for testing starch. The following steps must be stated in outlining the procedure:
- detach leaf to be tested from plant after 4 to 6 hours of exposure to sun to enable it form starch
  - put leaf in boiling water for about 30 seconds to kill the cells
  - put boiled leaf in a test tube containing 70% warm alcohol/ethylated spirit/ethanol in water bath to decolorise the leaf
  - rinse decolorised/brittle leaf in running cold water to soften the leaf tissues or to remove alcohol
  - spread out the leaf on white tiles or watch glass and add few drops of iodine solution
  - allow to stand for a few minutes
  - it turns blue-black indicating presence of starch.

It is worth noting that reasons must be stated for most of the actions taken.

**Question 3**

- (a) **Name one instrument used for collecting:**
- (i) **soil organisms from a soil sample;**
  - (ii) **tiny insects from a leaf or a stem.**
- (b) **Make a diagram 6 cm – 8 cm long of the instrument named in (a)(ii) above and label fully.**
- (c) **Explain briefly the relationship between three examples of symbiotic organisms.**

Few candidates who attempted this question performed poorly. In addition to this, the question was an unpopular one.

- (a) Candidates could not name the instrument used for collecting:
- (i) Soil organisms from a soil sample as the Sieve and Tullgren funnel
  - (ii) Tiny insects from a leaf or stem as the Pooter.
- (b) Most candidates could not present good diagram of the Pooter. Most of them had problems with the spelling of the names of the structures.
- Candidates must note that a good Biological diagram is evaluated based on the following parameters as presented below:
- Title: Diagram of a Pooter
- Quality:
- Size: 6 cm to 8 cm long
- Clarity of lines: Lines not broken, lines not wooly;

Neatness of labels: ruled guidelines with no arrow heads, no crossed guidelines, horizontal labels.

Details

Stopper/rubber bung with two openings  
Two delivery tubes, inlet tube longer than outlet tube  
Inner end of shorter delivery tube with mesh/gauze

Labels

Shorter delivery/suction tube; longer delivery/collection  
Tube/mesh/gauze/netting; cotton wool; specimen  
Tube/container; vessel rubber  
Stopper/bung/cork.

- (c) Candidates had difficulty in explaining the relationship between named examples of symbiotic organisms as presented below:  
trichonympha/flagellate, a protozoa living in the gut of termite; helps that termite to digest its cellulose; while the Trichonympha enjoys protection and food in return from the termite.  
Sea anemone attaching itself to the shell of hermit crab; thereby enjoying pieces of leftover food therein; the hermit crab in turn enjoys protection against predators or the sea anemone's stings prevent the predators from harming the hermit crab.

Algae and fungi in a lichen; lichen is made up of a fungus and unicellular alga living together; the green alga produces food/ photosynthesis for the association; the fungus protects the alga/absorbs water from the surrounding for the use of the alga.

Rhizobium sp a nitrogen – fixing bacteria living in the root nodules of leguminous plants; fixes atmospheric nitrogen into nitrates for use by the leguminous plant while the Rhizobium sp. enjoys shelter/food/nutrients from the leguminous plant.

It must be noted that any correctly named example of symbiotic relationships or organisms shall be accepted.

**Question 4**

- (a) **A child belongs to blood group O and the mother belongs to group B. With the aid of genetic cross, state the possible blood groups of the father.**  
(b) (i) **Name two forms of adaptive communication in animals.**  
(ii) **State two reasons why organisms communicate with one another.**  
(a) Most candidates attempted this question satisfactorily.  
Candidates were expected to construct three (3) genetic crosses using each of the father's possible blood groups A, B or O to cross with the mother's blood group B.

In conclusion, the father should either be blood group A, B or O.

It must be noted that if each of the genetic crossing is constructed and the crossing sign “X” is missing at the Parental genotype level, the candidates forfeits the score for the genetic diagram.

- (b) Candidates were able to answer the questions satisfactorily.
  - (i) Forms of adaptive communication; candidates were expected to mention the following: sound/auditory/acoustic; visual/vision; smell/chemical/ pheromones; tactile; electrical signal; display of colours/ dancing.
  - (ii) Reasons why organisms communicate included: for food, for mating/ reproduction, for territorial defense, danger/threats/predator presence/offense/attack for tracking routes etc.

### **Question 5**

- (a) **State five important parameters to consider in a biological drawing.**
- (b) **Describe briefly the external features of a fern.**
- (c) **List five digestive organs of a rat that will be visible when the rat is cut open ventrally.**
- (d) **Describe briefly how skeletal muscles bring about movement of the limb of a mammal.**
- (e)
  - (i) **What is antenatal care?**
  - (ii) **List three benefits derived from antenatal visits.**
- (f)
  - (i) **Explain briefly the term Recombinant DNA Technology.**
  - (ii) **State four applications of Recombinant DNA Technology.**

- (a) Candidates stated the parameters to consider in a biological drawing as follows: Title; Quality; Size; Magnification; Clarity of lines/lines not woolly & lines not broken; neatness of labels/rules guidelines; lines not crossed; lines not having arrow heads/horizontal labels; Details of drawing; Label/lines must touch the parts & labels correctly spelt; avoid shading of drawing; draw with a pencil.
- (b) Candidates could not describe briefly the external features of a fern satisfactorily. It is worth noting that ferns are described as having an underground stem called rhizome with thin branched adventitious roots arising from the stem; leaves or fronds develop from buds on the rhizome. Each frond is made up of several pinnules/leaflets/curled leaves and at the base of the curled leaves are the older ones which have been reduced to brown scales. Sporangia or sori develop on the under surface of the mature leaflets and indusium or protective layer covers each sorus.
- (c) Digestive organs or structures to be seen when a rat is cut ventrally are oesophagus/gullet; stomach; duodenum; pancreas; liver; gall bladder; ileum/small intestine; colon/large intestine; caecum; rectum.

- (d) Candidates who answered this question could fairly describe how skeletal muscles bring about the movement of the limb of a mammal. However, reference was made to the upper arm of the fore limb. It must be noted that muscles always work in pairs; these are the biceps/flexor and extensor/triceps; when one set of the muscle contracts the other set relaxes; it moves the bone in one direction; and when the other set contracts the other relaxes; it moves the bone in opposite direction; these two sets of muscles work in opposition to each other/antagonistic in function; movement of these muscles is coordinated by the Central Nervous System/brain.
- (e) (i) It must be noted that antenatal care is the special/total/overall/holistic attention given to a pregnant woman during the period of pregnancy/gestation to ensure safe delivery and healthy baby/babies.
- (ii) Benefits derived from antenatal visits include:
- Personal hygiene/promotes good health of woman/foetus
  - proper nutrition/diet
  - regular intake of prescribed medication/ drugs
  - vaccination/immunization
  - regular exercise
  - counseling
  - monitoring growth/stages/development of foetus/to ensure resolution of pregnancy related complications; leading to safe delivery
  - avoid the use of natural/herbal products and unprescribed drugs
- (f) Candidates had difficulty in providing satisfactory answers to the question.
- (i) Recombinant DNA technology could briefly be explained as the artificial combination of pieces of fragments of DNA into a host DNA by means of a carrier system; the foreign DNA becomes a permanent part of the host; it is replicated and passed on to daughter cells; the donated DNA may be from another organism or artificially synthesized.
- (ii) The application of recombinant DNA Technology include the following:
- production of human insulin
  - production of human growth hormone/any correct named growth hormone/soma tropic hormone
  - production of genetically modified microorganisms/correctly named examples
  - genetically modified crops/foods/grains/fruits/vegetables/animals
  - production of clones
  - production of stem cells in animals
  - repair of damaged tissues/organs
  - production of disease/drought-resistant varieties etc.

# **BIOLOGY 3**

## **1. GENERAL COMMENTS**

The paper maintained the standard of questions set in previous years. Candidates performed better.

## **2. SUMMARY OF CANDIDATES' STRENGTHS**

- (1) A number of candidates made the effort to make good quality drawings of the relevant specimens.
- (2) There was a fair attempt to relate structural features of organisms to their functions
- (3) More candidates are spelling the technical term correctly.

## **3. SUMMARY OF CANDIDATES' WEAKNESSES**

- (1) Once again, many candidates failed to calculate and disclose magnification to the drawing requested for in Question 1(e).
- (2) Standard of spelling of both technical and common words, continues to be poor.
- (3) Candidates did not observed the rule requiring names of taxa to be written with the first letter in capital letter.
- (4) Candidates readily wrote the plural forms of label to drawing whereas the guidelines point to a single structure.
- (5) Many candidates lost marks because of lack of appreciation for the meaning of feature of biological importance mentioned in question 2(a).

## **4. SUGGESTED REMEDIES**

- (1) Instructions should draw students attention to the unwritten requirement for disclosing magnification in the correct format to their drawings.
- (2) Instructions should insist on the proper capital letter for the first letter of the name of a taxon.
- (3) For differences between organisms, instructions should impress on students to consider analogous features of the organisms. Features that are unique to one organism can also be considered.
- (4) Instructors should discuss the meaning of the following expression with students and illustrate them with several examples across the syllabus. Field trips, features of biological importance, adaptations of organisms to their habitats

## **5. DETAILED COMMENTS**

### **Question 1**

- (a) *Study specimens C, D and E carefully and answer questions 1(a) to (e).*
  - (i) **Name the phylum to which specimens C and E belong.**
  - (ii) **State two reasons for the answer in (a) (i).**
- (b) **In a tabular form, state three observable structural differences between specimens**
  - (i) **C and D.**

- (ii) **C and E.**
- (c) **What is the relationship between specimens C and D?**
- (d) (i) **Name the habitat of specimen D.**  
(ii) **State two ways in which specimen D is adapted to its habitat.**
- (e) **Make a drawing, 8 cm – 10 cm long of the dorsal view of specimen C and label fully.**

- (a) (i) Phylum of both Butterfly and Grasshopper

This part of the question required candidates to mention the phylum of both butterfly and grasshopper. Many candidates readily stated correctly Arthropoda in response.

A number of candidates spelt the name of the taxon using a small letter ‘a’ and therefore lost credit. Others gave different phyla for the organisms, showing lack of coverage of taxonomy.

- (ii) Reasons for the answer in 1 (a)(i)

A number of candidates gave the required supporting reasons with correct spelling:

- presence of chitinous skeleton
- metameric segmentation
- jointed appendages

Majority of candidates however, had not studied this area of the syllabus and therefore lost marks.

- (b) (i) Differences between Butterfly and Caterpillar

This part of the question required the candidates to state in a tabular form three observable structural differences between butterfly and caterpillar. A number of candidates stated the differences in the required format. But few considered the analogous features to strike the differences. On the basis of the analogous features, the expected answer should be:

<b>Butterfly</b>	<b>Caterpillar</b>
Presence of proboscis	presence of Mandibles
Compound eyes	Simple eyes
Legs are long	Legs are short

On the basis of unique features, the expected answers include:

<b>Butterfly</b>	<b>Caterpillar</b>
Prolong absent	prolong present

Claspers absent	claspers present
Antennae present	antennae absent
Wings present	wings absent

- (b) (i) Differences between Butterfly and Grasshopper

	<b>Butterfly</b>	<b>Grasshopper</b>
Basic of	Clubbed antenna	Tapering antenna
Analogous	Proboscis	Mandibles
Features	Wings multi coloured	Wings uniform colour
	Hind leg short	Hind leg long
Based on	Scales on wings	Scales absent on wings
Unique	Eye spot on wing	Eye spot absent on wings
Features	Hair on abdomen	Hair absent on abdomen

- (c) Relationship between specimens Butterfly and Caterpillar

In a previous examination, candidates failed to response correctly to a similar question. The Chief examiner's report drew schools attention to the weakness but it appears a remedy has not been found. Candidates wrongly stated that caterpillar grows into butterfly for their answer. Others stated wrongly that the caterpillar is part of the life-cycle of butterfly.

The expected answer is caterpillar is the larval stage of butterfly or butterfly is the adult of caterpillar.

- (d) (i) Habitat of caterpillar

This part of the question was correctly answered by majority of the candidates. Leaves of citrus plants or vegetable crops were correctly mentioned as the habitat of caterpillar.

- (ii) Ways in which caterpillar is adapted to its habitat

Candidates were required to identify observable features that enhance successful living in the habitat. A number of candidates identified the features for movements. They mentioned prolegs for firm gripping of leaves and stem during climbing; claspers for attachment to leaves surface for stability.

Other features include spiracles for exchange of gases. Some wrongly mentioned osmeterium which emits foul smell to discourage predators mandible for biting and chewing leaves and colour pattern for camouflage against predators.

(e) Drawing of the dorsal view of Butterfly

The drawing was assessed on four areas:

Heading: Drawing of the dorsal view of specimen C

Quality: This covers clarity of lines, size of drawing within specification, ruled guidelines, neat labels and magnification

Details observed covers

- clubbed shape antennae
- three body division shown
- forewings broader than hindwings

Label: Correct naming of structures or the drawing

More candidates are making effort to improve on the quality of drawing. A fair number of candidates gave the correct heading. Many labeled the parts correctly. However, the shape of the antennae was not well drawn. Some used a single line instead of double lines to represent the antennae. A common error was the omission of disclosure of magnification of the drawing. Some candidates apparently had no previous practice in biological drawing.

**Question 2**

*Study specimens F, G, H and J carefully and answer questions 2(a) to (e).*

- (a) **State three observable features of biological importance in:**
- (i) **specimen F;**
  - (ii) **specimen G.**
- (b) (i) **Classify specimens F and G as either stem tuber or root tuber.**
- (ii) **Give two reasons each for the answers in b(i).**
- (c) **Classify specimens H and J into the class to which both belong.**
- (d) (i) **In a tabular form, state four observable differences between specimens H and J.**
- (ii) **State four observable similarities between specimens H and J.**
- (e) (i) **State the feeding habits of each of specimens H and J.**
- (ii) **Name two observable features used for feeding in specimen J.**

(a) Observable features biological importance

This part of the question was poorly answered because the expression: “features of biological importance” was not appreciated by most candidates. This question required candidates to note unique features of carrot plant and stem tuber of Irish potato.

Candidates were expected to observe the following features on:

- (i) Carrot plant:
  - tap root swollen
  - lateral roots
  - reduced / short stem
  - green leaves
  - tapering tap root
- (ii) Irish potato:
  - swollen stem tuber
  - presence of buds
  - presence of scale
  - presence of lenticel

Few candidates were able to respond correctly.

(c) Class of mosquito and cockroach

Majority of candidates recognized the class to be Insecta. Some candidates did not write the name of the taxon correctly.

- (d) (i) Observable differences between mosquito and cockroach. A few candidates failed to present their answers in the tabular format suggested in the question. Good candidates presented their answers as required. The following are suggested answers.

<b>Mosquito</b>	<b>Cockroach</b>
- Smaller in size	Larger in size
- A pair of wings	Two pairs of wings
- Short antennae	Long antennae
- Proboscis	Mandible
- Cylindrical body shape	Dorso – ventrally flattened body
- Absence of spines on legs	Spines on legs

(e) (i) Feeding habit of mosquito and cockroach

Answers of majority of candidates clearly showed that they did not appreciate the requirement of the question. The question asked candidates to describe the way the insects get their food daily.

Expected answers are:

For mosquito - piercing and sucking

For cockroach - biting and chewing

- (e) (ii) Observable features used for feeding by cockroach

A handful of candidates stated the expected answers. Features for biting and chewing of cockroach are mandible, maxillae, labium and labrum.

### **Question 3**

**Study specimens K, L, M and N answer questions 3(a) to (f).**

- (a) **Name the habitats of each of specimens K, L, M and N.**  
(b) **State the phylum and class to which specimen M belongs.**  
(c) **State three observable features which adapt each of specimens K and M to their habitats.**  
(d) (i) **State one respiratory structure possessed by each of specimens L and M.**  
(ii) **Explain briefly how specimen M is adapted for swift movement in its habitat.**  
(e) **Stat two ways by which the shell of specimen N is of importance to it.**  
(f) **State five observable structural differences between specimens L and M.**

- (a) Habitats of Euphorbia, Crab, Catfish, Periwinkle

This part of the question was based on specific habitats listed in the syllabus. Candidates revealed their inability to distinguish between type of habitat and specific habitat. A large number of candidates stated the type of habitat which is either aquatic habitat or terrestrial habitat as their answer. The expected answers are as follows:

For Euphorbia	-	desert
Crab	-	Mangrove / Marsh land / in holes at river banks / intertidal area
Catfish	-	pond / rivers and lake
Periwinkle	-	Intertidal area / rocky shore and sea

- (b) Phylum and class of catfish

Many candidates correctly identified chordate for the phylum and osteichthyes for the class. wrong spelling cost many candidates marks. Clearly classification needs special attention in schools.

- (c) Observable features that adapt Euphorbia and catfish to their habitat

The evidence from many scripts was that very little time and effort had been given to serious study of adaptations to habitats. Field trips by students to ponds, savanna, forest and sea shore will provide opportunity for student to appreciate the concept of adaptation to habitats.

Candidates were expected to state:

Euphorbia:

- succulent stem; for water storage
- leaves are modified into spine; to cut down excessive water loss
- green stem; for carrying out photosynthesis
- presence of spine; for protection against predators
- thick waxy cuticle; to reduce excessive water loss

Catfish:

- streamlined body; reduce resistance when swimming/movement in water
- possession of pair of fins; to facilitate swimming
- presence of operculum; for protection of gills
- lateral line; for detecting vibration
- presence of dark dorsal region and light central surface; for camouflage to escape predation

(d) (i) Respiratory structure possessed by Crab and Catfish

A straight forward question to state the respiratory structure of Crab and Catfish

For Crab - Gill

Catfish - Gill

(ii) Adaptation of Catfish to swift movement

This part of the question yet again was hinged on the concept of adaptation to habitat. Candidates were asked to explain how catfish is able to swim swiftly in water. Majority of the candidates did not answer the question satisfactorily.

Expected answers include:

- possession of streamlined body; to reduce friction
- possession of unpaired fins; for thrust and steering
- possession of paired fins; for balancing

(e) Importance of the shell to Periwinkle

Majority of candidates wrote answers that earned them credit. The expected include:

- protection from drying out / desiccation
- protection from predation / injury
- colour of the shell provides camouflage to escape predators

# CHEMISTRY 2

## 1. GENERAL COMMENTS

In general, the standard of the paper was the same and candidates performed very well compared to the previous year.

There were questions on knowledge/recalls, comprehensions, applications of concepts and some analysis which is very commendable. The questions were well structured and it afforded the candidates the opportunity to express themselves as far as the language of the subject is concerned. No candidate had the option to specialize in certain sections of the syllabus and get away with, especially the mandatory section A.

It is recommended that this way of setting, the paper should be encouraged in the future examinations.

## 2. SUMMARY OF CANDIDATES' STRENGTHS

Commendable features identified that should be encouraged include:

- (1) Definition of terms such as enthalpy of combustion, mole, relative atomic mass, hybridization and relevant explanations of concepts;
- (2) stating of basic laws in chemistry such as periodic law, Faraday's law;
- (3) Calculations involving amount of substance, mass of substances from given stoichiometry, relative atomic mass, enthalpy change for reactions using standard enthalpy of formations, order of reactions and rate constants;
- (4) Nuclear chemistry, equilibrium reactions and factors affecting  $K_c$ , application of electrolysis, comparison of enthalpies of neutralization involving strong and weak acids, oxidizing and reducing properties of elements from given reaction equations, products of incomplete combustion of hydrocarbons and acid base indicators.

## 3. SUMMARY OF WEAKNESSES

Weaknesses identified in the answers of the candidates include:

- (1) Identification of the intermolecular forces of attraction between covalent molecules;
- (2) Statement of the periodic law and the meaning of periodic properties of elements;
- (3) What is meant by catalytic cracking and drawing of structures of the isomers of butane;
- (4) Physical properties of compounds such as  $\text{Cu}_{(s)}$ ,  $\text{BeCl}_{2(s)}$ ,  $\text{NaH}_{(l)}$  and  $\text{CCl}_{4(l)}$ ;
- (5) Drawing of diagrams to include how  $\text{C}=\text{C}$  double bond in alkene is formed
- (6) Stating the similarities between nuclear reactions and chemical reactions

## 4. SUGGESTED REMEDIES

Early completion of the syllabus and continuous assessment of candidates through quizzes and exercises on the relevant topics be treated. Where appropriate, demonstrations and practicals should be a routine exercise.

## 5. DETAILED COMMENTS

### Question 1

- (a) (i) What is an acid-base indicator?  
(ii) Give one example of an acid-base indicator.
- (b) State the property exhibited by nitrogen (IV) oxide in each of the following equations:  
(i)  $4\text{Cu} + 2\text{NO}_2 \rightarrow 4\text{CuO} + \text{N}_2$ ;  
(ii)  $\text{H}_2\text{O} + 2\text{NO}_2 \rightarrow \text{HNO}_3 + \text{HNO}_2$
- (c) (i) Define enthalpy of combustion.  
(ii) State why the enthalpy of combustion is always negative.
- (d) (i) Distinguish between a primary cell and a secondary cell.  
(ii) Give an example of each of the cells stated in (d)(i).
- (e) Define the term mole.
- (f) Calculate the amount of hydrochloric acid in  $40.0 \text{ cm}^3$  of  $0.40 \text{ mol dm}^{-3}$  dilute HCl.
- (g) Name two substances which can be used as electrodes during the electrolysis of acidified water.
- (h) List two forces of attraction that can exist between covalent molecules.
- (i) Name the products formed when butane undergoes incomplete combustion.
- (j) Write the electron configuration of  ${}_{26}\text{Fe}^{3+}$

- (a, b) Majority of the candidates were able to answer this question very well with the exception of stating the properties exhibited by nitrogen (IV) oxide in the equations:  
 $4\text{Cu} + 2\text{NO}_2 \rightarrow 4\text{CuO} + \text{N}_2$ ;  
 $\text{H}_2\text{O} + 2\text{NO}_2 \rightarrow \text{HNO}_3 + \text{HNO}_2$ .
- (c,d) This section was very well answered by almost all the candidates
- (e) Some candidates could not define the term mole. They referred to it as if it was relative atomic mass.  
The mole is the amount of substance that contain as many elementary particles/units/entities as there are carbon atoms in 12g of carbon – 12.
- (f,g) Were answered well by majority of the candidates.
- (h) Few candidates could not list the forces that can exist between covalent molecules. The response expected were, van der Waals forces, induced dipole – induced dipole interaction, dipole dipole interaction, dipolar forces and hydrogen bonds.
- (i) Most candidates could not give the name of the products formed when butane undergoes incomplete combustion. The response expected was; water, carbon (II) oxide and soot.  
Most candidates were able to write the electron configuration of  ${}_{26}\text{Fe}^{3+}$ .

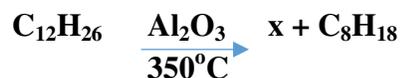
### Question 2

- (a) (i) ( $\alpha$ ) State the periodic law.  
( $\beta$ ) What is meant by the term periodic property of elements.  
(ii) List three properties of an element which show periodicity.

- (iii) Explain briefly how each of the properties listed in (a)(ii) varies across the period.
- (b) Define relative atomic mass.
- (c) (i) What phenomenon is exhibited by an element Z which exist as  ${}^{35}_{17}\text{Z}$  and  ${}^{37}_{17}\text{Z}$ .  
 (ii) What accounts for the difference in the mass number of the element Z.  
 (iii) Calculate the relative atomic mass of Z if the percentage abundance of  ${}^{35}_{17}\text{Z}$  is 75%
- (d) (i) State the method used for collecting each of the following gases:  
 (α)  $\text{CO}_2$ ;  
 (β)  $\text{HCl}$ ;  
 (γ)  $\text{H}_2$ ;  
 (ii) Give a reason for your answer stated in (d)(i) (α) and (β).
- (a) Candidates misconstrued periodic law as periodic property of elements. The expected statement of the law was “The properties of elements are the periodic function of their atomic numbers. However, most of the candidates rather gave the explanation of the law. Candidates were able to list some of the periodic properties but could not explain how they vary across the period.  
 (b,c,d) Sections of this question was very well answered by the candidates. But few of them used isotopes instead of isotopy as the phenomenon exhibited by Z in  ${}^{35}_{17}\text{Z}$  and  ${}^{37}_{17}\text{Z}$ .

### Question 3

- (a) Consider the following reaction equation:



- (i) What type of reaction is represented by the equation?  
 (ii) Write the molecular formula of X.  
 (iii) Draw the structure of two isomers of X.  
 (iv) Name the isomers drawn in (a)(iii).  
 (v) Write a balanced equation for the reaction between X and hydrogen.
- (b) Describe one test for fats.
- (c) Sulphur (IV) oxide, is converted to tetraoxosulphate (VI) acid according to the following equation:  
 $2\text{SO}_{2(\text{g})} + \text{O}_{2(\text{g})} + 2\text{H}_2\text{O}_{(\text{l})} \rightarrow 2\text{H}_2\text{SO}_{4(\text{aq})}$ .

If 1.5 moles of oxygen reacts with Sulphur (IV) oxide, calculate the mass of tetraoxosulphate (VI) acid produced.

[H = 1.0; O = 16.0; S = 32.0]

- (d) Consider the following neutralization reaction:  
 $\text{CH}_3\text{COOH} + \text{NaOH} \rightarrow \text{CH}_3\text{COONa} + \text{H}_2\text{O}; \Delta H_1$   
 $\text{CH}_3\text{COOH} + \text{NH}_4\text{OH} \rightarrow \text{CH}_3\text{COONH}_4 + \text{H}_2\text{O}; \Delta H_2$   
 $\text{NaOH} + \text{HCl} \rightarrow \text{NaCl} + \text{H}_2\text{O}; \Delta H_3.$
- (i) Arrange the enthalpy changes for the reactions in order of increasing magnitude.
- (ii) Explain briefly your order in (d)(i).

- (e) Consider the following substances:  
 $\text{Cu}_{(s)}, \text{BeCl}_{2(s)}, \text{NaH}_{(s)}, \text{HF}_{(l)}, \text{CCl}_{4(l)}$

State the substance(s) which

- (i) can conduct electricity;
- (ii) is/are soluble in water.
- (a) Almost all the candidates who attempted this question were able to give the correct and appropriate answers except that they could not draw and name the isomers of  $\text{C}_4\text{H}_8$  which was represented by X.
- (b) Most of the candidates could describe the test for fat using the translucent test and the Sudan (III) test.  
 However, some used the Osmic acid test which was not familiar as far as their practicals was concerned
- (c) This section was application of stoichiometry to calculate the mass of  $\text{H}_2\text{SO}_4$  produced from a given amount of  $\text{O}_2$ . The equation was  
 $2\text{SO}_2 + \text{O}_2 + 2\text{H}_2\text{O} \rightarrow 2\text{H}_2\text{SO}_4$   
 The candidates did well in answering this question.

#### Question 4

- (a) (i) Define hybridization.
- (b) (ii) With the aid of an appropriate diagram, indicate how the C = C double bond in an alkene is formed.
- (c) (i) Calculate the enthalpy change ( $\Delta H$ ) at  $25^\circ\text{C}$  for the reaction:  
 $\text{C}_2\text{H}_4(\text{g}) + 3\text{O}_2(\text{g}) \rightarrow 2\text{CO}_2(\text{g}) + 2\text{H}_2\text{O}(\text{l})$

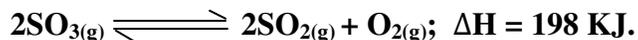
Using the information provided in the table below:

Compound	$\text{C}_2\text{H}_4(\text{g})$	$\text{CO}_2(\text{g})$	$\text{H}_2\text{O}(\text{l})$
$\Delta H^\circ_f / \text{kJmol}^{-1}$	+52.3	-393.5	-286.0

- (ii) State whether the reaction is endothermic or exothermic.

(iii) Give a reason for your answer in (c)(ii).

(d) Given the equilibrium system at 25°C.



(i) Write the equilibrium constant,  $K_c$  expression.

(ii) State the effect on  $K_c$  at the instant when concentration of  $\text{SO}_3$  is increased.

(iii) What would be the effect on the concentration of  $\text{SO}_2$  after equilibrium is re-established at 25°C when:

( $\alpha$ ) temperature is increased;

( $\beta$ ) pressure is increased.

(iv) Explain your answer in (d)(iii)( $\alpha$ ) and ( $\beta$ )

(e) Explain briefly the term homolytic fission and give an example.

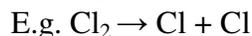
(a) Most of the candidates who attempted this question were able to define hybridization, but some few failed to say that it is the mixing of atomic orbitals.

Few of the candidates could not draw the appropriate diagram to indicate how the C=C double bond in alkene is formed.

(b,c,d) Sections of this question was well answered by the candidates. The only problem was the effect of increase in concentration of the  $K_c$  which they all said it has no effect since only temperature affects it.

(e) Most of the candidates saw homolytic fission as the fission reaction in nuclear chemistry and therefore could not give the correct response.

i.e. Process in which a bond is broken and the electrons between the atoms shared equally by the two fragments.



### Question 5

(a) What is the nature of each of the following radiations?

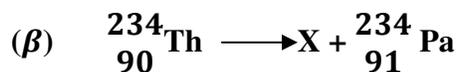
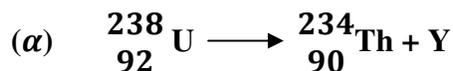
(i) Alpha;

(ii) Beta;

(iii) Gamma.

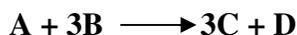
(v) State two factors that determines the stability of a nuclide.

(b) (i) Balance the following nuclear reactions:



- (c) (i) Give two similarities between nuclear reactions and chemical reactions.  
 (ii) State two uses of radioactive nuclides.

(d) Consider the reaction represented by the following equation:



The initial rate of the reaction was measured using different concentrations of A and B. the results are shown in the table below:

EXP	[A] mold m <sup>-3</sup>	[B] mol sm <sup>-3</sup>	Rate (mold m <sup>-3</sup> S <sup>-1</sup> )
I	0.100	0.100	5.40 x 10 <sup>-4</sup>
II	0.200	0.100	4.32 x 10 <sup>-3</sup>
III	0.200	0.200	4.32 x 10 <sup>-3</sup>

- (i) Determine the order of the reaction with respect to each of the reactants;  
 (ii) What is the overall order of the reaction?;  
 (iii) Write the rate law expression for the reaction;  
 (iv) Calculate the rate constant. Give its units.

Question 5 was answered by almost all of the candidates and they performed very well.

The problem faced here are notable:

- the identity of Alpha, Beta and Gamma rays
- using half life as a factor which affects stability of nuclides
- similarities between nuclear and chemical reactions

Aside these, the question is one of the questions which was very well answered by the vast majority of the candidates

# CHEMISTRY 3

## 1. GENERAL COMMENTS

The standard of this year's paper was comparable to that of the previous years in keeping with the high standard of performance of WAEC over the years. In Chemistry 3, the standard of the paper keeps teachers and candidates on their toes to search their books and run to and from the laboratories in order to meet the demands of the paper.

The marking scheme for chemistry 3 has also been maintained in terms of its quality and has been a great assistance to teachers and students. Candidates however performed poorly.

## 2. SUMMARY OF CANDIDATES' STRENGTHS

Some of the candidates showed strength in the following areas:

- (1) In question 1 for example, recording the volume of solution delivered from the burette (titre values) to two decimal places was done very well by some candidates.
- (2) The averaging of two consistent titres which differ by not more than  $0.20 \text{ cm}^3$  was done very well by many candidates.
- (3) The unit of titre values in  $\text{cm}^3$  was well done by many candidates
- (4) Writing down the mole ratio from the equations provided was correctly done by many candidates.
- (5) Some candidates were able to use the mole ratio in the calculations very well. In question 2, some of the candidates were able to filter their solutions given and some candidates knew the meaning of filtrate and residue. Some candidates were able to know the use of reagents such as dil HCl or dil  $\text{HNO}_3$ , dil NaOH or dil  $\text{NH}_3$  aq.  
In question 3, a few candidates were able to use some laboratory chemicals and equipment.

## 3. SUMMARY OF WEAKNESSES

- (1) Some candidates could not use the mole ratio in their calculations. This must be known by all the teachers currently teaching in the various schools.
- (2) Some candidates did not abide by the instructions given. For example some candidates did not follow the order such as question a(i), (ii), 1b(i), b(ii). Some candidates attempted to write down the answers to question b(ii) under question a(ii).
- (3) Some of the candidates could not use the formula calculating the concentration of reactants correctly e.g.  $C_1V_1 = C_2V_2$ . The substitution of figures into this formula was poorly done.
- (4) Some candidates performed and recorded tests that were not demanded. In some cases, the tests had no bearing on the questions.
- (5) Many candidates lost relevant marks for not leaving their answers in the appropriate significant figures.
- (6) A few candidates also lost marks for using wrong units

- (7) Some candidates also did not score where they used trivial/old instead of IUPAC names
- (8) Many candidates did not care about the state/nature of the sample i.e. whether reagents were being added to filtrate or residue.

#### 4. SUGGESTED REMEDIES

- (1) The solution to the poor standard of students is simply for the teachers and students to work hard in the classrooms and laboratories.
- (2) Teachers have to use their school laboratories very well.
- (3) Teachers must endeavour to expose candidates to a lot of practical exercises.
- (4) They must make time to mark the exercises while drawing their attention to essential points in recording tests, observation and inferences made.
- (5) It must be pointed out to them that the examiner is not in the laboratory as the exercises are being carried out. Hence results well recorded are equally important as exercises/activities performed.

#### 5. DETAILED COMMENTS

##### ALTERNATIVE A

##### Question 1

All your burette readings (initial and final) as well as the size of your pipette must be recorded but no account of experimental procedure is required. All calculations must be done in your answer booklet.

A is  $0.200 \text{ mol dm}^{-3}$  of HCl.

C is a solution containing 14.3 g of  $\text{Na}_2\text{CO}_3 \cdot x\text{H}_2\text{O}$  in  $500 \text{ cm}^3$  of solution.

- (a) Put A into the burette and titrate it against  $20.0 \text{ cm}^3$  or  $25.0 \text{ cm}^3$  portions of C using methyl orange as indicator.

Repeat the titration to obtain consistent titre values.

Tabulate your results and calculate the average volume of A used.

The equation for the reaction is:



- (b) From your results and the information provided, calculate the:

- (i) concentration of C in  $\text{mol dm}^{-3}$ ;
- (ii) concentration of C in  $\text{g dm}^{-3}$ ;
- (iii) molar mass of  $\text{Na}_2\text{CO}_3 \cdot x\text{H}_2\text{O}$ ;
- (iv) the value of x in  $\text{Na}_2\text{CO}_3 \cdot x\text{H}_2\text{O}$ .

[H = 1.0; C = 12.0; O = 16.0; Na = 23.0]

Credit will be given for strict adherence to the instructions, observations precisely recorded and accurate inferences. All tests, observations and inferences must be clearly entered in your answer booklet, in ink at the time they are made.

## Question 2

F is a mixture of two inorganic salts. Carry out the following exercises on F.

Record your observations and identify any gas(es) evolved.

State the conclusions you draw from the result of each test.

- (a) Put all of F in a beaker and add about  $10\text{cm}^3$  of distilled water. Stir well and filter. Keep the filtrate and the residue.
- (b)
  - (i) To about  $2\text{cm}^3$  of the filtrate, add  $\text{NaOH}_{(\text{aq})}$  in drops and then in excess.
  - (ii) To about  $2\text{cm}^3$  of the filtrate, add  $\text{NH}_3_{(\text{aq})}$  in drops and then in excess.
- (c) To another  $2\text{cm}^3$  portion of the filtrate, add a few drops of  $\text{HNO}_3_{(\text{aq})}$  followed by few drops of  $\text{AgNO}_3_{(\text{aq})}$ .
- (d)
  - (i) Put all the residue into a clean test-tube and add  $\text{HNO}_3_{(\text{aq})}$ .
  - (ii) To a portion of the solution from (d)(i) add  $\text{NaOH}_{(\text{aq})}$  in drops and then in excess.

## Question 3

State what would be observed, if the following reactions are carried out in the laboratory:

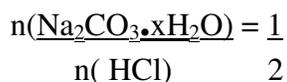
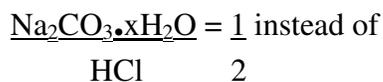
- (a) methyl orange is dropped into a solution of lime juice.
- (b) hydrogen sulphide gas is bubbled through Iron (III) chloride solution.
- (c) Sulphur (IV) oxide gas is bubbled into acidified solution of  $\text{KMnO}_4$ .
- (d) ethanoic acid is added to a solution of  $\text{K}_2\text{CO}_3$ .

## Question 1

The titration dealt with analysis to determine the value of X in  $\text{Na}_2\text{CO}_3 \cdot x\text{H}_2\text{O}$ . Most of the candidates had titre values which were consistent with the supervisor's titre. Performance was very good.

An appreciable number of the candidates were able to use the mole ratio, the various mathematical steps to calculate the required concentrations. They were also able to calculate the molar mass of  $\text{Na}_2\text{CO}_3 \cdot x\text{H}_2\text{O}$  and hence the value of X. A few of them lost the 1 mark for evaluation for not correcting to the nearest whole number.

NB: A few candidates wrote the mole ratio as



## Question 2

Some candidates did not report on the activity even though they proceeded to work on the filtrate and residue.

A few also described the filtrate as ‘white filtrate’ instead of ‘colourless filtrate’.

(b) (i) Performance by candidates was quite good.

(ii)	<u>Test</u>	<u>Observation</u>
	Filtrate + $\text{NH}_3(\text{aq})$ in drops then in excess -	pale blue gelatinous ppt

Many candidates wrote “precipitate dissolves” instead of “precipitate dissolves to form a deep blue solution”.

(c) Filtrate +  $\text{HNO}_3(\text{aq})$  - no visible reaction  
+  $\text{AgNO}_3(\text{aq})$  - white ppt

Many candidates did not know that this is enough evidence to establish presence of  $\text{Cl}^-$  ions. Hence they deduced the presence of  $\text{Cl}^-$  based on solubility of the  $\text{AgCl}$  ppt formed on adding excess  $\text{NH}_3(\text{aq})$  – (Not required in the question).

d(i) Residue +  $\text{HNO}_3(\text{aq})$ : Observations made were incomplete in some cases. Many of them did not perform the limewater test before drawing the inference  $\text{CO}_2$  from  $\text{CO}_3^{2-}$ . In few cases, candidates added  $\text{HCl}(\text{aq})$  instead of  $\text{HNO}_3(\text{aq})$ .

## Question 3

This question was satisfactorily answered by most of the candidates. The following points must however be noted.

- (b) Many candidates wrote ‘ $\text{FeCl}_3$  solution changes colour to green’ instead of ‘changes colour from ‘brown to green’.
- (d) Some candidates wrote ‘ $\text{CO}_2$  will be observed’ instead of ‘colourless, odourless gas evolved’.

## ALTERNATIVE B

### Question 1

**All your burette readings (initial and final) as well as the size of your pipette must be recorded but no account of experimental procedure is required. All calculations must be done in your answer booklet.**

**B is a solution of hydrochloric acid**

**D is a solution containing 2.45 g of anhydrous sodium trioxocarbonate (IV) in 250 cm<sup>3</sup> of solution.**

- (a) Put B into the burette and titrate it against 20.0 cm<sup>3</sup> or 25.0cm<sup>3</sup> portions of D using methyl orange as indicator.

Repeat the titration to obtain consistent titre values.

Tabulate your results and calculate the average volume of B used.

The equation for the reaction is:



- (b) From your results and the information provided calculate the:

- (i) concentration of D in mold m<sup>-3</sup>;
- (ii) concentration of B in mold m<sup>-3</sup>;
- (iii) concentration of B in gdm<sup>-3</sup>;
- (iv) volume of the gas evolved in the reaction at s.t.p.

[H = 1.0; C = 12.0; Na = 23.0, Cl = 35.5; Molar volume = 22.4 dm<sup>3</sup> mol<sup>-1</sup>]

Credit will be given for strict adherence to the instructions, observations precisely recorded and accurate inferences. All tests, observations and inferences must be clearly entered in your answer booklet, in ink at the time they are made.

### Question 2

E is a mixture of an organic compound and an inorganic salt. Carry out the following exercises on E.

Record your observations and identify any gas(es) evolved.

State the conclusions you draw from the result of each test.

- (a) Put all of E in a boiling tube or beaker and add about 10 cm<sup>3</sup> of distilled water. Stir the mixture and filter.  
Keep both the filtrate and the residue.
- (b) To about 5 cm<sup>3</sup> of the filtrate add about 2 cm<sup>3</sup> of Fehling's solution and warm.
- (c) (i) To the residue gently add about 5 cm<sup>3</sup> dilute HCl. Divide the solution into two portions.  
(ii) To the first portion, add NaOH<sub>(aq)</sub> in drops and then in excess;  
(iii) To the second portion of the solution, add NH<sub>3(aq)</sub> in drops and then in excess.

### Question 3

- (a) Describe briefly one chemical test that could be used to differentiate between
- (i) ethanol and propan-1-ol;
  - (ii) ethene and ethyne.
- (b) Give a reason for each of the following laboratory practices:
- (i) KMnO<sub>4</sub> solution is not acidified with HNO<sub>3</sub> before titration;
  - (ii) FeSO<sub>4</sub> solution is usually prepared fresh when needed;
  - (iii) Sodium metal is usually stored in liquid paraffin;
  - (iv) Alkalis are not stored in glass stoppered reagent bottles.

### Question 1

- (a) Observations made for the table of results and calculation of average titre, same as in Alt B.
- (b) The problem was with b(iv) where candidates were expected to calculate the volume of the gas evolved in the reaction at s.t.p.

A sizeable number of the candidates calculated volume of CO<sub>2</sub> from 250 cm<sup>3</sup> instead of from 25 cm<sup>3</sup> / 20 cm<sup>3</sup> of solution. A few also found the volume of CO<sub>2</sub> evolved from 1000 cm<sup>3</sup> of solution i.e.

$V(\text{CO}_2)$  from 25 cm<sup>3</sup> / 20 cm<sup>3</sup> = 0.0925 x 22.4 instead of

$V(\text{CO}_2) = \frac{0.0925 \times 22.4 \times 25}{20}$

$$= \frac{0.0925 \times 22.4 \times 25}{1000}$$

= say y dm<sup>3</sup>

### Question 2

- (a) As observed in Alt A, some candidates did not report on the activity performed i.e. addition of distilled water to the sample E, stirred and filtered. Some who reported also described the filtrate as 'clear filtrate' instead of colourless filtrate. Others also used terms wrongly. E.g. precipitate instead of residue.
- (b) Many of the candidates seem to be comfortable with this question.
- (c) (i) Residue + dil HCl: Some candidates did not report on the chemical test i.e. 'Gas turned limewater milky'. But gave the correct inference which did not score any marks.  
(ii) & (iii) Candidates performed creditably well.

### Question 3

Majority of the candidates performed quite well on this question. A few however were unable to spell the reagents correctly.

## ALTERNATIVE C

### Question 1

**All your burette readings (initial and final) as well as the size of your pipette must be recorded but no account of experimental procedure is required. All calculations must be done in your answer booklet.**

**The trioxocarbonate (IV) content of a sample may be determined by dissolving it in an acid and determining the excess acid by titration.**

**J is a solution obtained by reacting 8.00 g of impure trioxocarbonate (IV), MCO<sub>3</sub> with 1.00 dm<sup>-3</sup> of 0.200mol dm<sup>-3</sup> HCl solution.**

**K is 0.113 mol dm<sup>-3</sup> NaOH solution.**

- (a) **Put J into the burette and titrate it against 20.0 cm<sup>3</sup> or 25.0 cm<sup>3</sup> portion of K using methyl orange as indicator.**

**Repeat the titration to obtain consistent titres values.**

**Tabulate your results and calculate the average volume of J used.**

The equations for the reactions are:

- (i)  $\text{MCO}_{3(\text{aq})} + \text{HCl}_{(\text{aq})} \rightarrow \text{MCl}_{2(\text{aq})} + \text{CO}_{2(\text{g})} + \text{H}_2\text{O}_{(\text{l})}$
- (ii)  $\text{NaOH}_{(\text{aq})} + \text{HCl}_{(\text{aq})} \rightarrow \text{NaCl}_{(\text{aq})} + \text{H}_2\text{O}_{(\text{l})}$
- (b) From your results and the information provided calculate the:
- (i) concentration of HCl in J in  $\text{mol dm}^{-3}$ ;
- (ii) amount (in moles) of HCl used up when  $\text{MCO}_3$  was added to  $1 \text{ dm}^{-3}$  of  $0.200 \text{ mol dm}^{-3}$  HCl;
- (iii) percentage impurity in  $\text{MCO}_3$ .  
[ $\text{MCO}_3 = 100$ ]

Credit will be given for strict adherence to the instructions, observations precisely recorded and accurate inferences. All tests, observations and inferences must be clearly entered in your answer booklet, in ink at the time they are made.

### Question 2

L is an organic compound belonging to one or more of the following classes of compounds:

- Alkanoic acid;
  - Amide;
  - Alkanol;
  - Reducing sugar.
- (a) Dissolve all of L in about  $10 \text{ cm}^3$  of distilled water.
- (b) Perform one characteristic test for each class and determine the class to which L belongs.

### Question 3

- (a) A light green powder P is insoluble in water. On heating, a small portion of P decomposes to give a black residue Q.
- Another small portion of P reacts with dilute trioxonitrate (V) acid to give a bluish-green solution, S and a colourless odourless gas R. R turns lime water milky.
- (i) Identify P, Q R and S;
- (ii) Write relevant equations for each of the reactions.
- (b) (i) Give two examples of substances that sublime.
- (ii) Name one solid that can be used as desiccant.
- (iii) A liquid is suspected to be either pure water or an aqueous solution of sodium chloride. Describe one chemical test to identify the liquid.

### Question 1

The analysis was about determination of percentage impurity of a substance using the back titration method. Performance by candidates was quite good except for b(iii) where they were to determine the percentage impurity.

Unfortunately, many of the candidates used.

$\frac{\text{Moles of MCO}_3}{\text{Moles of HCl}} = \frac{1}{1}$  as the mole ratio instead of

$$\frac{\text{Moles of } \text{MCO}_3}{\text{Moles of HCl}} = \frac{1}{2}$$

Those who used the 1:1 ratio got the mass of pure  $\text{MCO}_3$  to be greater than that of the impure  $\text{MCO}_3$ . Such candidates got confused as noticed in the scripts.

### Question 2

Many candidates did not give the state of the reagents. Some also kept using L instead of  $\text{L}_{(\text{aq})}$  after dissolving all of L in distilled water. Others also omitted conditions like heating where this was necessary.

### Question 3

Except for b(iii) this question was also satisfactorily answered by most of the candidates. b(iii) instead of  $\text{AgNO}_{3(\text{aq})}$ , almost all the candidates used anhydrous  $\text{CuSO}_4$ . But this will not be suitable because an aqueous solution of sodium is involved.

# **CROP HUSBANDRY AND HORTICULTURE 2**

## **1. GENERAL COMMENTS**

The standard of the paper compared favorably with that of the previous years. Generally, candidates performed credibly well.

## **2. SUMMARY OF CANDIDATES' STRENGTHS**

The following strengths were observed by the Chief Examiner:

- (1) Generally, candidates adhered to the demands rubrics of the paper.
- (2) Most of the candidates provided answers to questions that demand short answers, this enable them to attempt the required number of questions
- (3) Candidates made good use of the answer booklet

## **3. SUMMARY OF CANDIDATES' WEAKNESSES**

A summary of candidates weaknesses as observed by the Chief Examiner include:-

- (1) Candidates found it difficult to answer questions that demand explanation as found in questions: 1a, 2a, 3b and 6c.
- (2) Poor performance in some cases could not bring out the correct answers required and hence candidates lost marks
- (3) Still there were a few candidates whose handwriting was very difficult to read and this affected them.
- (4) Some candidates may start answering a question on page 2 and then continue on page 6 and jump to page 8 to end it. This is not the best practice.
- (5) Very few candidates did not adhere to the instructions of the paper.

## **4. SUGGESTED REMEDIES**

- (1) Prospective candidates should be guided on how to answer questions that demand explanation.
- (2) Prospective candidates should also be encouraged to improve on their expression of the English language
- (3) They should also make a conscious effort to improve on their handwriting
- (4) Among others, prospective candidates should be briefed or reminded of the need to start each question on a new page

## **5. DETAILED COMMENTS**

### **Question 1**

- (a) **Explain five objectives of crop improvement.**
- (b) **Describe each of the following methods used in crop improvement:**
  - (i) **selection;**
  - (ii) **introduction.**
- (c) **Give four examples of exotic crops in West Africa.**

- (a) This question asked candidates to explain five objectives of crop improvement. A lot of candidates attempted this question. Most were able to state the objectives of crop improvement. The explanations were however poorly done.
- (b) Majority of the candidates could not describe the two terms as used in crop improvement. It is worth noting that selection is the creating of varieties with the best combination of desirable characteristics from population of crops. And introduction is obtaining crop varieties with desirable characteristics and making it available for cultivation in new environment.
- (c) Most candidates were able to provide examples of exotic crops in West Africa. This earned them four good marks.

## **Question 2**

- (a) **Explain two ways in which each of the following factors influence vegetable growth:**
  - (i) **soil temperature;**
  - (ii) **soil structure;**
  - (iii) **soil water.**
- (b)
  - (i) **What is a growth medium**
  - (ii) **Give four characteristics of a good growth medium**
  - (iii) **Give two examples of growth media.**

- (a) This part of the question was poorly answered. For (i) and (iii), candidates wrote on the general factors that influence vegetable growth.
- (b)
  - (i) Many candidates who attempted this question were able to define a growth medium as any substance/mixture of substances in which plant roots can develop and grow.
  - (ii) Most of them were able to give characteristics of a good growth medium.
  - (iii) Here, soil and sawdust were the most examples provided by candidates. Other correct answers include; water, perlite, peat, shredded soaked paper, vermiculite, moss.

## **Question 3**

- (a)
  - (i) **List four methods of planting lawn grasses.**
  - (ii) **Name four grasses suitable for lawn establishment.**
- (b) **Explain five principles of landscape designing.**
- (c) **State two main functions of ornamental plants.**

- (a)
  - (i) Majority of candidates were able to list the methods of planting lawn grasses.
  - (ii) Majority gave the names of grasses suitable for lawn establishment. The wrong answers given however, include: Guinea grass, Elephant grass, green grass among others.

- (b) Once again this question was poorly answered. Most candidates were able to state the principle but the explanation were not adequate. Most explanation were centered on lawn establishment instead of the general landscape. Over the years, this question has been poorly answered.
- (c) This question was satisfactorily answered by majority of the candidates.

#### **Question 4**

- (a) **Differentiate between monoculture and monocropping.**
- (b) **State three advantages of monoculture**
- (c) **Explain four principles of crop rotation**
- (d) (i) **Mention three tools that are used for laying-out a vegetable garden.**  
(ii) **State one use of each of the tools mentioned in d(i).**

- (a) Majority of candidates could not differentiate between monoculture and monocropping. It should be noted that monoculture is a system of farming which involves growing of the same crop on the same piece of land year after year while monocropping is the system of practice of planting one type of crop at a time on a plot and harvesting it before another crop is planted on the same field.
- (b) Candidates could not provide the specific advantages of monoculture satisfactorily. The expected advantages include:
  - allows for specialization and in organization of resources for producing a particular crop
  - more attention given to the production of the crop
  - makes crop management easy
- (c) Majority of the candidates satisfactorily were able to explain principles of crop rotation.
- (d) This sub-question was poorly answered by candidates. It seems candidates did not understand the term “lay-out of a garden”. Hence, provided names of simple garden tools such as cutlass, hoe, rake for their answers. The expected tools used for farm/field lay-out include; ranging pole, measuring tape, peg, garden line.

#### **Question 5**

- (a) **Discuss the production of banana under the following headings:**
  - (i) **two varieties;**
  - (ii) **climatic and soil requirements;**
  - (iii) **planting materials;**
  - (iv) **two diseases and their control;**
  - (v) **three uses.**
- (b) **Name two pests and two diseases of pawpaw.**

- (a) This question was generally poorly answered.

- (i) Only a few candidates were able to mention the varieties of banana which include Gros Michel, Robusta, Giant Cavendish, dwarf Cavendish.
- (ii) This part was poorly answered. The rainfall and temperature requirements were poorly answered. Only a few candidates mentioned loamy soil and the accurate pH ranges.
- (iii) Only a few candidates could give the correct planting material for banana which include; maiden suckers, sword suckers, peepers, bull heads, setts, mini setts.
- (iv) Quite a number of the candidates mentioned Panama disease and sigatoka disease but could not provide the corresponding control measures.
- (b) Most candidates could not provide correct answers to the question especially, that on the diseases of pawpaw. Diseases of pawpaw include; Anthracnose, dieback, mosaic, root rot, damping off, leaf spot powdery mildew.

### **Question 6**

- (a) List five examples of micro nutrients required by plants.**
  - (b) (i) List three major nutrients required by vegetables**  
**(ii) State one symptom of each of the nutrient listed in b(i).**
  - (c) Explain three factors that determine the nutrient requirement of maize.**
  - (d) List three ways in which nutrients are lost from the soil.**
- (a) Majority of candidates' responses were quite satisfactory as most of them listed Manganese, Zinc, Cobalt, Copper, Iron, Molybdenum.
  - (b) (i) This sub-question was well answered by most candidates. The expected major nutrients required by vegetables include; Nitrogen, Phosphorus, Potassium, Calcium, Magnesium, Sulphur, Carbon, etc.  
(ii) Candidates also gave the correct corresponding deficiency symptoms of the stated nutrients.
  - (c) Most of the candidates could not state correctly the factors that determine the nutrients requirements of maize plant. The expected factors include; type of soil, previous use of land, fertility status of the soil, variety of maize.
  - (d) Most candidates correctly stated the ways nutrients are lost in the soil. Their answers includes; erosion, crop removal, leaching and burning.

# **CROP HUSBANDRY AND HORTICULTURE 3**

## **1. GENERAL COMMENTS**

There is nothing substantial between this year's and previous year's standard. The standard of the paper remains the same. Meanwhile, this year's performance was better than the previous years.

## **2. SUMMARY OF CANDIDATES' STRENGTHS**

Candidates answers were orderly presented:

- (1) numbering of answers were nicely arranged.
- (2) about 80% of this year's candidates avoided lengthy answers. They were precise to the point
- (3) candidates' tabulation on "Observable differences" was nicely presented

## **3. SUMMARY OF CANDIDATES' WEAKNESSES**

- (1) Few candidates produced very poor handwriting
- (2) Some candidates did not understand the term "Observable differences" hence had the answers wrong.
- (3) Some candidates also produced very bad spelling: E.g. phosphorus, potassium and magnesium were spelt wrongly.

## **4. SUGGESTED REMEDIES**

- (1) Candidates need to read the question very well before attempting those questions.
- (2) With reference to the spelling, candidates / students should note that technical words and terms must be correctly spelt to score full marks.
- (3) Instructors/teachers should be encouraged to take students through practical and theory aspect of the syllabus side by side.

## **5. DETAILED COMMENTS**

### **Question 1**

- (a)
  - (i) **State three observable features of specimen A that make it tolerant to drought.**
  - (ii) **Mention two crops that could be intercropped with specimens A.**
  - (iii) **Name two varieties of specimen A that is cultivated in West Africa.**
- (b)
  - (i) **Give the family name of the crop from which specimen B was obtained.**
  - (ii) **Mention two other crops which belong to the same family as the crop from which specimen B was obtained.**
  - (iii) **Outline the steps involved in preparing a piece of land for the nursing of seeds contained in specimen B.**

**(iv) State two ways of storing specimen B.**

- (a) (i) Candidates could not describe or state the observable features of specimen A that make it tolerant to drought. They rather described or talked about conditions necessary for growth. They were expected to state the features which make the specimen withstand drought conditions e.g. long narrow leaves / fibrous roots system.
- (ii) Quite a number of candidates were able to state / mention the crops which could be intercropped with specimen A.
- (iii) Poorly attempted question. About 95% of the candidates failed to answer the question correctly. They failed to state varieties of millet in West Africa. Expected varieties include: Nyanza, Mangarana.
- (b) (i) Well answered question. Almost all candidates were able to state Malvaceae as the Family name of the crop from which specimen B was obtained.
- (ii) Candidates were able to mention or answer this question very well. E.g. cotton and kenaf were stated correctly by quite a number of the candidates.
- (iii) Poorly answered question. Steps in planting specimen B were completely messed up. The correct steps include: clearing the land, lining and pegging the land, burn debris and sowing of seeds at skate.
- (iv) Almost 50% of the candidates answered this question correctly. However, the remaining candidates gave wrong answers, which made them lost the marks.

**Question 2**

- (a) **Identify each of specimens C and D.**
- (b) **State three observable differences between specimens C and D.**
- (c) **Give four reasons why it is advisable to use specimen D instead of specimen C in crop production.**
- (d) **Name three major nutrients that could be provided by specimen D.**
- (e) **State three methods of applying specimen C on the farm.**
- (a) Almost all candidates were able to identify each of specimens C and D. e.g. NPK fertilizer / inorganic fertilizer, poultry manure or organic manure. However, few candidates identified poultry manure as poultry dropping.
- (b) This question was poorly answered by almost all the candidates. Candidates did not understand the term “Observable differences” between C and D specimens. Instead of stating colour differences, the shape and the phase of the specimens, candidates were stating wrongly their chemical compositions.
- (c) This question was poorly answered. Expected reasons include: organic manure improves soil structure, enhances soil microbial activities, releases nutrients slowly over a period of time does not pollute the environment.

- (d) Well answered by quite a number of the candidates. The only problem faced by candidates was the spelling of certain nutrients like phosphorus, potassium or magnesium.
- (e) Candidates provided good answers for this question. The only problem faced by candidates was “Ring method” instead of Ring method.

**Question 3**

- (a) Identify each of specimens E and F.**
- (b) Mention two methods of propagating each of specimens E and F.**
- (c) State two horizontal uses of specimen E.**
- (d) State two cultural practices that could be carried out during the cultivation of specimen F.**
- (e) State three uses of specimen G on the farm.**
- (f) Mention two ways of maintaining specimen G.**

- (a) Candidates were able to identify specimens C and D correctly, but few of the candidates had problems with the spelling of the specimens.
- (b) Methods of propagation of specimen E and F were nicely stated for the maximum marks.
- (c) Horticultural uses of specimen E such as for hedging, wreath making were well stated by many of the candidates.
- (d) Candidates correctly stated the cultural practices on Bougainvillea. E.g. training, watering, weed control as well as fertilizer application.
- (e) Well answered question by the candidates. They gave precise uses of specimen G (Headpan) such as carrying seedlings, carrying fertilizer/manure, carrying soil.
- (f) About 95% of the candidates stated the correct way of maintaining specimen G.

**Question 4**

- (a) Identify each of specimen H, J and K.**
- (b) State two observable differences between specimens H and J.**
- (c) Mention three uses of each of specimens J and K.**
- (d) Name two planting materials that could be used in propagating specimen K.**
- (e) Give the main reason for setting fire to specimen K on the field just before harvesting.**

- (a) Candidates were able to identify specimen H, J and K correctly as lime, Lemon and sugar cane respectively.
- (b) Candidates presented a nice tabulation but the description of the observable differences between the two specimens H and J were poorly done.

<b>Specimen H (Lime)</b>	<b>Specimen J (Lemon)</b>
--------------------------	---------------------------

Size: small in size	Big in size
Surface: has smooth skin	Has rough skin
Shape: round in shape	No definite shape

- (c) Uses of J and K were done correctly by majority of the candidates.
- (d) About 90% of the candidates stated the right planting materials of specimen K – sugarcane, e.g. short setts, longsetts and soldier setts. However, only few of the candidates had their answers wrong. Some mentioned stem cutting and others stated seeds and leaves, instead of short setts and long setts.
- (e) Almost all the candidates wrote the correct reasons for setting fire to specimen K on the field just before harvesting.

# **FISHERIES 2**

## **1. GENERAL COMMENTS**

The standard of the paper was at par with that of previous years.  
The performance of candidates was highly than those of previous years.

## **2. SUMMARY OF CANDIDATES' STRENGTHS**

The Chief Examiner noted the following strengths:

- (1) Legible handwriting.
- (2) Orderly presentation of answers

## **3. SUMMARY OF CANDIDATES' WEAKNESSES**

The following weaknesses were noted:

- (1) Definitions of key terms were poor
- (2) Explanation of terms were also poor
- (3) Inadequate preparation

## **4. SUGGESTED REMEDIES**

The Chief Examiner suggested the following remedies to overcome weaknesses of candidates:

- (1) Students should pay attention to definitions of terms
- (2) Teachers should teach the correct definitions of the fisheries terms
- (3) Students should prepare adequately

## **5. DETAILED COMMENTS**

### **Question 1**

**(a) Define each of the following terms as used in fisheries:**

- (i) Exclusive Economic Zone;**
- (ii) Maximum Sustainable Yield;**
- (iii) Overfishing;**
- (iv) Spawning stock;**
- (v) Fisheries institutions.**

**(b) Explain five ways in which fisheries contribute to national development.**

Generally, candidates performed well.

- (a) While most candidates provided correct definitions of the terms, some wrongly indicated that they were processes. Exclusive Economic Zone is the area of sea and its bed within 200 nautical miles from the country's shoreline where the country has exclusive rights. Maximum Sustainable Yield is the greatest harvest from a fish pond. Over fishing is

removing fish from a pond beyond what is allowed. It happens when farmers harvest all the fish including juveniles from ponds and water bodies.

Spawning stock was defined by some candidates as the “population of eggs and sperms that are released to be fertilized at a particular time. Candidates should note that spawning stock is the total weight of fish in a stock that are old enough to spawn.

Fisheries Institutions are institutions established to control all activities in the fisheries industry.

- (b) Most candidates were only able to name the contribution of fisheries to national development, but did not offer any explanation as required.

## **Question 2**

- (a) State four regulatory methods used for fisheries conservation in Ghana.**
- (b) State three traditional methods of fish preservation.**
- (c) Describe two modern methods of fish preservation.**
- (d) (i) What is a fish landing site?**  
**(ii) Name six facilities which are necessary for the smooth functioning of a modern fish landing site.**

- (a) Candidates confused ‘conservation’ with ‘preservation’ and stated fish preservation method instead. Expected answers were establishment of mesh size limits, catch quotas, close seasons, close areas etc.
- (b) The traditional methods of fish preservation were correctly stated by most candidates.
- (c) The description of modern methods of fish preservation was poorly done. Most candidates just mentioned the methods without describing them.
- (d)(i) The definition of fish landing site was poorly done. Some said it is a place where fish is processed, or marketed. Fish landing site is a place along shores of water body where fish is landed.
- (ii) The sub-question on facilities at fish landing sites was very well answered. Almost all facilities were listed.

## **Question 3**

- (a) List five signs of spoilage of fish.**
- (b) Describe each of the following life processes in fish;**
  - (i) feeding;**
  - (ii) respiration;**
  - (iii) reproduction.**

- (a) Signs of fish spoilage were fairly well provided.
- (b)(i) Where candidates were required to describe feeding as a life process, most candidates described how feed is applied to a fish pond. Candidates should note that during feeding water with food particles enter the mouth of fish; mouth closes; water flows over gills,

gill rakers trap food particles and allow water to pass out through the operculum and trapped food is swallowed.

- (ii) Some candidates described circulation in fishes. Also some indicated that oxygen is absorbed by lungs of fishes. During respiration, oxygen from water in the mouth diffuses into the blood stream and diffuses carbon dioxide out.
- (iii) Reproduction in fishes was not properly described by some candidates. Reproduction includes courtship, nest making, egg laying and shading of milt, fertilization and incubation of eggs and subsequent development.

#### **Question 4**

- (a) List four main causes of fish spoilage**
- (b) State six factors which affect the growth of fish in a pond.**
- (c) Give three examples of fin fishes.**
- (d) Describe how each of the following items could be applied to fish ponds:**
  - (i) inorganic fertilizer;**
  - (ii) organic fertilizer;**
  - (iii) fish feed.**

- (a) Causes of fish spoilage was generally well answered.
- (b) Factors which affect growth of fish in a pond we correctly listed
- (c) Most candidates gave correct examples of fin-fishes. But some wrongly listed types of fins in fishes
- (d) Most candidates could not differentiate between inorganic fertilizer and organic fertilizer, therefore could not adequately describe their application to fish ponds. Some described the use of organic fertilizer in vegetable gardens. Candidates should note that inorganic fertilizers are broadcasted on pond bottom, over water surface or dissolved in little water and poured into pond. Organic fertilizers are either broadcasted on pond bottom or put in cribs or sack and placed in pond water.

#### **Question 5**

- (a) (i) State six problems encountered in fish marketing in Ghana.**
- (ii) Give one solution to each of the problems stated in (a)(i).**
- (b) List four differences between cartilaginous fishes and bony fishes.**
- (c) Give four reasons why fish stock management is important.**

- (a)(i) Problems encountered in fish marketing were satisfactorily stated.
- (ii) Routine solutions were given for each problem: “Government should provide good roads”, etc. some listed problems facing fish farming. Expected answers included: export, provision of cold stores and provision of adequate packaging materials.
- (b) Differences between cartilaginous fishes and bony fishes were satisfactorily listed.

- (c) This was very poorly answered, or not attempted at all by most candidates. Many students linked the question to stocking density in fish ponds. Expected answers included: ensures maximum sustainable catches, gives economic yield, maintains maximum stock size and maintains spawning stock.

### **Question 6**

- (a) **Name four fishery resources protected by international law.**
- (b) **List four jobs opportunities available in the fishery industry.**
- (c) **Explain how each of the following features help fish to adapt to life in water:**
- (i) **swim bladder;**
  - (ii) **scales;**
  - (iii) **lateral line;**
  - (iv) **mouth.**
- (a) This questions was attempted by very few candidates. Some wrongly produced a list of fisheries regulations, (like mesh sizes regulators, fishing methods) and International Organizations like International Marine Organization, Green Peace, International Labour Organization. Expected answers included turtles, whales, sharks, dolphins and tuna.
- (b) Job opportunities were abundantly listed.
- (c)(i) Some candidates indicated that swim bladder enables fishes to swim. Many others correctly gave the required answers.
- (ii) Only a few candidates correctly stated how scales help fish to adapt to life in water. Even then they only mentioned the protective function of scales. It should be noted that scales also overlap backwards and do not impede smooth movement of fish.
- (iii) The function of the lateral line was correctly stated by most candidates.
- (iv) The use of the mouth was limited to its role in feeding. Most candidates ignored its function in gaseous exchange.

## **FISHERIES 3**

### **1. GENERAL COMMENTS**

The standard of the paper was at par with that of previous years'. The performance of candidates was also at par with that of previous years.

### **2. SUMMARY OF CANDIDATES' STRENGTHS**

The Chief Examiner noted the following strengths:

- (1) Legible handwriting
- (2) Orderly presentation of answers

### **3. SUMMARY OF CANDIDATES' WEAKNESSES**

The following weaknesses were noted:

- (1) Candidates showed a lack of understanding of the questions asked
- (2) Improper usage of the English Language
- (3) Inadequate preparation

### **4. SUGGESTED REMEDIES**

The following remedies were suggested by the Chief Examiner

- (1) Candidates should prepare well for examinations
- (2) Candidates should read and understand questions before attempting them
- (3) Candidates should read good English books to improve upon their use of the English language

### **5. DETAILED COMMENTS**

#### **Question 1**

The table below represents the average monthly fish landings from the sea, rivers and fish ponds in the country. *Study the table carefully and answer the questions that follow.*

	<b>Jan</b>	<b>March</b>	<b>May</b>	<b>July</b>	<b>Sept</b>	<b>Nov</b>
<b>Sea (mt)</b>	<b>110</b>	<b>120</b>	<b>150</b>	<b>180</b>	<b>170</b>	<b>130</b>
<b>Rivers (mt)</b>	<b>30</b>	<b>40</b>	<b>50</b>	<b>55</b>	<b>60</b>	<b>55</b>
<b>Fish ponds (mt)</b>	<b>25</b>	<b>20</b>	<b>10</b>	<b>5</b>	<b>5</b>	<b>10</b>

- (a) Calculate the total fish landings for each of the following water bodies:

- (i) sea;
  - (ii) rivers;
  - (iii) fish ponds.
- (b) Using the same axes, plot a graph with average monthly fish landings from the sea, rivers and fish ponds on the vertical axis and months on the horizontal axis.
  - (c) Describe the nature of graph drawn.
  - (d) Give three possible reasons for the changes in the fish landings from the sea, rivers and fish ponds.
- (a) Most candidates correctly added up the fish landings from the sea, rivers and ponds. However, most of them did not indicate that the quantities were in metric tons. Moreover, some added the quantities of landings from the sea, rivers and ponds together and struck the average by dividing their answers by 3, to obtain the average for each month.
  - (b) Graph: The graphs were generally poorly drawn. Mostly the points of the graphs were drawn by free hand, instead of being joined by ruled lines. Additionally, the point of the graph for January was joined to point O, which is the origin or point of intersection of the x-axis and the y-axis, even when no value had been provided in the data. The graphs had no headings, axes were not labelled, no scales were provided.
  - (c) The graph description was poorly done. The graph of sea landings should be described as “rising sharply” and “declining sharply”. Some candidates indicated that the graph “rises and falls” the graph for river landings rises sharply and drops gently whilst that for pond drops gently and rises gently.
  - (d) Was quite well answered.

## **Question 2**

- (a) Mention the method used in preserving each of specimens A and B.
  - (b) Describe the method used in preserving specimen A.
  - (c) Name three fish by-products that could be obtained during the production of specimen B.
  - (d) Give three reasons why fish is preserved in the form of specimen A.
  - (e) Name two materials that could be used to package each of specimens A and B.
  - (f) Name three other methods of preserving fish.
- (a) The methods used to preserve specimens A and B were mostly correctly stated as smoking and sun drying.
  - (b) The description of the drying process was satisfactorily, except that some candidates indicated that the fish was put on fire instead of placed on mats/rocks/concrete surface under the sun and turned intermittently.
  - (c) In listing by-products of fish smoking, some candidates listed the fish bones, giving the impression that the fish was filetted. Expected answers were fish entrails/gut, fish skin, gill and fats and oils.

- (d) This sub-question was well answered. Answers included:
  - to improve taste
  - to increase shelf life
  - to add value
  - to minimize spoilage
- (e) Most candidates named correct packaging materials.
- (f) In naming other methods of preserving fish most candidates wrongly repeated the methods already mentioned (smoking and drying). Expected answers were frying, steaming, salting, freezing and marinating.

### **Question 3**

- (a) Name five fish feed ingredients that are required in preparing specimen C.**
- (b) Give two advantages of using specimen C to feed fish.**
- (c) State three advantages and three disadvantages of using specimen D in transporting fish.**
- (d) Name two other items that could be used in transporting fish.**
- (e) (i) Identify specimen E.**
- (ii) Name the water quality parameter measured by specimen E in fish ponds.**
- (iii) Describe how specimen E is used to take measurements in fish ponds.**

- (a) The ingredients were correctly listed.
- (b) Most candidates missed out the key points of the advantage of using pelletized feed, that is to minimize wastage; to reduce pollution of the water; to produce complete feed. Most candidates just said it enables fish to grow.
- (c) Most students misunderstood the question. They wrongly assumed the basket was to be used to transport live fish. Some indicated that the basket allowed air to enter for respiration. Candidates were expected to state that free flow of air minimizes spoilage; it is cheap, it is readily available locally and is light in weight.
- (d) Some assumed that live fish is to be transported and provided wrong responses. Expected answers were nylon, plastic, fish boxes, cardboard and sack.
- (e)(i) Thermometer was correctly identified.
- (ii) Description of use of thermometer was poor in some cases. Some stated that water from the pond is fetched in a container and then the thermometer is placed in the water. Candidates should note that the thermometer is held by the tip and the end dipped into the pond water. It is kept in the water for some time, withdrawn and the reading taken immediately. The process is repeated at several points in the pond, and the average determined.

# **FORESTRY 2**

## **1. GENERAL COMMENTS**

The standard of this year's paper is comparable to that of the previous years. The performance of candidates improved slightly over last year.

## **2. SUMMARY OF CANDIDATES' STRENGTHS**

The chief examiner observed the following strengths:

- (1) clear and straight forward answers
- (2) legible handwriting
- (3) beginning of fresh answers on fresh page
- (4) good command of the English language

## **3. SUMMARY OF CANDIDATES' WEAKNESSES**

The following weaknesses were observed:

- (1) wrong spelling of terms
- (2) poor understanding of terms
- (3) rovision of incomplete answers
- (4) lack of hands-on knowledge of subject matter

## **4. SUGGESTED REMEDIES**

- (1) Students should read text books on the subject and make a conscious effort to understand the terms and learn how to spell them
- (2) Teachers should guide the students to understand the technical terms
- (3) Students should be taken to the field to have practical knowledge of the subject

## **5. DETAILED COMMENTS**

### **Question 1**

- (a) **Define the term agroforestry?**
- (b) **Explain each of the following terms as used in forestry:**
  - (i) **agrosilviculture;**
  - (ii) **agrosilvopastoral;**
  - (iii) **silvopastoral.**
- (c) **State four effects of soil erosion on the forest ecosystem.**
- (d) **Explain four measures that could be used to conserve wildlife.**

Expected solution:

- (a) Agroforestry

Agroforestry is an integrated land use management system where trees or shrubs are cultivated on the same piece of land as crops or livestock or both.

(b) Explanation of terms

- i. Agrosilviculture - this is the growing of crops and woody perennials on the same piece of land
- ii. Agrosilvopastoral - this system comprises of crops, pasture animals and woody perennials on the same piece of land
- iii. Silvopastoral - this system consists of pasture animals and woody perennials on the same piece of land.

(c) Effects of soil erosion

- loss of soil fertility
- leads to exposure of roots of plants
- leads to siltation of water bodies caused by run-off
- leads to physical destruction of land
- leads to landslide

(d) Measures used to conserve wildlife

- the laws that help to conserve wildlife should be enforced, more security men like game guards or game scouts should be employed to help in the law enforcement and offenders should be punished.
- poaching should be prevented, people who go into the restricted area to hunt without permit should be arrested and prosecuted.
- national parks should be provided with water and all the facilities need for the survival of the animals, all structures that would make life comfortable for the animals in the park should be provided, example pond of water, should be created for certain animals like warthog or duck which normally wallow
- the public should be educated on the importance of wildlife through television, radios and vans, the people should be informed about the numerous benefits derived from wildlife.
- encroachment of areas designated for wildlife should be prevented, people who enter areas meant for game and wildlife without permit should be arrested and prosecuted
- offenders of laws should be prosecuted and fined or imprisoned  
offenders of wildlife laws should be arrested and punished to serve as warning to others
- games guards should be well equipped

Comments:

This question was tackled by a great percentage of the candidates and most of them had high marks.

- (a) Most candidates defined the terms correctly
- (b) This question was poorly answered. Candidates were confusing the terms, the correct definitions are given above.
- (c) This question was satisfactorily answered by most candidates
- (d) Candidates obtained average marks for this question. Some candidates stated the measures instead of explaining them and as such had half the total marks. Refer to the answers provided.

**Question 2**

- (a) **Explain each of the following terms as used in forestry:**
  - (i) **skidding;**
  - (ii) **delimiting;**
  - (iii) **compartment.**
- (b) **Explain four ways in which trees are important to animals.**
- (c) **State three reasons why the Forestry Commission is important.**

Expected solution:

- (a) Explanation of terms

- (i) Skidding - The movement of a log with the help of a rope attached to a piece of equipment/ machinery from the felling site of the log to landing.
- (ii) Delimiting - The removal of branches from a timber or felled trees to leave a clean bole for lumbering.
- (iii) Compartment - It is a unit of management area of a forest reserve

- (b) Ways in which trees are important to animals

- Trees could serve as habitat/ home of animals such as reptiles, birds, mammals, insects  
Some animals live inside the wood of trees, others live on the tree while others live in buttress of trees. These areas serve as their main living places.
- Fruits borne by a good number of trees could be food for animals.  
Animals directly or indirectly feed on plant parts including the fruit, example squirrels and fruit bats live on fruits
- Trees could serve as breeding sites/ grounds for animals

- It is in these trees that the young of animals are borne and nurtured
- Trees could be the source of medicine for some animals
- Some animals take certain parts of plants to treat certain illness or diseases.
- trees could provide hide-outs for animals trying to elude detection of predators
- With the leaves and branches of trees some animals are able to hide themselves from their enemies
- provides shades for animals during sunny or hot days
- the numerous leaves on trees shield animals from the scorching sun

(c) Importance of the Forestry Commission

- promotes sustainable development and protection of the forest resource
- promotes the timber trade
- co-ordinates policies related to forestry
- advice government on forest resource
- collect and disburse revenue to resource owners
- enforce forestry laws

Comments:

This was another popular question, candidates who attempted this question performed satisfactorily.

- (a) Candidates had difficulty explaining the listed terms and hence obtained low marks for this sub-question. Refer to the answers provided.
- (b) Most candidates obtained good marks for this question
- (c) This question was also well answered by almost all the candidates who attempted it.

**Question 3**

- (a) **Distinguish between the following terms:**
  - (i) **pollarding and pruning;**
  - (ii) **rare species and endangered species.**
- (b) **Explain four ways in which trees are important to animals.**
- (c) **State three reasons why the beekeeping is important.**

Expected solution:

- (a) Distinguish between terms
  - (i) Pollarding is the cutting of a shoot just above the lower branch to promote lateral growth while pruning on the other hand is the removal of dead / diseased / unwanted branches to promote desired growth of the tree.

- (ii) Rare species are species which are very difficult to come by/ hardly seen/ very scarce while endangered species are species whose population or habitat has become so small that it may be lost forever if adequate protection is not given to it.

(b) Reasons for creating gaps in forests

- for sunlight to reach forest floor for regeneration / germination of seed in seed bank. Could be possible when there is warmth
- to allow sapplings to grow to maturity. The sapplings access to light prevents etiolation and with sunlight, chlorophyll will be formed for photosynthesis to take place
- to allow for natural succession to take place for permanent or climax to be reached, there must be sunlight for photosynthesis and growth.

(c) Importance of beekeeping

- honey obtained from beekeeping serves as food – Honey is used as substitute for sugar. It is also taken directly with flour meals.
- medicine – Honey is used in many medicines. E.g. it is used in making cough mixture.
- propolis obtained from bees serves as immune booster – This means that it helps our bodies to stand against germs.
- wax is industrial raw material – Wax is used in making many things including shoe polish, pomade and crayon.
- source of employment - Many people have gone into honey production as their main business
- income / revenue
- bees are pollinators – Bees are pollinators with their hairy bodies. They are able to transfer pollen grains from the anther to the stigma to effect pollination

Comments:

Candidates who attempted this performed well.

- (a) Most of the candidates answered this question satisfactorily and obtained very high marks
- (b) This sub-question was poorly answered by most of the candidates. Most of them did not understand the term gaps and therefore could not give reasons why they are created. Refer to the answers provided.
- (c) This sub-question was satisfactory answered by most of the candidates who attempted it

#### Question 4

- (a) State four differences between natural forests and plantations.
- (b) Name five migratory birds that could be found in Ghana.
- (c) Mention four factors that could lead to the termination of Timber Utilization Contact.
- (d) State three disadvantages of skidding.

Expected solution:

- (a) Differences between natural forests and plantations

<b>Natural forests</b>	<b>Plantations</b>
- Wide variety of species	- Normally monoculture of few tree species
- Presence of more NTFPs	- Absence or insignificant amount of NTFPS
- Tree species exhibit prominent buttresses	- Little or no buttresses
- Multi layered canopy	- Single-layered canopy
- More resistant / resilient to disease and pest attacks	- Less resistant / resilient to disease and pest attacks
- Soil fertility is high	- Soil fertility is low
- Uneven ages of trees / plant	- Even aged trees / plants

- (b) Migratory birds found in Ghana

- Egret
- Avocet
- whimbrel
- Wood whoopoe
- Reef heron
- Black winged stilt

- (c) Factors which could lead to termination of TUC in Ghana

- using expired permit document
- going beyond the date stipulated on the permit
- harvesting in excess / more than permitted

- failure to mark stumps
- felling undersized trees

(d) Disadvantages of skidding

- disturbance of forest floor
- destruction of seedlings, saplings, seeds etc
- laborious activity
- could kill forest animal like snails, tortoise etc which cannot escape
- could cause erosion in the forest

Comments:

Generally, most of the candidates who attempted this question performed below average.

- (a) Candidates who attempted this sub-question answered it satisfactorily.
- (b) It appears that candidates who attempted this sub-question do not understand the term migratory. Birds like parrots and owls which are not migratory birds were given. Refer to the answer provided for a list of migratory birds.
- (c) This is another poorly answered sub-question.
- (d) Candidates performed unsatisfactorily in answering this sub-question. Again, understanding the term skidding was the problem.

**Question 5**

- (a) **Discuss four ways in which wildlife is important.**
- (b) **Give four examples of forest based industries in Ghana.**
- (c) **Give the full meaning of each of the following acronyms:**
  - (i) **FORIG;**
  - (ii) **TIDD;**
  - (iii) **WD;**
  - (iv) **FSD.**

Expected solution:

(a) Importance of wildlife

- Tourism / Ecotourism

Wild animals live in specific ecological areas and therefore people travel from place to place to view them. Tourist may visit zoos, nature reserves, sanctuaries etc. This creates jobs/ income and a source of foreign exchange and revenue.

- Sociocultural - Chiefs in the North sit on animal skin as a sign of

supremacy

- festivals in which wildlife is involved, like the Aboakyir festival
- Food - Meat is obtained from the animals
- Education - for people to know the importance of wildlife
- Medicinal - bones of lions are used for strength, droppings of elephant use to cure diseases of children
- Research
- Industrial raw material - animals use in industry and wildlife parts like elephant tusk are used for making buttons
- Economics - some people hunt for wildlife for money

(b) Examples of forest based industries

- saw mill
- plywood mill
- chip board mill
- furniture industries
- civil works
- charcoal industry
- canning and sculpture
- boat / canoe building

(c) Meaning of Acronyms

- i. FORIG - Forest Research Institute of Ghana
- ii. TIDD - Timber Industry Development Division
- iii. WD - Wildlife Division
- iv. FSD - Forest Services Division

Comments:

Performance of candidates who attempted this was average.

- (a) This sub-question was well answered and candidates obtained satisfactory marks.
- (b) Candidates simply did not know what forest based industries are and hence were giving wrong answers like Cocoa Marketing Board, Benso Oil Palm plantain etc. refer to the answers provided.
- (c) Candidates performed excellently with this sub-question.

**Question 6**

- (a) **Give one reason why each of the following tending operations is important in forestry:**
  - (i) **thinning;**

- (ii) **pruning;**
- (iii) **beating up;**
- (iv) **stumping.**
- (b) **Describe four effects of deforestation on the environment.**
- (c) **Mention two diseases that attack tree seedlings at the nursery.**
- (d) **State two advantages of using exotic tree species in plantation establishment.**

Expected solution:

(a) Importance of tending operations

- i. Thinning - promotes fast growth of plants
  - for free movement on the plantation
  - reduces competition to prevent stunted growth
- ii. Pruning - reduces knot / prevent lateral development of plant / removes diseased branches/to obtain straight boles
- iii. Beating-up - to make optimum use of land/to reduce gaps/to reduce weed growth
- iv. Stumping - to reduce desiccation of seedlings  
To make transportation easier

(b) Effects of deforestation on the environment

- loss of habitats of various organisms  
Because of the removal of the vegetation, animals and plants that live on trees and those living inside trees buttresses lose their living places.  
Example, some plants like ferns. Some animals live in burrow just under trees in order to have low temperatures. As soon as the tree or the plant is removed the habitats are destroyed.
- loss of water sheds  
All the plants protecting rivers which are grown at the banks are destroyed. this causes drying up of the rivers through evaporation
- erosion, siltation / accretion  
because of the removal of vegetation, rains get into direct contact with the soil causing erosion. The eroded material are sent unto water banks
- loss of biodiversity of some species / extinction  
because the vegetation cover is removed, some plants and animals are very difficult to come by because their living places are destroyed,
- flooding  
because there are no vegetation, most of the rain water could not be absorbed into the soil but are ran or directed into rivers thereby causing flooding
- climatic variability / change

The presence of trees and other vegetation give a constant humid environment. Once the vegetation is removed the place experiences changes in temperature as well as alternating sunny and cloudy weather

- loss of soil fertility

In the absence of the vegetation cover, soil nutrients are washed from the soil by erosion.

(c) Diseases which attack seedling at nursery

- dumping off
- root knot
- rust

(d) Advantages of using exotic tree species

- They grow fast
- They are resistant to diseases
- Raw materials for industry e.g. rubber, timber and transmission poles
- High coppicing ability e.g. cassia spp, Teak

Comments:

Generally, candidates who attempted this question performed creditably.

- (a) This sub-question was answered correctly by most of the candidates
- (b) Candidates answered this sub-question correctly and hence obtained good marks
- (c) This sub-question was poorly answered. Candidates were giving answers like bacteria, fungi, nematodes which are not diseases.
- (d) Most of the candidates answered this sub-question correctly.

# **FORESTRY 3**

## **1. GENERAL COMMENTS**

The standard of the questions of this year's paper compared favorably with those of the previous years.

The performance of candidates was a little above average.

## **2. SUMMARY OF CANDIDATES' STRENGTHS**

The Chief examiner observed the following strengths

- (1) Almost all the candidates attempted all the questions as required
- (2) Candidates provided straight forward answers with good handwriting
- (3) Most of the candidates understood the questions and provided good answers

## **3. SUMMARY OF CANDIDATES' WEAKNESSES**

The main weakness of most of the candidates was spelling mistakes. Also about 20% of the candidates could not express themselves properly or as expected of them.

## **4. SUGGESTED REMEDIES**

The following remedies are suggested:

- (1) Candidates should read a lot of story books and newspapers.
- (2) Teachers should introduce candidates to the technical terms and guide them to practice their usage and spelling

## **5. DETAILED COMMENTS**

### **Question 1**

- (a) **Mention the main uses of each of specimens A, B and C.**
- (b) **State three precautionary measures that should be taken when using specimen A.**
- (c) **(i) Give one reason why metallic objects should not be kept around when using specimen B.**  
**(ii) State two ways of maintaining specimen B.**
- (d) **Explain why specimen C is painted in different colours.**
- (e) **(i) Mention the minimum number of specimen C that could be used for a successful operation.**  
**(ii) Give one reason for your answer in (e) (i).**

This question was answered nicely by most of the candidates except e(i) where a number of the candidates provided 2 or 4 as the answer instead of 3. The question was about the minimum number of ranging poles that could be used at a time. The answer should be 3 so that a straight line could be obtained.

## **Question 2**

- (a) Give three reasons why specimen D is used in alley-cropping.**
- (b) State four nursery practices that could be carried out on specimen D before it is outplanted in the field.**
- (c) Mention four factors that could cause poor establishment of specimen D in the field.**
- (d) Name the type of leaf borne by specimen D.**

- (a) Many candidates failed to answer as expected. The question was to provide reasons for using specimen D (*cassia* sp.) in alley cropping. The answers were:
  - they are easily established
  - they have high coppicing ability
  - they are resistance to fire
  - they have another use as fuel
  - their ability to fix atmosphere nitrogen into the soil
  - production of more litter that decompose to provide more nutrient to the soil
  - possession of deep rooting system to resist being uprooted by wind and the fact that it is easy to eradicate when the need arises
- (b) This was poorly answered. The question was on the nursery practices on the seedlings of *cassia siamea*. Most candidates mentioned pruning, thinning out as well as out planting. It must be noted that the above practices are not done at the nursery. They are done on the field. The nursery practices include watering, shading, fencing, disease and pest control, pricking out and hardening off.
- (c) This was answered nicely by almost all the candidates.
- (d) The type of leaves borne by *cassia* sp. is pinnate compound leaf or simply compound leaf.

## **Question 3**

- (a) Mention four uses of specimen E.**
- (b) Give three characteristics features of specimen E that promote its use.**
- (c) State six problems associated with the harvesting of specimen E from the forest.**
- (d) Name two vegetation types where specimen E could be found.**

- (a) This was on the uses of specimen E (cane), most of the candidates answered it correctly.
- (b) This question asked about the characteristic features of specimen E (cane), most of the candidates wrote about its ability to prevent erosion and its action as wind break. They answered the question as if considering the very specimen (stick or stem) before them. The answers should have been its flexibility, its durability, its beauty and its tensile strength.
- (c) This question asked about the problems associated with the harvesting of specimen E, a lot of candidates talked about the environmental problems like deforestation, erosion that

could be caused by the removal of the plant and the destruction of habitats. the problems like being bitten by snake, being attacked by wild animal or falling into deep pit, getting lost in the forest and stings from bees and wasps, were expected.

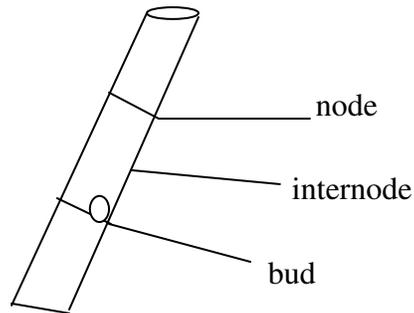
#### **Question 4**

- (a) **State three ways in which specimen F is of importance to the forester.**
- (b) **Name three predators of specimen F.**
- (c) **Mention the role of specimen F in the food chain.**
- (d) (i) **Give the family name of specimen G.**  
(ii) **Draw and label specimen G.**
- (e) **State four uses of specimen G.**

(a)&(b) These were satisfactorily answered.

(c) The role of earthworm in the food chain is a decomposer and not a consumer.

(d)(ii) This required the diagram of bamboo, stem, arrows like → are not used in labeling. It should be simple straight line touching that part of the diagram being labeled.



Bamboo

Bamboo belongs to the family Coruminaceae

# GENERAL AGRICULTURE 2

## 1. GENERAL COMMENTS

The standard of the paper compared favourably to that of the previous years. Candidates performance was however below average.

## 2. SUMMARY OF CANDIDATES' STRENGTHS

The Chief Examiner noted the following strengths:

- (1) Effective use of time as majority of candidates were able to finish answering the five questions within the allotted time.
- (2) Questions were answered from each of the five sections as required
- (3) Almost all candidates provided their details on the first page of the answer booklet
- (4) Answers to questions and sub-questions were properly numbered

## 3. SUMMARY OF CANDIDATES' WEAKNESSES

The Chief Examiner noticed the following weaknesses in the script of candidates:

- (1) Inability to express themselves correctly using the English language
- (2) Poor spellings especially of terminologies of agriculture
- (3) Inability to describe agricultural / scientific processes logically
- (4) Poor handwriting in a few cases

## 4. SUGGESTED REMEDIES

The following recommendations were offered

- (1) Effective teaching of the English language
- (2) Proper teaching of agricultural terminologies should be encouraged
- (3) Students should also be encouraged to use the terms in their writings

## 5. DETAILED COMMENTS

### Question 1

- (a) (i) **What is *farm land survey*?**
- (a) (ii) **Outline the steps involved in conducting a farm land survey.**
- (b) (i) **State five safety measures that should be taken when using machinery on the farm.**
- (b) (ii) **Mention four disadvantages of using manual power on the farm.**

Majority of candidates who attempted this question performed poorly.

- (a) (i) Candidates generally failed to explain what “Farm Land Survey” is. It should be noted that it is the measuring and mapping out of the position, size and boundaries of an area of farm land.

- (ii) Most candidates could not, satisfactorily, outline the steps involved in conducting farm land survey.

The correct steps are

- Reconnaissance survey
  - Preliminary survey
  - Planning the survey
  - Mapping and/or location survey
  - Drawing a map of the farm land
- (b) (i) This question was only fairly well answered. Safety measures including the following were hardly stated
- Never start a farm machine without knowledge of how to operate it
  - Do not use machine when drunk
  - Never top-up fuel level when machine is still running
  - Check and maintain correct tyre pressure

### **Question 2**

- (a) **Explain four problems of farm mechanization in West Africa.**
- (b) **State four roles played by governments in West Africa in the development of agriculture.**
- (c) **Distinguish between farm machinery and farm implement.**

Many candidates attempted this question but failed to answer it satisfactorily.

- (a) Most of the candidates, at best, were only able to state the problems of farm mechanization in West Africa. Only a few of them could explain the stated problems.
- (b) A fairly good number of them were however, able to state roles played by governments in Agricultural Development in West Africa.
- (c) A fairly good number of the candidates failed to distinguish between farm machinery and farm implement.

It is, therefore, useful to note the distinction as follows: Farm machinery are mechanical devices with moving parts and capable of generating power to accomplish tasks but implements are tools which require external source of power to perform tasks.

### **Question 3**

- (a) **Discuss four ways in which knowledge of soil profile is important to a farmer.**
- (b) **State four ways of improving soil fertility.**
- (c) **List four agricultural liming materials.**

A great majority of the candidates attempted this question and exhibited a fairly good familiarity and ideas about a soil profile.

- (a) Even though most correctly stated the importance of the knowledge of soil profile to farmers, they could not discuss the stated points satisfactorily.

- (b) Generally, candidates did not find much difficulties in stating ways of improving soil fertility. Their answers included mulching which should have been stated as organic mulching since not all types of mulching materials decompose to improve soil fertility as organic mulches do.
- (c) Majority of candidates gave correct examples of liming materials but lost marks in cases where the names of the materials were wrongly spelt.

Liming materials rarely listed by the candidates include the following:

- Bone meal
- Basic slag
- Grpsum
- Biochar
- Magnesium hydroxide

#### **Question 4**

- (a) **State five adverse effects of soil erosion on agriculture.**
- (b) **List five ways of conserving water in the soil.**
- (c) **Explain three roles of organic matter in soil productivity.**

The performance of candidates on this question was generally good.

- (a) They stated the adverse effects of soil erosion on agriculture fairly satisfactorily. Most of them did not however explain the adverse effects such as the following
- Eroded materials may silt dams and reservoirs
  - Destruction of farm structure
  - Erosion reduces the area of cultivable lands
- (b) Candidates' performance on this sub-question was only fair as most of them could not state many ways of conserving water in the soil. Ways such as the following were rarely stated:
- Use of soil conditioners
  - Use of wind breaks
  - Zero tillage
  - Minimum tillage
  - Organic manuring
- (c) Most of the candidates, correctly, mentioned the roles of organic matter in soil productivity. The fact that organic matter improves soil texture, as mentioned by some candidates is wrong. It rather improves soil structure. However, many candidates could not explain the correct roles satisfactorily.

#### **Question 5**

- (a) **Give two examples of food crops belonging to each of the following groupings:**
- (i) **legumes;**
- (ii) **stem tubers.**
- (b) (i) **Differentiate between beds and borders as used in landscaping.**

- (ii) **State three principles that should be observed when planting in borders.**
- (c) **State two harmful effects of weeds on cultivated crops.**

The performance of candidates on this question was generally poor. Perhaps the topic “Bed and Borders” is not properly taught in schools.

- (a) Candidates were generally able to give examples of crops that are legumes and those that are stem tubers. They, however, found it difficult giving yam as stem tuber and cassava as root tuber and not vice versa. Similarly, they wrongly gave sweet potatoes as stem tuber instead of Irish potato.
- (b) A lot of candidates could not clearly distinguish between Beds and Borders in land scaping. For such candidates, their best answer was the fact that beds can be viewed from all sides/angles and borders can be viewed from two or three sides. Only a few of them knew also that in beds the tallest plants are in the centre/middle tallest plants in borders are at the back/obstacle. Performance in planting / establishing beds and borders in terms of height, colour, form and merging of plants was poor in most cases.
- (c) Candidates were generally familiar with this sub-question. They therefore answered it well scoring the full marks of two (2) in most cases.

### **Question 6**

- (a) **Define the term crop improvement.**
- (b) **Describe each of the following methods of crop improvement:**
  - (i) **introduction;**
  - (ii) **selection.**
- (c) **Define the term a crop pest.**
- (d) **List eight physical barriers that could be used in controlling crop pests.**

Many candidates attempted this question but general performance was poor because they could not explain the stated terms well.

- (a) Crop Improvement  
Deals with the development of crop varieties which have desirable characteristics better than existing varieties.
- (b) (i) Introduction  
It involves obtaining crop varieties with desirable or superior or characteristics and making it available for wide cultivation in new environments.
- (ii) Selection  
Choosing plant / crop varieties with the best combination of desirable characteristics from a population of crops with a variety of genetic constitution.
- (c) Most candidates correctly defined the term “Crop Pest” and scored the two marks allocated to it.
- (d) Except in a few cases, candidates wrongly stated physical methods instead of physical barriers used for controlling pests.

The expected barriers include fencing, waxing of crops, use of nets to cover crops.

### Question 7

- (a) **List four effects of malnutrition in animal production.**
- (b) **Give four reasons why artificial insemination is not widely practiced in West Africa.**
- (c) **State four factors that should be considered in selecting a site for fish pond construction.**

This question was also popularly among candidates but performance can only be described as fair.

- (a) Majority of the candidates could state the effects of malnutrition but the following effects were rarely stated:
  - Draught animals become less strong to work
  - Poor quality animal product/poor market value
  - Delayed sexual maturity
- (b) Candidates' knowledge of Artificial Insemination is poor. They could not, therefore, give convincing reasons why artificial insemination is not widely practiced in West African countries.

The correct reasons include the following:

  - The practice is expensive
  - Inadequate in detecting heat
  - Difficulty in detecting heat
  - Short duration of heat
- (c) Candidates exhibited adequate knowledge of construction of fish pond by stating correctly, factors to consider in sitting a fish pond.

### Question 8

- (a) **Mention two examples each of the following groups of animal diseases:**
  - (i) **viral disease;**
  - (ii) **bacterial disease;**
  - (iii) **fungal disease;**
  - (iv) **protozoan disease.**
- (b) **State four advantages of silage over hay as feed for ruminants**
- (c) **List four parts of the digestive tract of poultry.**

Many candidates attempted this question and performed fairly well on it.

- (a) They could give correct examples of viral, bacterial, fungal and protozoan diseases in farm animals easily. Some examples given are as outlined below:

#### Viral Diseases

- Foot and mouth Disease
- Bird flu

#### Bacterial Diseases

- Tuberculosis
- Anthrax

- |                       |               |
|-----------------------|---------------|
| - Rinderpest          | - Mastitis    |
| - Fowlpox             | - Brucellosis |
| - Gumboro Disease     | - Pullorum    |
| - African Swine Fever | - Blackleg    |
| - Newcastle Disease   | - Footrot     |

Fungal Diseases

- Aspergillosis
- Ringworm
- Candidosis
- Scabies

Protozoan Diseases

- Fowl fever
- Red Water Disease
- Coccidiosis
- Trypanosomiasis

Candidates' difficulty in giving examples of the diseases was wrong spellings of names of the diseases which caused them valuable marks.

- (b) Candidates had some knowledge of silage and hay but they could not give the required number of the advantages of silage over hay as feed stuff. Most of them, however, did not score full marks on the question.
- (c) This sub-question was well-answered. But wrong spellings of the names of parts of the alimentary canal of the poultry bird caused them marks.

**Question 9**

- (a) Explain four factors that determine the efficiency of labour.**
- (b) Mention four functions of a farm manager.**
- (c) State four factors that influence the supply of agricultural produce.**

- (a) This was another question attempted by many candidates who correctly stated most of the factors that determine the efficiency of labour. Most of them, however, could not adequately explain the stated factors.
- (b) This sub-question was well answered by the generality of the candidates and scored full marks in most cases.
- (c) Candidates were not able to state the factors that influence the supply of agricultural produce. In most cases, they got the price of the produce since they influence both the supply and demand of agricultural produce.

Other factors that influence supply include:

- Number of producers
- Price of related produce
- Technology
- Natural hazards
- Price of factors of production

## **Question 10**

- (a) Mention three roles of research institutions in agricultural extension.**
- (b) Mention five objectives of agricultural extension.**
- (c) (i) Define the term credit as used in agribusiness.**  
**(ii) Give three reasons why credit is important in agricultural production.**  
**(iii) Mention three formal sources of farm credit.**

- (a) Majority of candidates who attempted this question miserably failed to mention the roles of research institutions in agricultural extension. These roles include the following:
  - Identification of major agricultural problems and finding solutions to them for agricultural production through extension agents.
  - Making appropriate recommendations to government on agricultural policies
  - Developing agricultural innovations and new farming technologies to be adopted by farmers through extension education.
- (b) In this question, most candidates confused the objectives of agricultural extension with the roles of Research Institutions. The objectives include the following:
  - To get farmers in the right frame of mind to adopt farming innovations
  - To help farmers to gain managerial skills needed for commercial farming
  - To help improve the general quality of farmers and rural dwellers
- (c) (i) Most candidates lost the marks for the sub-question either by simply saying that credit is money granted farmers or buying goods in the shop and paying for them later. It is suspected that giving the term as “credit” rather than “Agricultural credit” could be the cause of the confusion for candidates.  
It should be noted that Agricultural credit/ credit or loan is money service or other forms of capital granted farmers on trust or the provision of collateral to be repaid at an agreed future date normally with interest.
- (ii) Candidate had fairly good ideas about the reason for obtaining agricultural credit. They therefore, in most cases, gave the three reasons for the full three marks.
- (iii) Candidates appeared to have knowledge of the general sources which they readily stated forgetting the word/adjective “formal” describing the sources. As a result most did not score full marks.

The expected formal sources include:

- Banks
- Government Agencies
- Non-governmental organization/NGO
- Co-operative societies
- Marketing Board
- Micro-finance organizations

# **GENERAL AGRICULTURE 3**

## **1. GENERAL COMMENTS**

The standard of the paper generally compared favourably with that of previous years with respect to contents, syllabus coverage and level of difficulty. The performance of candidates was good as compared to the previous years.

## **2. SUMMARY OF CANDIDATES' STRENGTHS**

- (1) Most candidates showed improvements in spelling of scientific names and Agricultural terminologies
- (2) Most candidates were able to start each question on fresh paper
- (3) Most candidates adhered to the rubrics of the paper
- (4) Most candidates were able to identify the specimens provided by their common and scientific names
- (5) Most candidates were able to describe the soil sedimentation experiment correctly

## **3. SUMMARY OF CANDIDATES' WEAKNESSES**

- (1) Candidates could not calculate the number of specimen in an area of a pond
- (2) Few candidates failed woefully in providing scientific names for the specimens provided
- (3) Candidates exhibited poor construction of sentences that made it difficult for examiners to comprehend what they were trying to state.

## **4. SUGGESTED REMEDIES**

The Chief Examiner made the following suggestions meant to remedy the weaknesses of candidates. Teachers/instructors should

- (1) give exercise involving calculation and identification of specimens to their students
- (2) periodically use question and answer to drill students on scientific terms
- (3) be encouraged to learn theory and practical aspects of the syllabus side by side
- (4) be encouraged to read good story books to enrich their vocabulary

## **5. DETAILED COMMENTS**

### **Question 1**

**Specimen A shows a technique used in crop production.**

***Study the specimen carefully and answer questions that follow:***

- (a)
  - (i) **Name the crop production technique that has been demonstrated in specimen A.**
  - (ii) **State three conditions necessary for the success of the technique.**
  - (iii) **State two advantages of using the technique in crop production.**
- (b)
  - (i) **Identify specimen B by its scientific name.**

- (ii) State three characteristics of specimen B that makes it a good animal feed.
- (c) (i) Identify specimen C by its common name.
- (ii) Determine the number of specimen C that could be found in a pond of length 4,000 cm and width 1,000 cm if the number of specimen C per square metre is 2.
- (a) (i) Most of the candidates correctly identified the crop techniques demonstrated as grafting
- (ii) Majority of the candidates failed to present the conditions necessary for the success of the crop techniques demonstrated satisfactorily.  
The expected responses include:
- plants must be compatible or closely related
  - scion part of the graft should be the same
  - diameter of the cut plants should be the same
  - ensure scion and stock are well aligned
  - conditions around joints parts should be moist
- (iii) The advantages of using the technique were fairly stated by majority of the candidates as follow:
- to grow plants whose cutting are difficult to root
  - to repair damage plant parts
  - early maturity
  - to produce desirable traits in plants / true to type
- (b) (i) Most candidates identified the specimen B as Panicum maximum correctly. However, few candidates failed to present the scientific name correctly.
- (ii) Most of the candidates failed to state the characteristics of specimen B that makes it good animal feed. The expected characteristics include:
- high proportion of leaf
  - is palatable
  - high nutrition value
  - survive drought / resistant to drought
  - survive under continuous grazing
- (c) (i) Almost all the candidates identified the specimen correctly as Tilapia.
- (ii) Determination of the number of specimen/Tilapia found in an area of the pond was poorly done by most of the candidates. The expected calculation is as follow:
- Area of pond = 4,000 cm x 1,000 cm  
                   = 40 m x 10 m  
                   = 400 m<sup>2</sup>
- If number of specimen for 1m<sup>2</sup> = 2  
 Then, number of specimen for 400 m<sup>2</sup>  
                   =  $\frac{400 \times 2}{1}$   
                   = 800 specimens/tilapia

## **Question 2**

- (a) (i) **Identify each of specimens D and E.**  
(ii) **Give two features of specimen D that enables it perform its functions effectively.**
- (b) (i) **Identify each of specimens F, G and H by their scientific names.**  
(ii) **Classify each of specimens F, G and H based on their feeding habits.**  
(iii) **State two types of damage caused by specimen H to crops.**  
(iv) **State two ways of controlling specimen H.**

(a) (i) Majority of the candidates were able to identify correctly specimens D and E as Gizzard and Crop respectively. However, few candidates wrongly stated “gizzard plus crop” or just digestive system.

(ii) Only a few candidates correctly stated the feature of specimen D that enable it to perform effectively as

- thick wall
- inner lining is rough
- it is muscular

Most candidates failed to state the function of specimen F (crop). The expected responses include:

- reservoir for food
- secretes enzymes
- secretes mucus which moistens and soften food
- passes food onto proventriculus
- serve as hunger sensation

(b) (i) This sub-question was poorly answered by many candidates. Identification of specimen by their scientific names include:

Specimen F - *Zonocerus veriegatus* / *Zonocenus* sp

Specimen G - *Dystercus supersticiosus* / *Dysdercus* sp

Specimen H - *Sitophilus zea* / *Sitophilus* sp

(ii) Most of the candidates did quite well by classifying the specimens based on their feeding habits as follow:

- Specimen F - biting and chewing
- Specimen G - piercing and sucking
- Specimen H - boring

(iii) This sub-question was well answered as most of the candidates provided the type of damage caused to crops by specimen H as follow:

- bore holes in seed
- destroy seed embryo thereby reducing viability
- reduce maize to powder
- create wounds for disease infections

However, few candidates wrongly stated damage caused to plants by pests such as “bore holes into plants” instead of “bore holes in the seeds”.

- (iv) Majority of the candidates provided correctly ways of controlling specimen H as follows:
- thorough cleaning of store room before restocking with grains
  - proper drying of maize / grains before storing
  - early harvesting of maize
  - fumigation of storage facilities
  - etc

### **Question 3**

**Study carefully the experimental set-up labelled J.**

**Use the set-up to answer the questions that follow:**

- (a) State the aim of the experiment.**
- (b) Outline the steps involved in setting up the experiment.**
- (c) Besides the floating materials on the surface of the water, state two other observations that could be made from the experimental set-up.**
- (d) Mention four ways in which the floating materials on the surface of the water is of importance in crop production.**
- (e) State two precautions that should be taken when setting up the experiment.**

- (a) Majority of the candidates were able to state the aim of the experiment as “To demonstrate that soil is made up of particles of different sizes”.
- (b) Majority of the candidates could not outline the steps involved in setting up the experiment.

The expected steps involves:

- take a glass jar / measuring cylinder
  - collect soil, dry it and grind it
  - weigh about 100 g of the soil into the glass jar / measuring cylinder
  - pour adequate water (about four times the volume of soil) into the jar
  - add calgon / a dispersing agent / sodium carbonate to aid dispersion of soil particles
  - cover mouth of jar and shake vigorously / stir to aid dispersion
  - place the jar on a table / bench and allow the mixture to stand for at least 24 hours / over night
- (c) The observation in the set up was wrongly stated by majority of the candidates. Expected observations include:
    - different layers of soil particles observed
    - coloured water / cleared water / suspended clay particles was observed
  - (d) Majority of the candidates provided the correct responses for the importance of the floating organic matter for crop production
  - (e) Only few candidates stated correct precautions for the setting up the experiment. Expected responses include:

- volume of water should be large compared to the soil
- soil sample should be dried
- soil sample should be ground
- shake vigorously to disperse the soil
- allow set up to stand overnight / 24 hours

#### **Question 4**

- (a) Identify each of specimen K, L and M.**
- (b) State two uses each of specimens K, L and M.**
- (c) Name three tools that should be used before using specimen L in seed bed preparation.**
- (d) State three ways of maintaining specimen M.**

(a) Majority of the candidates were able to identify specimen K, L and M as Hoe, Rake and a pair of secateurs.

However, few candidates had the spelling of specimens wrong. For example “rake” was wrongly spelt as “rak” and “a pair of secateurs” as just “secateurs” without adding “a pair”.

(b) Almost all candidates provided the correct uses of the tools provided except that of “a pair of secateurs”.

Uses of specimen M (a pair of secateurs) include:

- for cutting / pruning woody shrubs
- for cutting bud wood / scion
- for making wood cuttings

(c) This sub-question was fairly answered correctly by majority of the candidates.

Tools used before specimen L (rake) in seed bed preparation include: cutlass, pickaxe, hoe, mattock, spade, shovel.

(d) Majority of the candidates state the correct ways of maintaining each of the specimen M as follow:

- sharpen cutting edge
- tighten screw
- replace spring when weak
- wash / clean after use
- oil / grease metal part

# **INTEGRATED SCIENCE 2**

## **(1) GENERAL COMMENTS**

The questions cover a wide range of topics and the standard of the paper compares favourably with those of previous years. Candidates' performance, however, was below average as compared with the performance of candidates in the recent past.

## **(2) SUMMARY OF CANDIDATES' STRENGTHS**

- (1) The presentation of responses were orderly and appropriately numbered.
- (2) Handwriting of most students was legible.
- (3) Most candidates attempted the required number of questions.
- (4) Candidates started new questions on fresh pages.

## **3. SUMMARY OF CANDIDATES' WEAKNESSES**

The following were weaknesses of candidates reported by the Chief Examiner:

- (1) Poor understanding of scientific principles;
- (2) Some candidates wasted time answering more than four questions;
- (3) Candidates were not well prepared for the examination. This led to candidates reproducing the questions before answering.
- (5) Poor spelling especially of scientific terms was common as well as the use of wrong terminologies.
- (6) Poor expressions in English language was evident in a number of scripts.

## **4. SUGGESTED REMEDIES**

The Chief Examiner suggested the following remedies to the candidates' weaknesses.

- (1) Vocabulary drill on scientific terms should be encouraged in schools. Special attention should be given to terms which appear to have similar meanings.
- (2) Special lessons should be held on fundamental unit, derived units and SI units.
- (3) Teachers are encouraged to take students through the types of questions often asked and assist students through exercises to be familiar with the requirements of these types of questions

## **5. DETAILED COMMENTS**

### **Question 1**

- (a) (i) **What is meant by the term seed dispersal?**  
(ii) **State three ways in which seed dispersal is important.**
- (b) (i) **Define potential energy?**

- (ii) A 400 g orange on a tree is 120 cm above the ground. Calculate the potential energy of the orange. [ $g = 10 \text{ ms}^{-2}$ ]
- (c) Give two examples each of the following types of fertilizer:
- (i) inorganic fertilizers;
- (ii) organic fertilizers.
- (d) Three liquids, dilute acid solution, alkaline solution and distilled water, were kept in unlabelled identical reagent bottles. Describe briefly a test that could be performed to identify each of the liquids.
- (a) Majority of the candidates could explain seed dispersal and the importance of seed dispersal.
- (b) Many candidates stated the formula as Potential Energy =  $mgh$  but defined the  $g$  as gravity instead of acceleration due to gravity. They lost marks because they failed to convert the 400 g to 0.4 kg and 120 cm to 1.2 m and got the substitution wrong.
- (c) Some candidates confused 'inorganic' with 'organic', a few however named the common inorganic fertilizers – NPK, urea, ammonium nitrate, muriate of potash etc and organic fertilizers as manure and faeces/sewage.
- (d) Majority of the candidates could identify the three solutions using red and blue litmus paper; a few however failed to indicate that the two litmus papers must be placed separately in each liquid. Some failed to differentiate between the red and the blue litmus, papers and so lost marks.

## **Question 2**

- (a) (i) Explain the term ration as used in animal production.
- (ii) Give three reasons for feeding animals with a balanced diet.
- (b) (i) State three processes involved in purifying water to be supplied to a community?
- (ii) What is the function of liquid ammonia in refrigerators?
- (c) (i) What does the expression *plastics are insulators* mean?
- (ii) A simple electrical circuit has a supply delivering 1.5 V. If the current in the circuit is 0.5 A, calculate the resistance.
- (d) Explain each of the following ecological terms:
- (i) community;
- (ii) population;
- (iii) ecosphere.
- (a) The definition of the term ration, amount of total feed provided to an animal during a 24 hour period, was a challenge to many candidates but they were able to state the reasons for feeding animals with balance diet, e.g., preventing deficiency diseases.
- (b) (i) Candidates were able to name the common processes i.e. filtration, sedimentation, chlorination, but in most cases they got the spellings wrong. Other less common

answers expected include aeration, taste and colour control and corrosion or scale control.

- (ii)  $\text{NH}_{3(l)}$  in refrigerator does not regulate heat as stated by some candidates. It takes away heat or it brings about cooling or freezing.
- (c) This sub-section was well answered by most candidates as they demonstrated their knowledge of Ohm's law, but a few, even though, wrote the correct formula, could not manipulate the formula properly.
- (d) The explanation of 'ecosphere' was a challenge to most of them i.e. the part of the universe or earth or atmosphere, that supports life. A few also limited community and population to people and so lost marks.

### **Question 3**

- (a) (i) **Give three reasons why water is not a good thermometric liquid.**  
(ii) **Give the reason why water is a good cooling agent in machines.**
- (b) (i) **What is an enzyme?**  
(ii) **State three factors that affect the action of enzymes.**
- (c) **List three characteristics each of the following breeds of farm animals:**
  - (i) **layers;**
  - (ii) **dairy cattle.**
- (d) (i) **Define the term hydrocarbon?**  
(ii) **Draw the structural formula of:**
  - ( $\alpha$ ) **ethane;**
  - ( $\beta$ ) **ethane.**

This question was attempted by many candidates but they performed poorly.

- (a) (i) The narrow range between freezing ( $0^\circ\text{C}$ ) and boiling ( $100^\circ\text{C}$ ), anomalous expansion of water and transparency of water which makes it difficult to read its level through glass were hardly mentioned by candidates but were the expected answers.  
(ii) Most candidates failed to state the correct properties of water responsible for its suitability as a cooling agent. The expected responses were: it is neutral, it has low viscosity which makes it flow easily and also it has a high specific heat capacity which makes it capable of absorbing a lot of heat.
- (b) A fair knowledge of enzymes (biological catalyst) was exhibited, but candidates failed to mention concentration of substrate/enzyme/product as additional factors that affect the action of enzymes. Many candidates failed to appreciate that enzymes are produced by living organisms where they speed up reactions and not only digestion.

- (c) Candidates concentrated rather on the behavior of layers and dairy cattle instead of characteristics, viz ragged/dirty feathers, bright plumage etc (for layers) and large body capacity etc (for dairy cattle).
- (d) Most of the candidates provided correct answer to this sub-question.

#### **Question 4**

- (a)
    - (i) **What is meant by the pole of a magnet?**
    - (ii) **Draw the magnetic lines of force around a bar magnet.**
  - (b) (i) **Distinguish between voluntary action and involuntary action.**  
**List four post harvest activities required in the preservation of maize.**
  - (c) **Describe the processes that take place between pollination and seed formation in flowering plants.**
  - (d) **Distinguish between:**
    - (i) **an atom and an ion;**
    - (ii) **neutralization and esterification.**
- (a) (i) The meaning of ‘the pole of a magnet’ did not come out clearly in the candidates responses even though they know of North and South poles. It’s part of a magnet where the magnetic force is strongest.
- (ii) Most candidates were able to draw the magnetic lines of force. Some poorly, a few however failed to indicate the N/S poles. Others also lost marks because they wrongly indicated direction of arrows from South to North.
- (c) This sub-question was very poorly answered. Many candidates wrote differences between pollination and seed formation which was not the demand of the question. Some wasted time describing self/cross pollination when they should have presented the sequel event from where the pollen grain absorbs water / germinates, developing a pollen tube carrying two nuclei/tube nucleus and generative nucleus the latter dividing to form two male gametes inside the pollen tube which travels through the style into embryo sac of the ovule where the fertilization takes place.
- (d) (i) This was fairly well answered.
- (ii) Neutralization was correctly explained but esterification which involves alkanol and alkanolic acid, was said to involve organic acid instead.

#### **Question 5**

- (a) **Define each of the following terms as associated with reproduction in humans:**
  - (i) **copulation;**
  - (ii) **ejaculation;**
  - (iii) **ovulation;**

- (iv) **menstruation.**
- (b) **Name the type of oxide formed when each of the following elements reacts with oxygen:**
- (i) **sulphur;**  
(ii) **sodium;**  
(iii) **zinc.**
- (c) (i) **What is short-sightedness?**  
(ii) **Describe briefly how short-sightedness could be corrected?**
- (d) **Give four reasons why it is important to keep records during crop production.**
- (a) Some candidates confused copulation with ejaculation. The former is the insertion of the penis into the vagina and the latter is the discharge of semen into the vagina during mating.
- (b) About 99% of candidates misread the question and stated the products of the reactions instead of the types as demanded by the question viz. (i) acidic oxide (ii) basic oxide and (iii) amphoteric oxide
- (c) (i) This error that when one is short-sighted, he/she sees only objects closed by and does not see distant objects at all was stated by most candidates. Shortsighted people can see distant objects but not clearly.  
(ii) Candidates stated the use of diverging lens but failed to describe how the defect could be corrected i.e. it focuses rays from long distant objects, on the retina for them to be seen clearly.
- (d) Some candidates gave reasons for keeping records in respect of animals when the question demanded answer for crop production. Answers expected included (i) to enable payment of tax (ii) facilitate access to loan (iii) estimate amount of yield expected and even to win awards etc.

### **Question 6**

- (a) **Calculate the mass of quicklime produced when 10 g of limestone is heated.**  
[Ca = 40; C = 12; O = 16]

**The equation for the reaction is:  $\text{CaCO}_3 \rightarrow \text{CaO} + \text{CO}_2$**

- (b) (i) **List three emissions of radioactivity.**  
(ii) **State the charge of each of the emissions listed in (i).**
- (c) (i) **List three sources of organic matter in the soil.**  
(ii) **State two advantages of tilling as a method of land preparation in crop production.**
- (d) **Name four blood vessels associated with the human heart.**

- (a) Many candidates were able to calculate the molar masses of  $\text{CaCO}_3$  (100g/mol) and  $\text{CaO}$  56 g/mol but failed to realize that from the equation  $100\text{g CaCO}_3 \equiv 56\text{ CaO}$
- $$\therefore 10\text{ g} = \frac{56 \times 10}{100} = 5.6\text{ g of CaO.}$$
- (b) Candidates lost marks when they referred to the particles (in case of alpha and beta) and ray (in case of gamma) as emissions, since it was part of the question. Many stated the correct charge though (+2, -1 and neutral respectively).
- (c) (i) This sub-question posed a big challenge to a number of candidates who gave answers other than dead/decaying plants and animals; tissues of soil organisms; substances synthesized by soil organisms and animal droppings/manure.
- (ii) Well answered by many candidates
- (d) Very poorly answered by many candidates; a few who were close to the answer had spelling challenges of aorta, pulmonary artery, pulmonary vein, vena cava. The question demanded names of blood vessels and not parts of the human heart, which some candidates listed.

# **INTEGRATED SCIENCE 3**

## **1. GENERAL COMMENTS**

The standard of the paper compares favourably with those of the previous years. The performance of candidates showed slight improvement over those of the recent past.

## **2. SUMMARY OF CANDIDATES' STRENGTHS**

Some features noted in candidates' answers include:

- (1) Giving more precise answers by strict observation of given illustrations or diagrams.
- (2) Candidates clearly expressed themselves.
- (3) Use of particular scientific words were employed to drive home answers to questions.
- (4) Reading and recording data has seen more improvement with precision and accuracy.
- (5) Legible handwriting was exhibited.

## **3. SUMMARY OF CANDIDATES' WEAKNESSES**

Candidates exhibited weaknesses in the following

- (1) Plotting of graph
  - Poor labelling of axes
  - Poor choice of scale
  - Poor plotting of points
  - No drawing of sizeable triangles
  - Poor substitution of corresponding values for slope calculation
- (2) Incorrect spelling of scientific terms.

## **4. SUGGESTED REMEDIES**

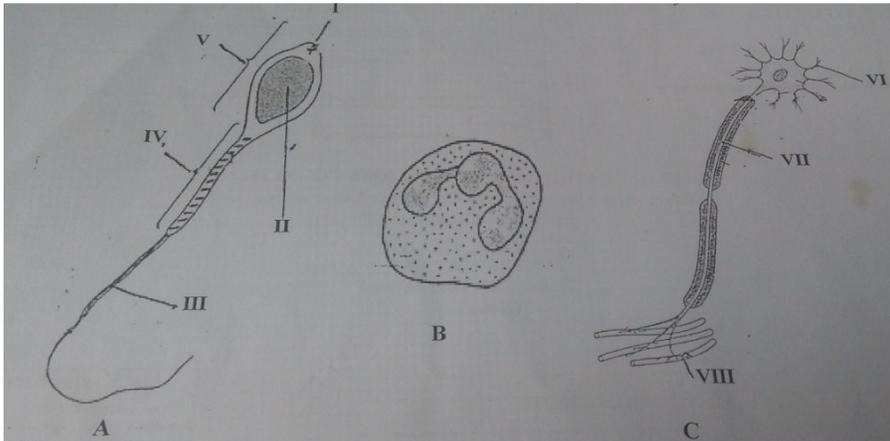
- (1) Teachers must practice plotting of graph with candidates and emphasize on paper representation of axes, scale, points plotting, drawing lines that best fit the points and how to calculate slopes.
- (2) Special attention should be given to the spelling of scientific words.
- (3) Comprehensive teaching learning and effective approach to examination writing must be executed by teachers to give candidates confidence to perform through self effort with integrity.

## 5. DETAILED COMMENTS

### Question 1

The diagrams below illustrate three different types of specialized cells, labelled A, B and C, found in humans.

*Study the illustrations carefully and answer the questions that follow.*



- (a) (i) **Identify each of the cells labelled A, B and C.**  
(ii) **Name each of the parts labelled I, II, III, IV, V, VI, VII and VIII.**  
(iii) **State one function of each of the parts labelled I, III, VI and VII.**
- (b) (i) **State the location of each of the cells labelled A, B and C in the human body.**  
(ii) **State the importance of each of the cells labelled A, B and C.**
- (a) (i) A, B and C were well identified except a few candidates who stated that B was red blood cell instead of white blood cells.  
(ii) Many of the candidates knew the names of the labelled parts of the cells in A, B and C. The correct spellings were as follows:  
I - acrosome and not accrone;  
VI - dendrite and not deadrite;  
VII - muscle/effector not synapse.  
(iii) I - Candidates to note that acrosome secretes enzyme which dissolves the membrane of the ovum (not the ovary for the head to penetrate.)  
III - well answered  
IV - receives (not transmit) impulse  
VII - transmits (not receives) impulse
- (b) (i) Well answered except in C where a lot of candidates wrongly stated nerves and nervous system. Any other part of the body was correct.  
(ii) A number of candidates could not correctly answer this question  
A - helps with fertilization not reasoning  
B - helps with body's defence system not transport oxygen to the heart  
C - relays messages from the brain not to determine stimulus

## Question 2

The diagrams below illustrate an electrical circuit used to investigate a scientific law. The rheostat is adjusted to vary the current and voltage in the circuit

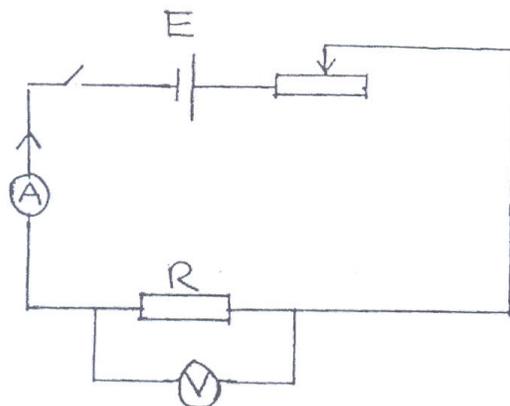
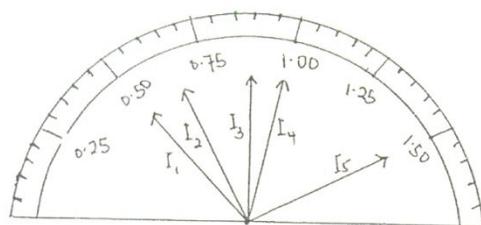
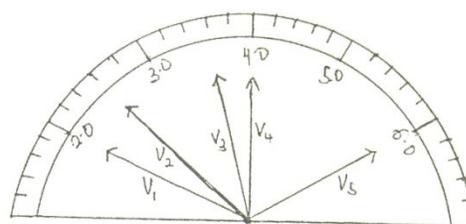


Fig 2(a) and Fig 2(b) below illustrate ammeter readings  $I = I_1, I_2, I_3, I_4$  and  $I_5$  and the corresponding voltmeter readings  $V = V_1, V_2, V_3, V_4$  and  $V_5$ , respectively when the key is closed.



Ammeter reading in amperes  
Fig. 2 (a)



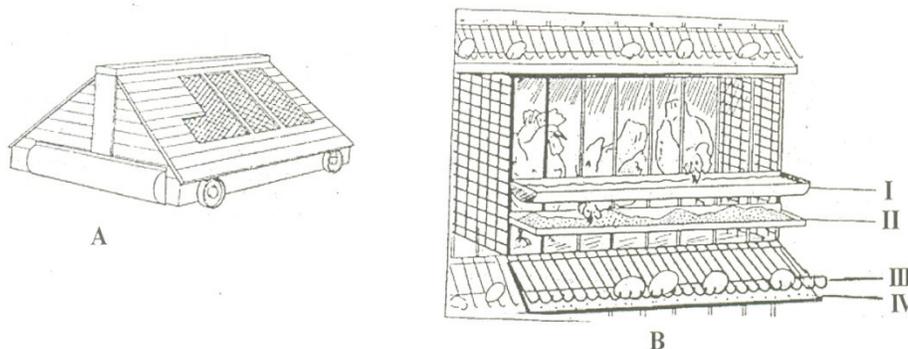
Voltmeter reading in volts  
Fig. 2 (b)

- Read and record the ammeter readings  $I = I_1, I_2, I_3, I_4$  and  $I_5$  in Table 1 below.
- Read and record the voltmeter readings  $V = V_1, V_2, V_3, V_4$  and  $V_5$  in Table 1 below.
- Plot a graph with  $V$  on the vertical axis and  $I$  on the horizontal axis.
- Describe the slope of the graph.
- State the significance of the slope.
- Using the graph, determine the voltage in the circuit when the current  $I = 0.82$  A.
  - Using the graph, determine the current in the circuit when the voltage  $V = 5$  V.
- Name the scientific law investigated.
- Readings of electrical meters well read.

- (c) The features of a graph were not tackled well by quite a number of candidates.
- Axes - not well labelled. y-axis had to be  $V/V$  not  $V$ ; x-axis be  $I/A$  not  $I$ .
  - Scale - a good scale must have regular intervals of 2, 5 and 10. Intervals are very wrong if they are odd numbers or matching points are used directly on any of the axes.
  - Plotting of points – At least three points must simultaneously represent  $x$  and  $y$  coordinates to give the line that best fits, out of which a good slope can be deduced or calculated using  $\frac{\Delta y}{\Delta x}$
  - Calculation of slope must have a corresponding unit.
- (d) Some candidates had the formula  $\frac{\Delta y}{\Delta x}$  but could not substitute correct values from the graph they plotted.
- (e) Candidates should have known that from the graph, the ratio of  $V/I$  gives resistance which was the significance of the graph/slope.
- (f)-(g) Well answered by majority of candidates

### Question 3

The diagram below illustrates two management systems, labelled A and B, practised in chicken production. Study the diagram carefully and answer the questions that follow.



- (a) Identify the management system being practiced in each of A and B.
- (b) Name the type of housing used in each of the systems labelled A and B.
- (c) Name each of the parts labeled I, II, III and IV.
- (d) Name the type of chicken being kept in the system labelled B.
- (e) State three advantages that the system labelled A has over the system labelled B.
- (f) Give two reasons for recommending the system labelled B to a commercial poultry farmer.

(a) & (b) Few candidates answered the types of management systems correctly.

Correct answers were as follows:

- (a) A - semi intensive system  
 B - intensive system

(b) A - fold unit / moveable fold unit

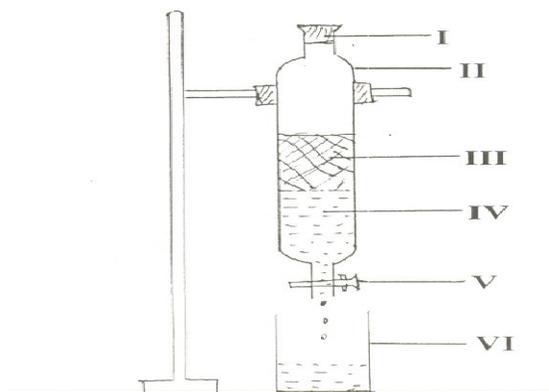
B - battery stage

- (c) Quite a number of candidates could not state the parts of the housing used. Correct technical terms were:
- I - water trough/drinking trough/waterer
  - II - feed (not food) tray / feeder / feeding tray / rack
  - III - egg collection tray / rack
  - IV - faeces / dropping collection tray / rack
- (d) Types of chicken reared in B:  
Quite a number of candidates wrote “broiler” instead of layer
- (e) Candidates’ answers to advantages of system A over B were not clear in many cases. Expected answers were as follows:
- birds can exercise
  - less spending on feed
  - effective dropping disposal
  - exposed to sunlight
  - exposed to greens
  - etc
- (f) None of the answers in (e) befits answers for B. Candidates were expected to write the following for B.
- easy to keep records
  - feeding is easy
  - no pecking
  - best for egg production
  - no contaminated food

#### **Question 4**

**The diagram below is an illustration of a set up used to separate a mixture of kerosene and water.**

***Study the diagram carefully and answer the questions that follow.***



- (a) Name the method used in separating the mixture.
- (b) Identify each of the parts labelled I, II, III, IV, V and VI.
- (c) State the function of each of the parts labelled I and V.
- (d) State one physical property of the liquids that would enable the separation to occur.
- (e) Name the components of two other liquid-liquid mixtures that could be separated using this method.

- (a) A lot of candidates were confused with the method involved
- it was not fractional distillation because heating and boiling points were not involved here
  - it was not distillation because heating was not involved
  - it was not decantation because there was no clear layer of liquid and a precipitate
- The correct answer was separation funnel method
- (b) Correctly answered by most candidates.
- (c) The correct use of the cork was to prevent evaporation or spilling of liquids. Preventing air from entering funnel was not the issue.
- (d) Most candidates correctly stated immiscibility as the physical property involved in the experiment.
- (e) Correctly answered except a few who still cited kerosene and water as an example when the question said state other mixtures (liquid-liquid)

# **PHYSICS 2**

## **1. GENERAL COMMENTS**

The questions set were within the scope of the syllabus. The standard of the questions compared favourably with the previous years'.

The performance of candidates was of average. Some candidates produced fairly good responses to questions but the general performance was average compared to the previous years'.

## **2. A SUMMARY OF CANDIDATES' STRENGTHS**

Candidates demonstrated considerable strength in the following areas:

Correct formulae were quoted and correct substitutions were made;

The phenomena that can be explained by the molecular theory of matter were correctly listed.

Factors that affect the maximum height attained by a bullet fired from a gun were correctly stated.

Stable equilibrium as applied to a rigid body was well defined.

Candidates correctly stated a dielectric is an insulator.

Candidates knew a voltmeter has a higher resistance than an ammeter.

Candidates could distinguish between resistors in parallel and resistors in series; and solved problems on them accordingly.

Few candidates gave concise and coherent responses.

## **3. A SUMMARY OF CANDIDATES' WEAKNESSES**

The following weaknesses of candidates were noted by the Chief Examiner from the responses:

Candidates could not explain how  $h$  varies with  $t^2$ .

Most candidates were not able to apply Hooke's law to solve a problem.

Many candidates could not state the advantages of p-n junction diode over diode valve

Candidates had difficulty in stating practical examples of mechanical resonance.

The energy level diagram for the atom was not correctly drawn by most candidates.

Candidates could not draw and label a diagram of astronomical telescope in normal adjustment.

Many candidates had difficulty in solving problems on resistance and gas thermometers, calculation of wavelength of a wave that undergoes transition and the determination of the age of the ancient bone.

## **4. SUGGESTED REMEDIES**

1. Students must prepare adequately or must be prepared before attempting the Physics examination.
2. Candidates must solve past Physics examination questions.
3. Chief examiners report on Physics must be read by candidates.

4. Candidates must improve on their standard in English language to enable them understand the questions better and also give concise responses.

## 5. DETAILED COMMENTS

### Question 1

**A particle is dropped from a vertical height  $h$  and falls freely for a time  $t$ . With the aid of a sketch, explain how  $h$  varies with  $t^2$ .**

Many candidates were not able to explain the variation of  $h$  with  $t^2$ . Some stated that  $h$  varies with  $t^2$ , without the correct sketch.

The expected response is,  $h$  decreases linearly with  $t^2$ .

### Question 2

**A particle is projected horizontally at  $15 \text{ ms}^{-1}$  from a height of 20 m. Calculate the horizontal distance covered by the particle just before hitting the ground. [ $g = 10 \text{ ms}^{-2}$ ]**

This question was popular and many candidates calculated the horizontal distance covered correctly.

### Question 3

**List three phenomena which can be explained by the molecular theory of matter.**

This question was misunderstood by some candidates and most of them stated the molecular theory of matter instead of phenomena which can be explained by the theory. Some of the phenomena expected are, Brownian motion, diffusion, surface tension, capillarity, osmosis, viscosity, evaporation etc.

### Question 4

**A spiral spring has a length of 14 cm when a force of 4 N is hung on it. A force of 6 N extends the spring by 4 cm. Calculate the unstretched length of the spring.**

Many candidates were not able to apply Hooke's law correctly in solving this problem. The expected solution is: By Hooke's law  $F = ke$

Therefore,

$$\frac{F_1}{A_1} = \frac{F_2}{A_2}$$

Or

$$\frac{F_1}{l_1 - l_0} = \frac{F_2}{A_2}$$
$$\frac{4}{14 - l_0} = \frac{6}{4}$$
$$l_0 = 11.3 \text{ cm}$$

### **Question 5**

- (a) State two factors on which surface tension depends.**
- (b) How can mosquito larvae be made to sink in stagnant water?**

- (a) This question was popular, however most candidates could not state the factors on which surface tension depends.

The expected answers were: Surface tension depends on purity of liquid, temperature of liquid, nature/type of liquid, or viscosity/density of liquid.

- (b) Candidates answered this question correctly by stating that pouring oil/detergent/soap on the water will make mosquito larvae sink.

### **Question 6**

**List three advantages of fluorescent tubes over filament bulbs.**

Many candidates were able to list the advantages of fluorescent tubes over filament bulbs. They are: brighter, produce less heat, last longer, consume less energy, etc.

### **Question 7**

**List three advantages of p-n junction diode over diode valve.**

Candidates could not list the advantages of p-n junction diode over diode valves. It appeared semiconductors were not treated by most candidates. The expected responses were: p-n junction diode needs low voltage to operate, does not need time to warm up, is not bulky, is cheaper to manufacture in large quantities, more durable.

### **Question 8**

- (a) State two deductions that can be made from a displacement-time graph**
- (b) If the distance between two equal masses is doubled and their individual masses are also doubled, what would happen to the force between them? Support your answer quantitatively.**
- (c) State two factors that affect the maximum height attained by a bullet fired from a gun.**
- (d) State two practical examples of mechanical resonance.**
- (e) A body is released from rest at the top of a plane inclined at  $30^\circ$  to the horizontal and 4.0 m high. If the coefficient of friction between the body and the plane is 0.3, calculate the time the body takes to reach the bottom of the plane.**

- (a) Most candidates stated velocity, but they could not state initial displacement as one of the deductions that can be made from a displacement time graph.

- (b) This question was popular and most candidates stated that the force will remain the same if the distance between the two equal masses are doubled and their individual masses are also doubled. However, many could not support their answers quantitatively. The expected solution is:

$$\mathbf{F}_1 = \frac{Gmm}{r^2} \qquad \mathbf{F}_2 = \frac{G(2m)x(2m)}{(2r)^2} = \frac{Gmm}{r^2}$$

Therefore  $\mathbf{F}_1 = \mathbf{F}_2$

- (c) Candidates stated correctly factors that affect the maximum height attained by a bullet fired from a gun. These factors were: initial velocity, angle of projection, acceleration due to gravity and air resistance.
- (d) Candidates were not able to state examples of mechanical resonance. Most of them stated examples from sound instead.

Expected examples of Mechanical Resonance are:

- collapse of a bridge (by marching soldiers)
- car bodies rattle at (very high speed)
- shattering of glass (due to high pitch notes)
- throwing off a paper rider (from a vibrating stretch string)

- (e) Few candidates attempted to calculate the time the body takes to reach the bottom of the plane, but most of them could not.

The expected solution was:

Let a = the acceleration with which the body moves down the inclined plane.

Net force on the body = ma = mgsinθ - Fμ

OR

$$a = g\sin\theta - \mu g\cos\theta$$

$$a = 10 \times \sin 30 - 0.3 \times 10 \times \cos 30$$

$$= 2.4\text{ms}^{-2}$$

Distance covered,  $s = \frac{4}{\sin 30} = \frac{4}{0.5} = 8 \text{ m}$

$$s = ut + \frac{1}{2}at^2$$

$$8 = 0 \times t + \frac{1}{2} \times 2.4 \times t^2$$

$$t = \underline{\underline{2.58 \text{ s}}}$$

### Question 9

- (a) Define stable equilibrium as applied to a rigid body.
- (b) Sketch a block and tackle system of pulleys with a velocity ratio 3.
- (c) At the beginning of a race, a tyre of volume  $8.0 \times 10^{-4} \text{ m}^3$  at  $20^\circ \text{C}$  has a gas pressure of  $4.5 \times 10^5 \text{ Pa}$ . Calculate the temperature of the gas in the tyre at the end of the race if the pressure has risen to  $4.6 \times 10^5 \text{ Pa}$ .
- (d) (i)

	<i>Ice point</i>	<i>Steam point</i>
	273 K	375 K
<i>Resistance/<math>\Omega</math></i>	5.67	7.75
<i>Pressure/Pa</i>	$7.13 \times 10^4$	$9.74 \times 10^4$

The table above shows readings of the resistance and pressure of a platinum resistance thermometer and a constant volume gas thermometer respectively, when immersed in the same liquid bath. Use the data to determine the temperature of the bath on the:

- ( $\alpha$ ) resistance thermometer;
- ( $\beta$ ) gas thermometer;
- when the resistance and pressure are  $7.43 \Omega$  and  $9.33 \times 10^4 \text{ Pa}$ , respectively.
- (ii) By what percentage is the temperature measured on the platinum resistance thermometer in error.

- (a) Candidates were able to define satisfactorily stable equilibrium of a rigid body.
- (b) Few candidates were able sketch a block and tackle system of pulleys with a velocity ratio 3. This diagram should have one pulley at the bottom block and two pulleys at the top block.
- (c) Some candidates calculated correctly the temperature of the gas in the tyre. The expected solution was:

$$\frac{P_1}{T_1} = \frac{P_2}{T_2}$$
$$\frac{4.5 \times 10^5}{293} = \frac{4.6 \times 10^5}{T_2}$$
$$T_2 = 299.5 \text{ K OR } 26.5^\circ \text{C}$$

- (a) (i) Candidates had difficulty in determining the temperature of the liquid in the bath on the resistance thermometer and the gas thermometer.
- (ii) The candidates could also not determine what percentage the temperature measured on the platinum resistance thermometer is in error. The expected solutions to problems was:

Resistance thermometer:

$$\frac{a}{b} = \frac{c}{d}$$

$$\frac{7.43-5.67}{7.75-5.67} = \frac{R-273}{375-273}$$

$$R = 359.3\text{K}$$

(ii) Error = 359.3-359

$$= 0.3$$

$$\text{Percentage error} = \frac{0.3}{359.0} \times 100\%$$

$$= \underline{0.084\%}$$

Gas thermometer:

$$\frac{(9.33-7.13) \times 10^4}{(9.74-7.13) \times 10^4} = \frac{G-273}{375-273}$$

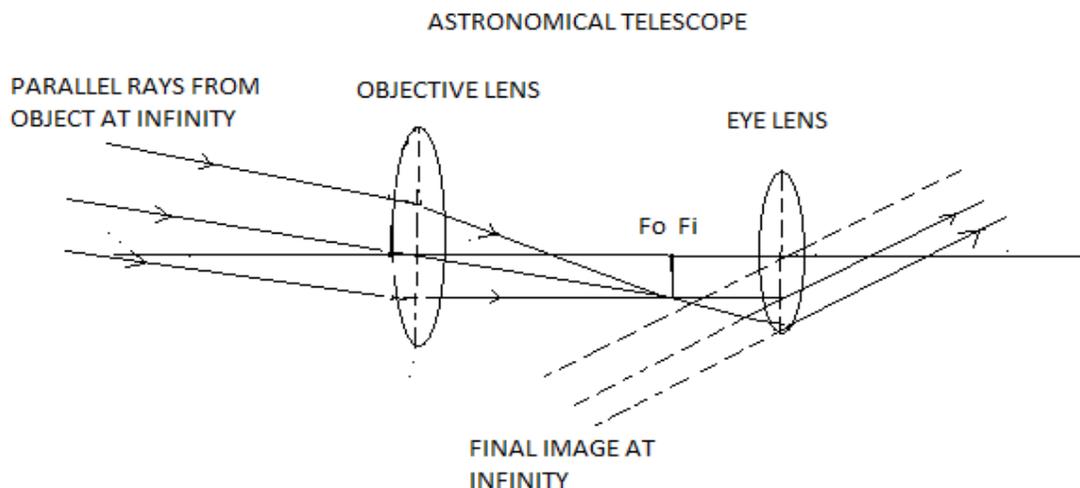
$$G = 359.0\text{K}$$

### **Question 10**

- (a) What is a *wavefront*?
- (b) (i) State two practical uses of glass prisms.  
(ii) List two factors that determine the deviation of a ray of light travelling from air into a triangular glass prism.  
(iii) Sketch a graph to illustrate the variation of the angle of deviation,  $d$ , with that of incidence,  $i$ , for a ray of light travelling from air into a triangular glass prism. Indicate on the graph at which point the angle of incidence,  $i$ , equal to the angle of emergence,  $e$ .
- (c) (i) Draw and label a diagram of an astronomical telescope in normal adjustment.  
(ii) The angular magnification of an astronomical telescope in normal adjustment is 5. If the focal length of the objective is 100 cm, calculate the:  
( $\alpha$ ) focal length of the eyepiece;  
( $\beta$ ) length of the telescope.
- (a) Most candidates could not state what wavefront is: -Wavefront is a surface over/on which particles vibrate in (the same) phase.
- (b) (i) The practical uses of prism were satisfactorily stated by most candidates.  
(ii) Most candidates were not able to list the factors that determine the deviation of light ray travelling from air into a triangular glass prism. The expected answers were:  
- angle of incidence  
- (refracting) angle of the prism  
- refractive index of the prism
- (iii) The sketch of graph to illustrate the variation of the angle of deviation,  $d$ , with that of incidence,  $i$ , for a ray of light travelling from air into a triangular prism

was wrongly done by most candidates. As a consequence, the point at which the angle of incidence,  $i$ , equals the angle of emergence,  $e$ , could not be determined.

- (c) (i) Candidates were not able to draw a labelled diagram of an astronomical telescope in normal adjustment. Candidates appeared to have no knowledge of this instrument. The expected diagram was



- (ii) Few candidates quoted the correct formula and calculated correctly the focal length of the eyepiece and the length of the telescope.

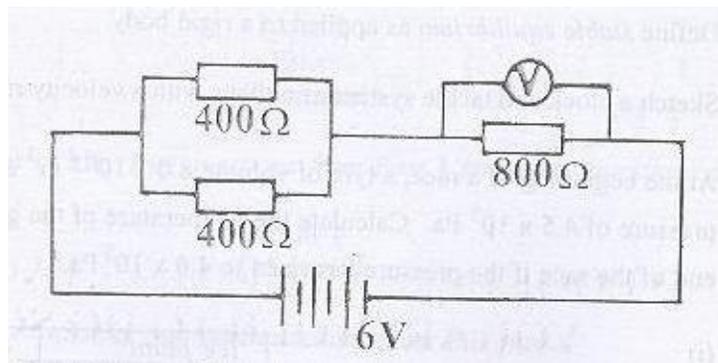
The expected solution is:

$$\begin{aligned} (\alpha) \quad M &= \frac{f_o}{f_e} \\ 5 &= \frac{100}{f_e} \\ f_e &= 20\text{cm} \end{aligned}$$

$$\begin{aligned} (\beta) \quad \text{Length of telescope} &= f_o + f_e \\ &= 100 + 20 \\ &= 120\text{cm} \end{aligned}$$

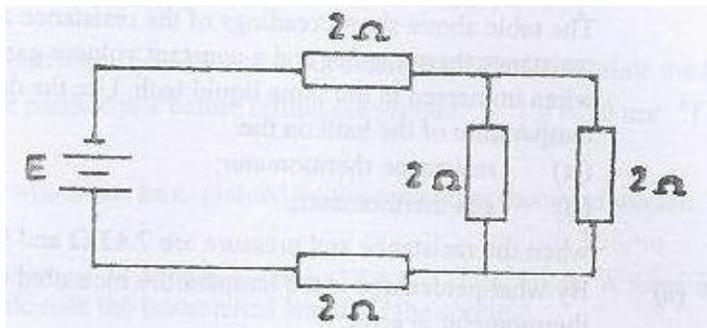
### Question 11

- (a) (i) **What is a dielectric?**  
 (ii) **A parallel plate capacitor consists of two plates each of area  $9.6 \times 10^{-3} \text{ m}^2$ , separated by a dielectric of the thickness  $2.25 \times 10^{-4}$  and dielectric constant 900. Calculate the capacitance of the capacitor.**  
 $[\epsilon_0 = \text{permittivity of free space} = 8.85 \times 10^{-12} \text{ F m}^{-1}]$
- (b) (i) **Which of the following devices has a higher resistance: an ammeter or a voltmeter? Give a reason for your answer.**  
 (ii)



The resistance of the voltmeter in the circuit diagram illustrated above is  $800\ \Omega$ . Calculate the voltmeter reading.

(c)



A battery of negligible internal resistance is connected to a set of resistors as illustrated in the circuit diagram above. Determine the equivalent resistance of the circuit.

This question was popular and many candidates attempted it

- (a) (i) Most candidates correctly stated that dielectric is an insulator.  
(ii) Many candidates were able to calculate correctly the capacitance of the capacitor.
- (b) (i) Candidates correctly stated that voltmeter has a higher resistance but they could not give a satisfactory reason for their answers. The expected reason is that voltmeter is connected in parallel in a circuit to allow passage of minimal current through it; and the circuit current is not significantly affected.  
(ii) Most candidates did not realize that the resistance of the voltmeter connected across the  $800\ \Omega$  resistor has to be considered in calculating the overall circuit resistance; and this made them gave the wrong calculation.

The expected solution is:

$$\frac{1}{R_1} = \frac{1}{400} + \frac{1}{400}$$

$$R_1 = 200\ \Omega$$

$$\frac{1}{R_2} = \frac{1}{800} + \frac{1}{800}$$

$$R_2 = 400 \, \Omega$$

$$R_T = 200 + 400 = 600 \, \Omega$$

$$I = \frac{VT}{RT} = \frac{6}{600} = 0.01 \, \text{A}$$

$$\begin{aligned} \text{Voltmeter reading} &= \text{p.d. across } R_2 \\ &= 0.01 \times 400 \\ &= \underline{4.0 \, \text{V}} \end{aligned}$$

- (c) The equivalent resistance of the circuit was correctly calculated by most candidates.

$$R_P = \frac{R_1 \times R_2}{R_1 + R_2} = \frac{2 \times 2}{2 + 2} = 1$$

$$R_T = 2 + 2 + 1 = \underline{5 \, \Omega}$$

### Question 12

- (a) (i) What is nuclear fission?  
 (ii) State the function of each of the following materials in a nuclear fission reactor:  
 (α) graphite;  
 (β) boron rods;  
 (γ) liquid sodium.

- (b)

n	1	2	3	4	5	∞
E <sub>n</sub> /eV	-13.60	-3.39	-1.51	-0.85	-0.54	0.00

- (i) Draw the energy level diagram for the atom.  
 (ii) Determine the wavelength of the photon emitted when the atom goes from the energy state  $n = 3$  to the ground state:  
 $[h = 6.6 \times 10^{-34} \, \text{J s}, c = 3.0 \times 10^8 \, \text{ms}^{-1}, e = 1.6 \times 10^{-19} \, \text{C}]$
- (c) A piece of ancient bone from an excavation site showed  ${}^{14}_6\text{C}$  activity of 9.5 disintegrations per minute per  $1.0 \times 10^{-3} \, \text{kg}$ . If a bone specimen from a living creature shows  ${}^{14}_6\text{C}$  activity of 12.0 disintegrations per minute per  $1.0 \times 10^{-3} \, \text{kg}$ , determine the age of the ancient bone.  
 $[\text{Half-life of } {}^{14}_6\text{C} = 5572 \, \text{years}]$

- (a) (i) Candidates did not state correctly what nuclear fission is. Most of them gave partial statements. Some of them indicated energy is released during nuclear fission, but they did not add that neutron release accompanied the energy.

Candidates are expected to state that- Fission is the splitting of a heavy nucleus into lighter nuclei with the release of energy and neutrons.

- (ii) Most candidates were not able to state correctly the functions of graphite, boron rods and liquid sodium in a nuclear fission reactor. Some of them stated graphite and boron rods control the reaction, while liquid sodium cools the reactor. The expected functions are:-

Graphite – Slows down high energetic neutrons in the reaction chamber.

Boron rods – Absorb excess neutrons so as to control fission rate.

Liquid sodium – Extract/conduct excess heat from the reactor.

- (b) (i) Most candidates drew, wrongly, equally spaced energy level diagrams for the atom. It is expected that the labelled diagram indicates decreasing spaces between the energy levels, from the lower to higher energy levels.
- (ii) The wavelength was determined correctly by some of the candidates.

The expected solution is

$$\begin{aligned}\lambda &= \frac{hc}{\Delta E} \\ &= \frac{6.6 \times 10^{-34} \times 3.0 \times 10^8}{(-1.51 - (-13.6)) \times 1.6 \times 10^{-19}} \\ &= \underline{\underline{1.02 \times 10^{-7} \text{ m}}}\end{aligned}$$

- (b) Many candidates had difficulty in determining the age of the ancient bone. The expected solution was

$$\begin{aligned}\lambda &= \frac{0.693}{\frac{T_1}{2}} \\ &= \frac{0.693}{5572} \\ &= 0.0001244 \text{ year}^{-1} \\ N &= N_0 e^{-\lambda t}\end{aligned}$$

$$e^{0.0001244t} = 1.2632$$

$$0.0001244t = 0.234$$

$$t = \underline{\underline{1878 \text{ years}}}$$

# **PHYSICS 3**

## **1. GENERAL COMMENTS**

The standard of the paper compares favourably with that of previous years. The performance of candidates was, generally, better than that of last year.

## **2. A SUMMARY OF CANDIDATES' STRENGTHS**

Some commendable features noted in candidates' answers were:

- (1) Candidates followed the rubrics of the papers.
- (2) Candidates chose good and easily readable scales in plotting graphs.
- (3) Large enough right-angled triangles were drawn and used in determining slopes of graphs.
- (4) Results were neatly tabulated and in a composite form.
- (5) Candidates demonstrated a good knowledge of the theory of the subject by giving precise definitions of quantities and their application in solving related problems.

## **3. A SUMMARY OF CANDIDATES' WEAKNESSES**

Below are some weaknesses noted in candidates' answers:

- (1) Candidates recorded distances or lengths in whole numbers.
- (2) Wrong units were assigned certain physical quantities such as current, voltage and resistance.
- (3) The means of values were wrongly determined.
- (4) Physical laws were wrongly stated.
- (5) Candidates were unable to plot graphs to the accuracy of the chosen scales.

## **4. SUGGESTED REMEDIES**

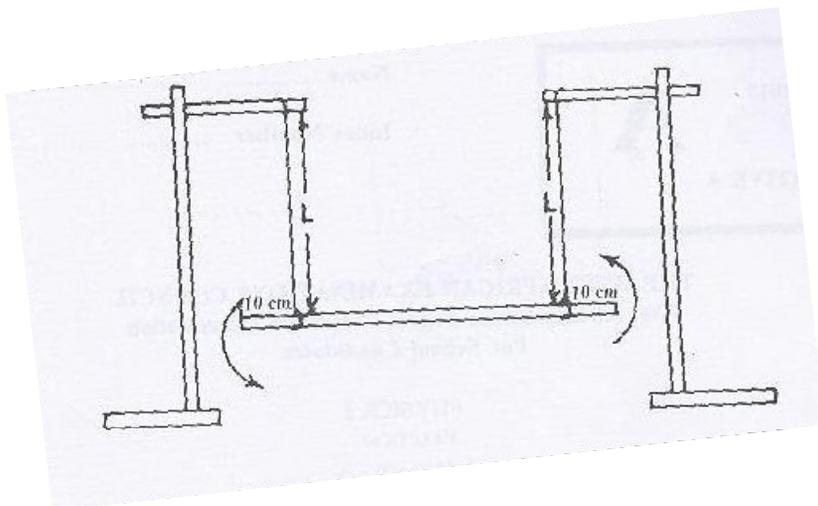
- (1) Students should be exposed to and made to use laboratory equipment frequently.
- (2) Students should be taught the acceptable number of decimal places for the instruments in the laboratory.
- (3) Students should be guided in choosing good scales for plotting graphs.
- (4) More time should be devoted to practical lessons.

## 5. DETAILED COMMENTS

### ALTERNATIVE A

#### Question 1

(a)



You are provided with two retort stands, two metre rules, pieces of thread and other necessary apparatus.

- (i) Set-up the apparatus as illustrated above ensuring that the strings are permanently 10 cm from either end of the rule.
  - (ii) Measure and record the length  $L = 80$  cm of the two strings.
  - (iii) Hold both ends of the rule and displace the rule slightly, then release so that it oscillates about a vertical axis through its centre.
  - (iv) Determine and record the time  $t$  for 10 complete oscillations.
  - (v) Determine the period  $T$  of the oscillations.
  - (vi) Evaluate  $\log T$  and  $\log L$ .
  - (vii) Repeat the procedure for four other values of  $L = 70, 60, 50$  and  $40$  cm.
  - (viii) Tabulate your readings.
  - (ix) Plot a graph with  $\log T$  on the vertical axis and  $\log L$  on the horizontal axis.
  - (x) Determine the slope,  $s$ , and the intercept,  $c$ , on the vertical axis.
  - (xi) State two precautions taken to ensure accurate results.
- (b)
- (i) Define simple harmonic motion.
  - (ii) Determine the value of  $L$  corresponding to  $t = 12$  s from the graph in (a) above.

## OBSERVATIONS

- (i),(ii),(iii) Five values of  $L$ ,  $t$  and  $T$  were to be recorded to at least 1 dp and 2 dp for  $T$ .
- (iv),(v) Most candidates lost marks for failing to record  $\log L$  and  $\log T$  to 3 significant figures and 3 decimal places respectively.

## GRAPH/SLOPE

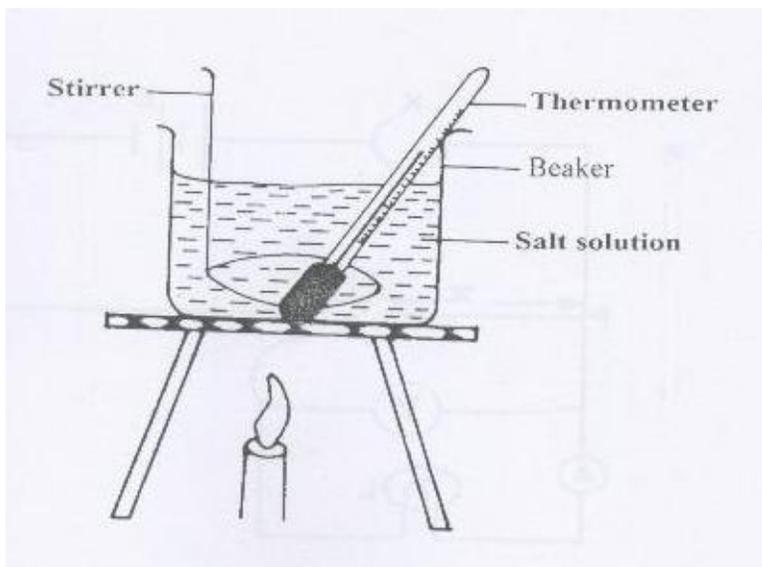
- (ii) The choice of scales for  $\log L$  and  $\log T$  involving negative values proved a problem for most candidates. This led to loss of marks on the graph plotting and the consequent slope determination.

## PRECAUTIONS

Most candidates were able to write two precautions taken in the acceptable tense.

- (b) (i) Simple Harmonic Motion was correctly defined by most of the candidates. However, a few of them stated that “acceleration was directed towards a fixed point and inversely proportional to the displacement from the fixed point and always directed toward the fixed point.
- (ii) Candidates were able to calculate  $T=12/10 = 1.2$  secs. However, most failed to read the corresponding values of  $\log 1.2 = 0.079$  on the graph and to determine the corresponding anti log value, to obtain the value of  $L$ .

## Question 2



**You are provided with a beaker, a thermometer, a stirrer, a measuring cylinder, table salt, water and other necessary materials.**

- (i) Measure 200 cm<sup>3</sup> of water into the beaker
  - (ii) Heat the water until it boils steadily for about 2 minutes.
  - (iii) Read and record the boiling point  $b_0$ .
  - (iv) Add table salt of mass  $M = 10.0$  g to the boiling water and stir continuously until another boiling point  $b_i$  is attained.
  - (v) Read and record  $b_i$ .
  - (vi) Evaluate  $\theta_i = (b_i - b_0)$ .
  - (vii) Using the same mixture, repeat the procedure four times by adding 10.0 g of salt each time to give the cumulative mass  $M_i$  of salt as 20 g, 30 g, 40 g and 50 g.
  - (viii) In each case allow the mixture to boil steadily for at least 2 minutes then read and record the boiling point  $b_i$ .
  - (ix) Tabulate your readings.
  - (x) Plot a graph with  $M_i$  on the vertical axis and  $\theta_i$  on the horizontal axis.
  - (xi) Determine the slope,  $s$ , of the graph.
  - (xii) State two precautions taken to ensure accurate results.
- (b)
- (i) Define the boiling point of a liquid.
  - (ii) What effect do impurities have on the boiling point of a liquid?

#### OBSERVATIONS

- (i) Values of  $b_0$  read did not agree with those recorded by their teachers and thus marks were lost.
- (iii) Five values of  $b_i$  recorded, mostly followed the trend with  $b_i$  increasing with increasing  $M$ .

#### GRAPH/SLOPE

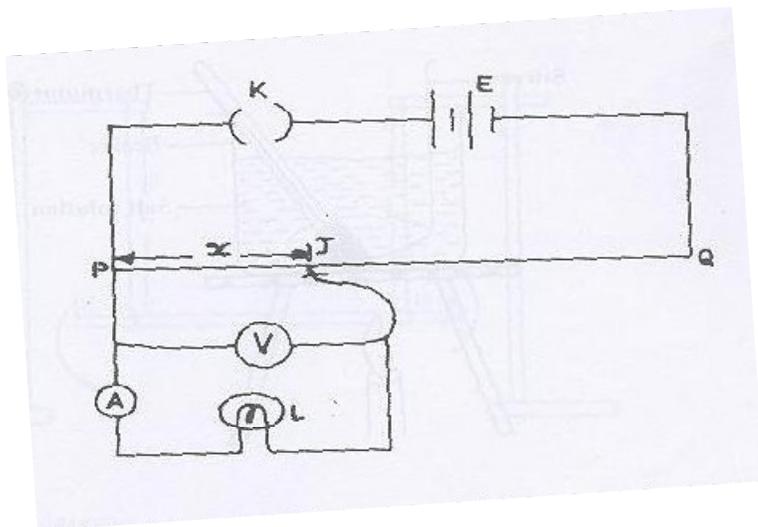
Most candidates chose good scales to draw the graphs. The slope was also correctly determined by most of them.

PRECAUTIONS – Some candidates wrongly stated “regular stirring” which was an instruction, as a precaution.

- (b) (i) Most candidates wrongly defined the boiling point of a liquid as the temperature at which the liquid boils without reference to the saturated vapour pressure and the external atmospheric pressure.
- (ii) Most of the candidates indicated that impurities increase the boiling point of a liquid.

### Question 3

(a)



You are provided with cells, a potentiometer, an ammeter, a voltmeter, a bulb, a key, a jockey and other necessary materials.

- (i) Measure and record the *emf*  $E$  of the battery
  - (ii) Set-up a circuit as shown in the diagram above.
  - (iii) Close the key  $K$  and use the jockey to make a firm contact at  $J$  on the potentiometer wire such that  $PJ = x = 10$  cm.
  - (iv) Read and record the voltmeter reading  $V$  and the corresponding ammeter reading  $I$ .
  - (v) Evaluate  $\log V$  and  $\log I$ .
  - (vi) Repeat the procedure for other values of  $x = 20, 30, 40, 50$  and  $60$  cm.
  - (vii) Tabulate your readings.
  - (viii) Plot a graph with  $\log I$  on the vertical axis and  $\log V$  on the horizontal axis.
  - (ix) Determine the slope,  $s$ , of the graph.
  - (x) Determine the intercept,  $c$ , on the vertical axis.
  - (xi) State two precautions taken to obtain accurate results.
- (b)
- (i) How is the brightness of the bulb affected as  $x$  increases? Give a reason for your answer.
  - (ii) List two electrical devices whose actions do not obey Ohm's law.

## OBSERVATION

Most candidates either failed to record the e.m.f.  $E$  of the battery as instructed, or to the required number of decimal places or without units.

- (ii) Most candidates failed to record values of  $V$  and  $I$  to 1 decimal place.
- (v) and (vi) Most candidates lost marks for failing to record values of  $\text{Log } I$  and  $\text{Log } V$  to at least 3 decimal places.

## GRAPH/SLOPE

With the negative values of  $\text{Log } I$  and  $\text{Log } V$ , most candidates chose wrong scales and thus lost marks in plotting points and the subsequent slope determination.

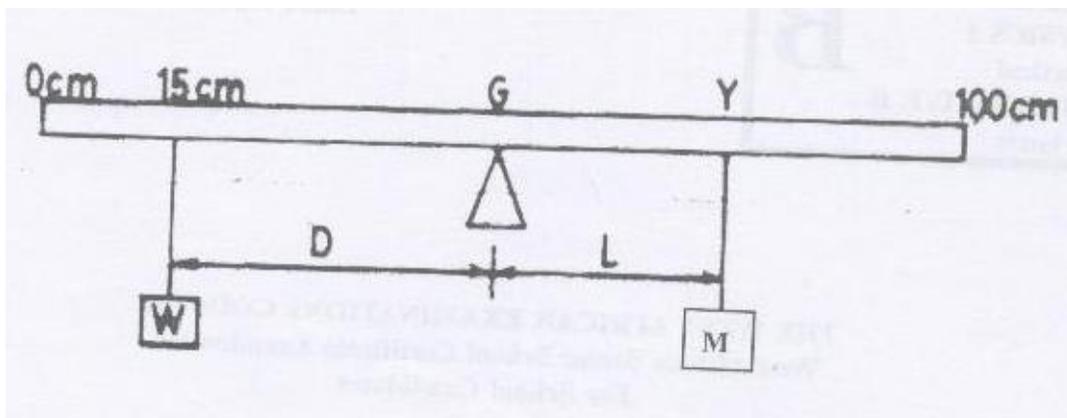
## INTERCEPT

To score for intercept, candidates were to determine the antilog of values correctly used from the graph.

- (b)
  - (i) With increase in  $x$ , most candidates stated wrongly that there is an increase in resistance and therefore a decrease in current leading to a decrease in brightness of the bulb.
  - (ii) For devices that do not obey ohm's law some candidates stated wrongly semiconductors in general. To score, candidates should have stated specific semiconductors such as thermistors, transistors, diodes etc.

## ALTERNATIVE B

### Question 1



**You are provided with a uniform metre rule, a knife edge, masses and other necessary apparatus.**

- (i) **Suspend the metre rule horizontally on the knife edge. Read and record the point of balance  $G$  of the metre rule. Keep the knife edge at the point throughout the experiment.**

- (ii) Using the thread provided, suspend the object labelled W at the 15 cm mark of the metre rule.
  - (iii) Suspend a mass  $M = 20$  g on the other side of G. Adjust the position of the mass until the metre rule balances horizontally again.
  - (iv) Read and record the position Y of the mass M on the metre rule.
  - (v) Determine and record the distance L between the mass and G. Also, determine and record the distance D between W and G.
  - (vi) Repeat the procedure for four other values of  $M = 30$  g, 40 g, 50 g and 60 g. In each case, ensure that W is kept constant at the 15 cm mark and the knife edge at G.
  - (vii) Evaluate  $L^{-1}$  in each case. Tabulate your readings.
  - (viii) Plot a graph of M on the vertical axis and  $L^{-1}$  on the horizontal axis.
  - (ix) Determine the slope, s, of the graph.
  - (x) Evaluate  $= \frac{s}{D}$
  - (xi) State two precautions taken to obtain accurate results.
- (b)
- (i) State the principle of moments.
  - (ii) Define centre of gravity.

#### OBSERVATIONS

Candidates who failed to record values of G and Y lost marks in (i), (ii), (iv) and (v)

A good number of candidates were guilty of this.

Values of  $L^{-1}$  of most of the candidates were not recorded to the required 3 decimal places or more.

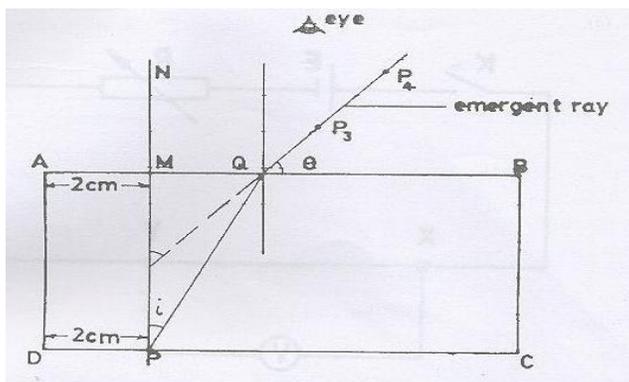
#### GRAPH/SLOPE

Most candidates were able to choose good scales for plotting M against L. They also correctly calculated the slope. Most candidates evaluated correctly  $S/D$ .

- (b)
- (i) To score for principle of moments, candidates were to state that “for a body in EQUILIBRIUM sum of clockwise and anticlockwise moments about a specific point were equal. Some candidates failed to indicate that the body must be in equilibrium and that sum of clockwise and anticlockwise moments about the SAME point were equal.
  - (ii) In defining centre of gravity some candidates wrongly stated that it is a point where the resultant MASS instead of WEIGHT of a body appears to act.

## Question 2

(a)



You are provided with a rectangular glass prism, cellotex board, optical pins and other necessary materials.

- (i) Fix the drawing paper on the cellotex drawing board.
  - (ii) Place the rectangular glass prism on the paper and trace its outline ABCD. Remove the prism.
  - (iii) Draw two normal NMP to meet AB and DC at M and P respectively such that  $|AM| = |DP| = 2.0$  cm.
  - (iv) Trace the ray PQ with two pins  $P_1$  and  $P_2$  and Q respectively such that angle  $MPQ = i = 5^\circ$ .
  - (v) Replace the prism on its outline. Trace the emergent ray with two other pins  $P_3$  and  $P_4$  such that they lie in a straight line with  $P_2$  and the image of  $P_1$  viewed through the glass prism.
  - (vi) Measure and record  $\theta$ , the angle between the emergent ray and face AB of the glass prism.
  - (vii) Evaluate  $\cos \theta$  and  $\sin i$ .
  - (viii) Repeat the procedure for four other values of  $i = 10^\circ, 15^\circ, 20^\circ$  and  $25^\circ$ . Tabulate your readings.
  - (ix) Plot a graph of  $\cos \theta$  on the vertical axis and  $\sin i$  on the horizontal axis.
  - (x) Determine the slope,  $s$ , of the graph.
  - (xi) State two precautions taken to obtain accurate results.  
[Attach your traces to your answer booklet.]
- (b)
- (i) State the laws of reflection of light.
  - (ii) Explain what is meant by the statement: the refractive index of a material is 1.65.

### OBSERVATIONS

Most of the candidates scored for (i), (ii) and (iii). Some candidates lost marks because they either did not measure the incident angles correctly or used incident angles instead of glancing angles for  $q$ . In some cases, AM values were not equal to 2 cm.

Some candidates also lost marks for  $\sin i$  and  $\cos \theta$  because they failed to record values to at least 3 decimal places.

### GRAPH/SLOPE

Most candidates were able to choose good scales to plot values for  $\cos \theta$  against  $\sin i$ , and determined the slope correctly. Some candidates lost marks because they either over approximated the values or they swapped the axes.

### ACCURACY

To score, values of slopes were to fall between 1.35 and 1.65.

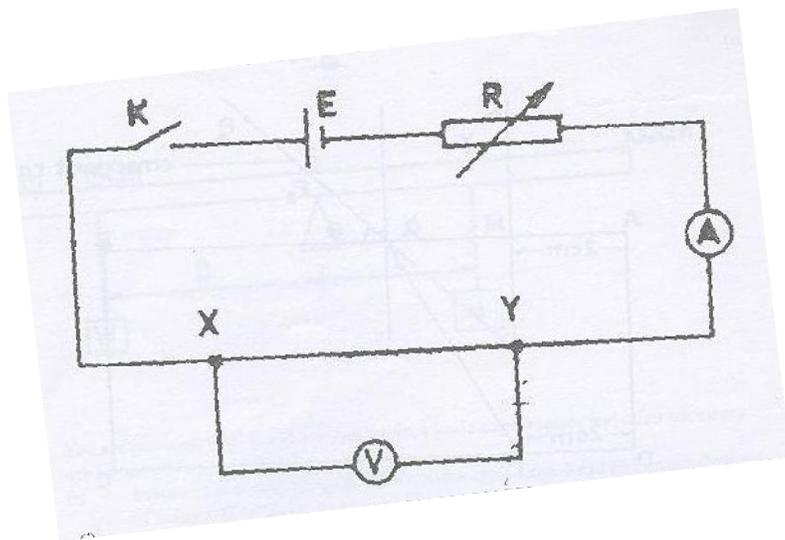
### PRECAUTIONS

Most candidates scored for precautions as they stated them appropriately and in the acceptable tenses.

- (b) (i) Only few candidates were able to state the law correctly.
- (ii) Most candidates correctly explained the statement “the refractive index of a material is 1.65” as the ratio of the speed of light in vacuum or air to that in the material is equal to 1.65.

### Question 3

(a)



- (i) Measure and record the length XY of the resistance wire provided.
  - (ii) Connect the circuit as shown in the diagram above.
  - (iii) With  $R = 0 \Omega$ , close the key K. Read and record the current  $I_0$  and the voltage drop  $V_0$  across the resistance wire.
  - (iv) Setting  $R = 1 \Omega$ , close the key. Read and record the current I and the corresponding voltage drop, V across the wire.
  - (v) Repeat the procedure for five other values of  $R = 5 \Omega, 10 \Omega, 20 \Omega, 40 \Omega$  and  $60 \Omega$ . Tabulate your readings.
  - (vi) Plot a graph with V on the vertical axis and I on the horizontal axis.
  - (vii) Determine the slope, s, of the graph.
  - (viii) State two precautions taken to ensure accurate results.
- (b)
- (i) Mention and state the law on which the experiment in 3 (a) is based.
  - (ii) A piece of resistance wire of diameter 0.2 mm and resistance  $7 \Omega$  has resistivity of  $8.8 \times 10^{-7} \Omega \text{ m}$ , calculate the length of the wire.  

$$[\pi = \frac{22}{7}]$$

#### OBSERVATIONS

Candidates failed to score for (i),(ii) and (iii) for either not stating the value of XY at all or stating it to the wrong number of decimal places. The values of  $I_0$  and  $V_0$  were incorrectly stated or stated without correct units. In most cases, candidates' values of XY were different from the one supplied by their teachers.

Most candidates were able to record correctly values of R, I and V to the required number of decimal places and in trend.

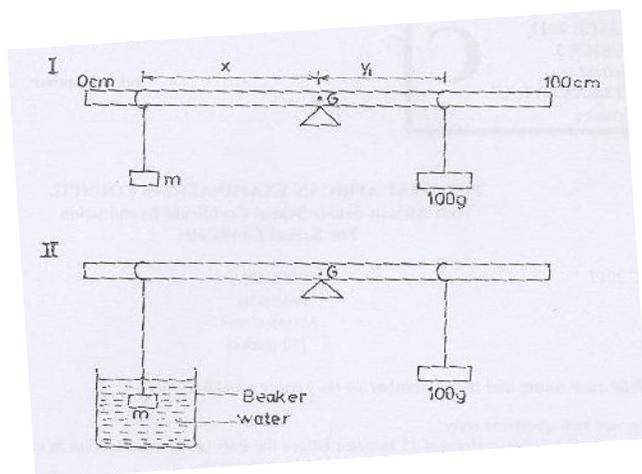
GRAPH/SLOPE – Most candidates were able to choose good and acceptable scales to plot graph of V against I and also determined the slope correctly.

- (b) (i) Most candidates failed to score for the statement of Ohm's law. They referred to a CONDUCTOR instead of a METALLIC CONDUCTOR in their definitions.
- (ii) To score for this calculation, candidates were to begin from  
 $R = \rho L/A \Rightarrow l = AR/P$ , since  $A = \pi d^2/4$ ,  $\Rightarrow L = R\pi d^2/4\rho$  substituting correctly gives an l value of 0.25. Most candidates solved this correctly.

## ALTERNATIVE C

### Question 1

(a)



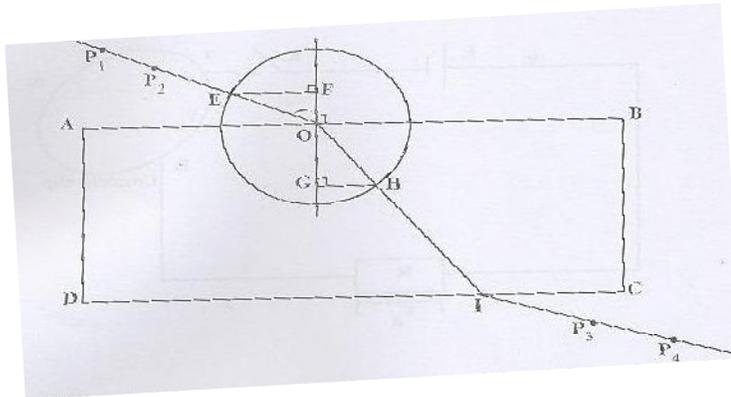
You are provided with a metre rule, which has a hole drilled at the 50 cm mark, a knife edge, an object marked  $m$  and a 100 g mass.

- (i) Pivot the metre rule, which has been drilled at the 50 cm mark, horizontally on the knife edge.
- (ii) Suspend the object marked  $m$  at the 10 cm mark of the metre rule.
- (iii) Suspend the 100 g mass on the other side of the knife edge and adjust the position of the mass until the metre rule balances horizontally as shown in Diagram 1 above.
- (iv) Read and record the distances  $x$  of  $m$  from the pivot and  $y_1$ , of the 100 g mass from the pivot.
- (v) Repeat the procedure for four other positions of  $m$  at 15 cm, 20 cm, 25 cm and 30 cm. In each case keep the position of the knife edge fixed and adjust the position of the 100 g mass until the meter rule balances horizontally to obtain the corresponding values of  $y$ .
- (vi) Also repeat the procedure with  $m$  completely immersed in water contained in a beaker as shown in Diagram II for the positions of  $m$  suspended at the 10 cm, 15 cm, 20 cm, 25 cm and 30 cm marks of the metre rule respectively. In each case adjust the position of the 100 g mass until the metre rule balances horizontally, then read and record the new distances  $y_2$  of the 100 g mass from the pivot.
- (vii) Evaluate  $y_1 - y_2$  in each case. Tabulate your readings.
- (viii) Plot a graph with  $y_1$  on the vertical axis against  $y_1 - y_2$  on the horizontal axis.
- (ix) Determine slope of the graph.
- (x) State two precautions taken to obtain accurate results.

- (b) (i) Explain what is meant by the centre of gravity of a body and state how it is related to the stability of the body.
- (ii) State the conditions of equilibrium for a body acted upon by a number of coplanar parallel forces.

### Question 2

(a)



You are provided with a rectangular glass prism, cellotex board, drawing papers, four optical pins and other necessary materials.

- (i) Fix the drawing paper provided to the cellotex drawing board.
- (ii) Place the glass prism on the drawing paper and trace the outline ABCD of the prism.
- (iii) Remove the prism and mark a point O on AB such that AO is about one-quarter of AB.
- (iv) Draw a normal through point O. Also, draw an incident ray to make an angle of  $i = 25^\circ$  with the normal at O. Fix two pins at points  $P_1$  and  $P_2$  on the incident ray.
- (v) Replace the prism. Fix two other pins at  $P_3$  and  $P_4$  such that the pins appear to be in a straight line with the images of  $P_1$  and  $P_2$  when viewed through the block along DC.
- (vi) Remove the prism. Join points  $P_3$  and  $P_4$  and produce it to meet DC at I. Also, draw a line to join OI.
- (vii) With O as centre and using any convenient radius, draw a circle to cut the incident ray and the refracted ray at E and H respectively. Keep this radius constant throughout the experiment.
- (viii) Draw the perpendicular EF and GH. Measure and record  $d = EF$  and  $l = GH$ .
- (ix) Repeat the procedure for four other values of  $i = 35^\circ, 45^\circ, 55^\circ$  and  $65^\circ$ . In each case measure and record  $d$  and  $l$ .

- (x) Plot a graph of  $d$  on the vertical axis against  $l$  on the horizontal axis.
- (xi) Determine the slope,  $s$ , of the graph.
- (xii) State two precautions taken to ensure accurate results.

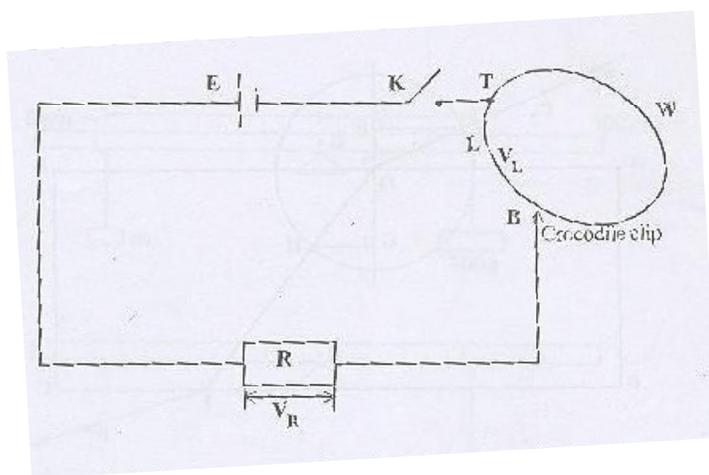
[Attach your traces to your answer booklet]

- (b) (i) State Snell's law.
- (ii) Calculate the critical angle for water-air interface.

[Refractive index of water =  $\frac{4}{3}$ ]

### Question 3

(a)



You are provided with cell E, standard resistor R, bare constantan wire W, key K, voltmeter V and crocodile clips.

- (i) Connect the two ends of the wire W to the same point T of the plug key K so that W forms a loop.
- (ii) Connect the rest of the circuit as shown in the diagram above.
- (ii) Using the crocodile clip, grip a point B on the bare wire such that  $BT = L = 15$  cm.
- (iv) Close the key and measure the potential difference  $V_L$  across the wire and  $V_R$  across the standard resistor R.
- (v) Evaluate  $V = \frac{V_L}{V_R}$ .
- (vi) Repeat the procedure for other values of  $L = 30$  cm,  $40$  cm,  $50$  cm,  $60$  cm and  $70$  cm. In each case measure  $V_L$ ,  $V_R$  and evaluate  $V = \frac{V_L}{V_R}$ .
- (vii) Plot a graph with  $V$  on the vertical axis and  $L$  on the horizontal axis.
- (viii) Draw a smooth curve through the points.
- (ix) Record the maximum value of  $M$  for  $V$  and the corresponding value of  $L$ .

- (x) State two precautions taken to obtain accurate results.**
- (b)**
  - (i) Explain how heating affects the results of the experiment.**
  - (ii) How can the effect of heating be reduced practically in the experiment?**

# **RESUMÉ OF BUSINESS SUBJECTS**

## **1. STANDARD OF THE PAPER**

For the Business Subjects, all the Chief Examiners asserted that the standard of the papers compared favourably with that of the previous years and all the questions set were clear, without ambiguity and within the scope of the various syllabuses. The level of difficulty and details of requirements was also comparable to that of previous years.

On the performance of the candidates, the reports of the Chief Examiners varied. An improved performance was recorded for Financial Accounting while the Chief Examiner for Principles of Cost Accounting said a few candidates performing excellently.

On the other hand, the Chief Examiner for Clerical Office duties said performance was average while that of Business Management reported that candidates' performance was lower than last year's. The report for Typewriting indicated that candidates' performance was not encouraging.

## **2. SUMMARY OF CANDIDATES' STRENGTHS**

- Orderly Presentation of Answers

The Chief Examiners for Business Management, Financial Accounting and Principles of Cost Accounting commented that candidates' answers were well organised with an excellent presentation especially in the practice questions.

- In-depth Knowledge of Topics

The Chief Examiners for Principles of Cost Accounting and Business Management noted that a few candidates displayed an in-depth knowledge of the topics in the respective subject areas.

- Precise and Concise Answers

The Chief Examiner for Principles of Cost Accounting commented that most of the candidates avoided lengthy introductions and their answers were clear and straight to the point.

- Correct Headings and Monetary denomination

The Chief Examiner for Financial Accounting further reported that most candidates provided correct headings for the accounts being prepared and indicated monetary denominations as expected.

- Adherence to Rubrics and Attempting All Questions

The Chief Examiners for Typewriting noted that candidates managed to finish their speed test and attempted all tasks. The Chief Examiners for Business Management and Financial Accounting and typewriting also commended the candidates for following the rubrics by attempting the required number of questions and completing their tasks.

### 3. A SUMMARY OF CANDIDATES' WEAKNESSES

- Lack of Adequate Preparation

All the Chief Examiners for Business Management, Clerical Office Duties, Financial Accounting and Principles of Cost Accounting, stated that from some candidates' answers it can be concluded that they were not adequately prepared to write the papers. Solutions to questions portrayed poor knowledge of the topics and it was clear that they were just guessing.

- Poor Command of the English Language

All the Chief Examiners reported that a good number of candidates had a problem with expressing themselves clearly and meaningfully using the English Language. This, coupled with poor spelling, made the candidates' answers meaningless and disjointed. This prevented candidates from obtaining higher marks.

- Inability to respond to Specific Requirements of the Questions

All the Chief Examiners stated that while candidates did not have difficulty in listing and stating their answers, most candidates were unable to respond appropriately to the demands of the question such as explain, distinguish, or differentiate. This can also be linked to their inability to express themselves well.

- Lack of In-depth knowledge in Certain Topics

The Chief Examiners for Business Management, Clerical Office Duties and Principles of Cost Accounting reported that some candidates lacked in depth knowledge in certain topics. This prevented them from earning maximum marks for the questions. The Chief examiner for Financial Accounting also reported that candidates were unable to classify items.

- Non-adherence to the Requirements of the Questions and Lack of Understanding

It was reported by the Chief Examiners for Financial Accounting, Principles of Cost Accounting, Typewriting and Business Management that some candidates did not take to read and understand the requirements of the questions before attempting to answer. Also some candidates did not attempt the required number of questions or did not follow the instructions/rubrics

### 4. SUGGESTED REMEDIES

The Chief Examiners suggested the following remedies for the weaknesses documented.

- Extensive preparation for the examination

All the Chief Examiners mentioned that there is the need for all candidates to prepare adequately for the examination and candidates should be guided to understand the topics. Teachers should thus endeavour to cover all the topics in the syllabus.

- Understanding the demands of the question

Candidates must take their time to read the rubrics and the questions carefully to understand the requirements before answering. They must learn to select the questions they are well prepared for and follow instructions.

- Improving usage of the English Language

Candidates must read widely and work more exercises in order to improve upon their communication skills. They must also learn to write their answers in clear and simple language to avoid ambiguities.

- Showing Detailed Working and Correct Headings

Candidates must show all workings leading to their final answers as marks are mostly awarded for workings. Candidates must also learn to use the correct headings and titles for their diagrams and presentations.

- Working of more exercises

There is the need for candidates to go through more exercises in their spare time. Also teachers/instructors must give student more exercises as practice makes perfect.

# **BUSINESS MANAGEMENT**

## **1. GENERAL COMMENTS**

The standard of the paper compared favourably with those of the previous years. However, the candidates' performance was below that of the previous year.

## **2. SUMMARY OF CANDIDATES' STRENGTHS**

Some of the students did well to explain concepts like decentralization. Leadership, corporate social responsibility and parties to a cheque. A few candidates also gave relevant examples to explain the points they raised. Some of the students are to be commended for writing legibly.

## **3. SUMMARY OF CANDIDATES' WEAKNESSES**

Most of the candidates could not answer the case study questions.

Some of the candidates did not read over their answers. There were omission or inclusion of words that rendered their answers to questions very bad.

Some of the candidates deviated from the required answers. Most of them also lacked understanding of concepts like globalization, economic integration and decentralization. They could not explain the various documents used in international trade.

Most of the candidates displayed poor expression of sentences.

## **4. SUGGESTED REMEDIES FOR THE WEAKNESSES**

Candidates must be encouraged to read widely on the topics in the syllabus. They must also be encouraged to cultivate the habit of reading to improve upon their vocabulary and expressions.

The candidates need to be taken through a lot of class exercises and tests to help them master the concepts in Business Management. They must be helped, more especially, on how to answer case study questions.

Finally, students must be advised to read over their answers and improve upon their handwriting.

## **5. DETAILED COMMENTS**

### **QUESTION 1 (CASE STUDY)**

This was the "Case Study" which candidates had to read and use application to answer the questions.

#### **(a)(i) Explain decentralization**

It is the transfer of decision making power and assignment of accountability and responsibility to all levels of organization.

Most candidates said decentralization is whereby demand for the banks products made it successful; and others wrote – decentralisations whereby organization gives freedom or right to the people in the organization.

(ii) **State 3 benefits that the bank derived from decentralization.**

- **decisions were taken quickly**
- **it motivated staff**
- **it brought better control and supervision**
- **it reduced the burden on top executives**

**Candidates wrote that the bank recorded high profit;** customer's requests were promptly attended to etc.

(b) List 4 services that could be provided by the bank

- accepting deposits
- honouring payments
- advising customers etc.

Some candidates wrote or listed the following police service, fire service, Prison service, and others said the bank should reduce interest on loans.

(c) **State 3 factors that contributed to the initial success of Home Touch Bank**

**Ltd.**

- decentralization of decision making
- provision of a variety of financial banking products
- prompt action on customer's request

Candidates copied directly from the passage – all decisions were taken without approval from head office etc.

(d) **Suggest three 3 recommendations that will help revive Home Touch Bank**

**Ltd.**

- there should be decentralization
- branch managers should be allowed to take decision within their functional areas ect.

## **QUESTION 1**

Candidates copied a lot of things from the passage as answers to the question. eg. There should be reduction in the banks' products; there should be increase in demand for the banks 'products etc.

Candidates treated the "Case Study" as comprehension exercise by lifting answers from the passage and ended up performing woefully.

## **QUESTION 2**

- (a) **What is a product? – It is a bundle of utilities that satisfy consumers' need or wants.**
- (b) **State and explain any four reasons for the failure of a new product –poor timing, competition, products of detest high production cost, inappropriate pricing.** This was a popular question and candidates who attempted it did well.

A few candidates however defined product as anything offered, at the market for sale. This category of candidates stated the reasons for the failure of a new product with out explanation.

## **QUESTION 3**

Candidates were asked to explain the following documents used in international trade.

**Export Order, Bill of Lading, Consular Invoice, Certificate of Origin and Certificate of Insurance.**

It was not a popular question because only a few people attempted it. Surprisingly the few who attempted it did very well.

## **QUESTION 4**

- (a) **What is a cheque?**
- (b) **Identify and explain the parties to a cheque**
- (c) **Outline three essential features of a valid cheque**

This was a very popular question.

It was answered very well and many candidates scored the full marks. In the "c" part where candidates were asked to give three features, some gave four and others gave, five correct features.

Only a handful of candidates in their explanations took pay to be drawee and vice versa.

## **QUESTION 5**

**(a) Reasons for the failure of public corporations:**

- **Interference from politicians**
- **Public corporations record consistent losses**
- **Mismanagement of resources**
- **Recruitment of wrong people**
- **Lack of effective supervision**

**(b) Advantages of limited liability companies**

- large capital
- perpetual existence
- transfer of shares
- engagement of experts
- limited liability
- economics of scale

Candidates who attempted this question did better at the “b” part than the ‘a’ part. On the whole they did quite well.

## **QUESTION 6**

**(a) What is leadership – It is how a manager is able to influence his/her subordinates to achieve organizational goals.**

**(b) Explain 3 types of leadership styles**

- autocratic – does not seek the opinion of subordinates
- democratic – involves subordinates in decision making.
- laissez-faire – subordinates are given large degree of freedom to establish their own objectives and make decisions on their own.

**(c) Sources of power – Instead of writing on coercive power, legitimate power, Referent power, expert power, reward and information powers some candidates wrote on Democratic Power, Authority Power, Worldly Power and Divine Power and scored no work.**

Majority of candidates who attempted this question did not do well.

### **QUESTION 7**

**The question was in three part:**

- (a) Explain economic integration**
- (b) Distinguish between common market and economic union**
- (c) Explain three causes of globalization**

Expected answers:

- (a) Economic integration is a form of International Corporation among nations to foster their economic interests.
- (b) Common market is an arrangement whereby participating countries have the same internal and external tariffs. Whereas Economic Union has common tariffs on imports from-on-member countries.
- (c) Causes of globalization include:
  - (i) Technology: advances in technology have resulted in increased production and therefore new market will therefore have to be found.
  - (ii) Transportation system: improved transportation system or net network has made it very easy to move goods around the globe.
  - (iii) Information and communications technology including internet which enable individuals and organizations to order and pay for goods.

The question was not popular. The few candidates who attempted it did not explain the term 'Economic integration' neither did they show a distinction between 'Common Market and Economic Union'.

A candidate wrote that 'A common market is a place where ordinary foodstuff like cassava, plantain, pepper, and order things are sold and bought, whereby Economic Union is when all the union in the economy met'

### **QUESTION 8**

**The question was in two parts.**

- (a) What is corporate social responsibility?**
- (b) State and explain four ways in which a business can be socially responsible.**

EXPECTED ANSWERS:

- (a) Corporate social responsibility refers to the obligation of the organization to protect and/or enhance the society in which it operates.
- (b) ways in which a business can be socially responsible include:
  - (i) Satisfying employees: - provision of good working environment and facilities for the employees.
  - (ii) Protecting the environment:- ensuring that its activities do not pollute the environment.
  - (iii) Taxation: - by paying its taxes promptly etc.
  - (iv) Employment: - by employing same members of the community
  - (v) Scholarship: - by awarding scholarships to brilliant but needs students.
  - (vi) Provision of social amenities to the community – eg. Schools, water etc

The question was not popular. Those candidates who attempted it did not perform well.

Unfortunately, water, electricity, roads etc, as main points, and ended up scoring only three out eight (8) marks.

# CLERICAL OFFICE DUTIES

## 1. GENERAL COMMENTS

Questions adhered to standards and compared favourably to those of the previous years.

The general performance of candidates could be described as average.

## 2. A SUMMARY OF CANDIDATES' STRENGTHS

Some questions were well answered because candidates understood them well.

## 3. A SUMMARY OF CANDIDATES' WEAKNESSES

The greatest weakness of candidates was their inability to identify the problems in the case study.

## 4. SUGGESTED REMEDIES FOR THE WEAKNESSES

Instructors of the subject are to adopt new strategy (i.e. practical approach) of teaching. Teachers should encourage candidates to study the subject comprehensively. Again candidate should be exposed to the subject over a period of time to prepare them adequately to write and pass the subject.

## 5. DETAILED COMMENTS

### CASE STUDY

1. (a) **Candidates were expected to name and explain the source of recruitment the job seekers were using before the company (Fadugu Telecommunications Company) advertised.**

Expected answers included the following;

- i. Unsolicited application.
- ii. Unsolicited application is where applicants write letters to companies seeking for jobs without any advertisement declaring vacant positions.

\*Candidates were able to provide good answers.

- b) Candidates were expected to suggest **five** activities that may be involved in the employment procedure at Fadugu.

Expected answers should include:

- i. Declaration of vacant positions.
- ii. Receipt of application letters
- iii. Short listing
- iv. Interview
- v. Selection
- vi. Offer of appointment
- vii. Referees
- viii. Medical test

- ix. Police clearance/criminal checks
- x. Induction/training courses
- xi. Advertisement.

\*This question was well answered.

- c) (i) Candidates were to identify the department that processes the letters of application of the job seekers.

The expected answer is

Human Resource Management/ Personnel Department.

\*Candidates easily identified the department.

- (ii) Candidates were to list **five** other functions the department performs.

The expected answers should include;

- i. Recruitment and selection of staff
- ii. Performance appraisal of employees
- iii. Staff discipline
- iv. Staff welfare
- v. Staff promotion
- vi. Induction and training of staff
- vii. Fixing of wages and salaries
- viii. Industrial relations and grievance handling
- ix. Maintenance of staff records
- x. Designing job specifications
- xi. Manpower planning.

\*This question was well answered as candidates clearly understood it.

- (d) Candidates were to state **eight** items that may be found in the newspaper advertisement of Fadugu Telecommunications Company.

The answers should include:

- i. The name and address of the company
- ii. Name of vacant position
- iii. Educational background
- iv. Experience
- v. Age
- vi. Mode of application
- vii. Addressee's address
- viii. Conditions of service
- ix. Recommendation
- x. Closing date
- xi. Marital status

xii. Hobbies/interests

\*Most candidates were able to state a few of the items listed above.

**2. (a) The question expects candidates to outline four causes of health hazards in an office.**

**Expected answers are as follows:**

Causes of health hazards in the office are:

- i. Non-use of protective clothing during working hours.
- ii. Poor ventilation at the place of work.
- iii. Non-use of appropriate tools and equipment to perform a task.
- iv. Insanitary working environment.
- v. Overcrowding in the office.
- vi. Exposure to excessive noise.
- vii. Poor lighting system in the office.
- viii. Non-observance of health regulations.
- ix. Stress and overload of work.
- x. Ignorance of workers about health hazards.

**(b) Candidates were to state four ways an office can prevent fire accident.**

Answers should include:

1. Install fire extinguishers  
Handle highly inflammable substances with extra care
2. Regular checks to detect electrical and non-electrical faults
3. Regular maintenance of office equipment
4. Regular education of office staff about possible causes of fire.
5. Installation of fire alarms
6. Avoidance of overload of socket/power point
7. Switch off electrical appliances at the end of each work day
8. Ensure that all electrical installations are handled by expert.

\*Candidates mixed up answers for 2(a) and 2(b).

**3. (a) (i) This is a common recall question. Candidates were to state what an index in filing is.**

The answer should be a device/means of finding the position of records in a filing system quickly and easily.

**(ii) Candidates were to list four types of index.**

The types are:

- i. Book /ordinary page index
- ii. Strip index

- iii. Wheel/rotary index
- iv. Visible card index
- v. Vertical card index
- vi. Punch edge card index.

\*Candidates, in most cases, failed to identify the types of index available.

- 4. (a) The question requires candidates to define computer and the answer should be an electronic device used to process data at a very high speed, store it and retrieve in the form of organised information with maximum level of accuracy.
- (b) Candidates were expected to state **five** advantages of lateral filing.

#### ADVANTAGES of lateral filing

- i. It ensures easy storage of files/documents
- ii. It facilitates easy retrieval of files/documents
- iii. It saves office space
- iv. It allows for side by side or front to back filing
- v. It allows a number of files to be seen at a glance
- vi. It is easy to store a large volume of files.

\*Questions on lateral filing indexing are poorly answered in most cases

- 5. (a) **Candidates were expected to state six items that should appear on a receipt.**

The answers should include:

- i. Name of the payee
- ii. Date of payment
- iii. Amount paid stated in words
- iv. Amount paid stated in figures
- v. Signature of the recipient
- vi. Balance to be paid
- vii. Name of the company issuing the receipt
- viii. Receipt number
- ix. Description of the goods and services paid for
- x. Signature of the person issuing the receipt
- xi. Address of the company issuing the receipt

\*Candidates' performance can be described as average.

- (b) This question requires candidates to explain the following documents as used in business transactions.
  - i. Advice note
  - ii. Debit note
  - iii. Delivery note
  - iv. Letter of enquiry

v. Quotation

The answers should be:

**ADVICE NOTE:**

It is a document prepared by the seller and sent to the buyer to inform him about the dispatch of the goods ordered and it enables the recipient to check that the right goods have been sent.

**DEBIT NOTE**

It is a document sent to the buyer when goods sold to him have been under-charged on an invoice, to correct the under-charge.

**DELIVERY NOTE**

It is an accompanying document giving the descriptions and quantities of the goods supplied and also enables the recipient to check the correctness of the supply.

**LETTER OF ENQUIRY**

This is a trade letter sent by the buyer to a specific seller to find out about the goods available, their prices and terms of payment.

**QUOTATION**

It is a reply to the letter of enquiry sent by the seller to the buyer stating clearly his selling terms and delivery conditions.

\*Candidates' performance was below average. While goods answers were given to letter of enquiry and debit note, the rest were poorly answered.

**6. (a) Candidates were to list six functions of an office.**

**Expected answers should include:**

**FUNCTIONS OF AN OFFICE**

- i. It receives information
- ii. It gives out information
- iii. It safeguards assets
- iv. It records information
- v. It analyses information
- vi. It processes information
- vii. It arranges information

**\*This is an easy question patronized by most candidates.**

**(b) Candidates were to list five duties of each of the following personnel.**

- (i) General clerk**
- (ii) Private secretary**

The answers should be

General Clerk

- i. Filing of documents
- ii. Collating and stapling of documents
- iii. Maintaining office records
- iv. Duplicating office records
- v. Reception duties
- vi. Preparing office tea
- vii. Operating the telephone switch board
- viii. General mailroom duties
- ix. Writing simple official letters
- x. Routing account work

Private Secretary

- i. Arranging meetings
- ii. Taking down minutes and reports
- iii. Receiving and transcribing dictation
- iv. Taking care of manager's petty cash
- v. Keeping the manager's diary
- vi. Arranging the manager's appointments and engagements
- vii. Making manager's travel arrangements, booking of hotels, etc
- viii. Receiving and entertaining visitors
- ix. Handling telephone calls
- x. Filing of manager's personal and business correspondences
- xi. Supervising junior secretarial staff

\*Some good answers were provided for private secretary. That of general clerk was poor.

7.

(a) **Candidates were to state three features of courier services.**

**The answers should include:**

- i. They provide door-to-door service
- ii. Parcels and letters are delivered on time
- iii. They are fast and reliable
- iv. They provide proof of delivery
- v. There is guarantee security of mail/documents

**\*This was a relatively an easy question.**

(b) **Candidates were expected to explain the purposes of using each of the following postal services:**

- i. **Pose restante**
- ii. **Registered mail**
- iii. **Recorded delivery**

- iv. **Business reply service**
- v. **Private mail bag**

The answers should be:

Post Restante: this is used by travellers and visitors who have no permanent addresses to receive their mail at the post office.

Registered Mail: to provide extra security for valuable letters and parcels by post.

Recorded Delivery: to provide proof of dispatch and delivery to senders of correspondences.

Business Reply Service: to enable the sender of a correspondence to pay the cost of postage for the reply from its recipients.

Private Mail: to enable large institutions without letter boxes to collect their mail.

\*Almost all candidates who attempted this question were unable to give the required answers.

8. (a) Candidates were to write the following abbreviations in full:

- (i) cc
- (ii) wef
- (iii) PTO
- (iv) NB

cc - carbon copy

wef - with effect from

PTO - please turn over

NB - Nota bene/ note well/note

(b)(i) Candidates were to explain **three** purposes of a meeting.

Purposes of a meeting

1. To deliberate over issues
2. To report on some activities
3. To inform members of the outcome of an investigation
4. To share knowledge and experience on how to solve a problem
5. To enable employees express their grievances to management
6. To enhance internal relations in an organisation
7. To give members of a meeting the sense of recognition
8. To help members participate in management

\*Generally candidates failed to articulate the purposes of meetings.

(b) (ii) Candidates were to explain **three** requirements of a valid meeting.

Requirements of a valid meeting are:

1. It must be properly convened – appropriate notices should be circulated with agenda and the time for circulating must not be breached.
2. It must be properly constituted – there has to be a chairman and secretary and quorum formed and maintained throughout.
3. It must be properly conducted – it must have a legal backing and procedures of the conduct of a meeting followed.
4. It must be held in accordance with the stipulated rules and regulations.

\*In the estimation of candidates, a valid meeting should have a quorum and nothing else.

# **FINANCIAL ACCOUNTING 2**

## **1. GENERAL COMMENTS**

The standard of the paper as well as candidate's performance is comparable to those of previous years. There has not been any remarkable change.

## **2. SUMMARY OF CANDIDATES' STRENGTHS**

A summary of candidates' strengths i.e. commendable features/improvement noted in **candidates' answers which should be encouraged.**

- **Precision and Conciseness**

The answers to the theory questions in Section A; were precise and concise. Candidates avoided unnecessary preambles to solutions to theory questions.

- **Provision of correct headings and monetary denominations**

Majority of the candidates presented their answers correctly headed with appropriate monetary denominations indicated in the financial statements in Section B. This practice is commendable as it is in accordance with IFRS requirement in financial reporting.

### **Presentation/Arrangement of work**

- **Arrangement of work**

Candidates' showed appropriate sub totals and brought balances in the various accounts they prepared. They also showed workings to their solutions. They also avoided unnecessary cancellation in their works.

- **Preparation of Departmental Accounts**

Candidates demonstrated remarkable improvement in the preparation of departmental accounts. The apportionments to the various departments were correctly made and the total columns provided as part of the answer.

Even though Question 5 on journal entries did not specifically ask for narrations candidates indicated them in accordance with the standard practice in accounting.

## **3. SUMMARY OF CANDIDATES' WEAKNESSES**

- **Non-adherence to some requirements of the question.**

As had been pointed in previous reports, the tendency of some candidates not adhering strictly to the instructions of the paper still prevailed.

In Section A, candidates were required to answer two questions out of **four**.

However, several cases of candidates answer more than the required number of questions.

- Specific requirements such as; “list” (Question 1a), “State” (Question 2b); “Explain” (Question 2c and 3a) and “Distinguish” (Questions 3b) were strictly not complied with. For instance, in Question 1b, descriptions of the items were not required as was done by some candidates.
- In section B, Question 7, the requirements did not include preparation of statement of affairs as at 31/12/2013 and/or Balance sheet as at 31/12/2013. These statements were still prepared by some of the candidates.
- Few candidates ignored the directions to candidates as indicated on the cover page of the answer booklets.
- Inadequate coverage of subject matter:
- Just as in previous years, solutions to questions on accounting ratios and partnership accounts revealed inadequate preparation on these topics.

**Lack of understanding of certain topics**

- In Question 4(a), specific ratios such as current ratio, Gross Percent %, were wrongly stated as falling into the main groups of accounting ratios. Candidates’ understanding of interpretation of ratios was tested in Question 4(b). The result was abysmal.
- The few candidates who attempted Question 8 on partnership showed lack of understanding of the topic. Some even treated capital and current balances as appropriation of profit in the profit and loss appropriation account.
- **Inability to properly classify items in the manufacturing Accounts,**

In the preparation of manufacturing Accounts in Question 6, classification of items which make up prime cost and factory overhead totals couldn’t correctly be made. Items such as factory fuel and description of equipment were wrongly treated as components of prime cost and direct factory expenses as a factory overhead item.

**4. SUGGESTED REMEDIES**

- **Adherence to rubrics of the question.**

Candidates should adhere to the instructions as stated on the question paper. For example, Attempt five questions in all, two in Section A and three from Section B means exactly that. The examinee is not at liberty to change instructions. Teachers should emphasize the foregoing in the preparation of students for the examination.

- **Arrangement of work: Details of workings.**

A cardinal rule in accounting practice examination that should be observed by candidates is that all workings must be shown since marks are awarded for details. Valuable marks are thus lost when only the final figures are shown. For example, the manufacturing Account in Question B will disclose for manufacturing wages details as follows (each item attracting a tick ie 3 ticks)

Manufacturing wages	Le 16,500
Add: Accruals	4,000
	20,000

Instead of entering the aggregate figure of Le 20,500 only which would attract a tick.

- **Coverage of the syllabus.**

The scanty answers provided to Questions 4 (Accounting ratios) and 8 (Partnership Accounts) suggest that the topics had not been well covered by the candidates.

Instructions should not guide students on grasping the formulae for computing the various ratios, but equally must emphasize the interpretation of each ratio. Practical scenarios may be adopted in this direction.

In partnership Accounts, the preparation of Profit and Loss appropriation Account and Partners' Capital and Current Accounts in columnar form should be given greater attention. The purpose of each account should be clearly spelt out. Students should be guided with comparative questions on preparation of accounts of a sole proprietorship and that of partnership for them to appreciate the differences between them.

- **Compliance with requirements**

Instructions should emphasize implications requirements such as 'state', 'list', 'explain', 'what is to students. They should be guided through assignments, group work to appreciate the significance of each.

Example: A question may be set using different requirements such as

- State four accounting concepts
- Explain four accounting concepts
- What are accounting concepts?

## **DETAILED COMMENTS**

### **QUESTION 1**

**This was a three – part question on source documents and uses of subsidiary books.**

**The first part tested Candidates on the meaning of source documents. Candidates were expected to state that a source is:**

- An original document evidencing a business transaction.
- Forms the basis of entries in the books of accounts.
- Provides basic details about a transaction.

Variations of the explanations are acceptable but must include the three basic points outlined above. A lot of the Candidates were able to explain the first two points but omitted the third point.

Candidates should note that source documents are not the same as journal.

The second part of the question required Candidates to state six types of the source documents.

Majority were able to state the following types:

- Cash receipts
- Sales invoice
- Purchase invoice
- Credit Note
- Debit Note

Incomplete answers such as cheques, statements petty cash instead of cheques Stubs/Counterfoils, bank statements and petty cash vouchers respectively were prevalent.

Few candidates described the documents which of course attracted no additional marks.

The third part of the question required candidates to state three uses of subsidiary books ie.

What are subsidiary books generally used for? The question therefore did not ask for identification of various subsidiary books and the use of each. Majority of the Candidates however, produced answers to that effect. Examples: Purchases day book is used to record credit purchases; Sales day book is used to record credit sales.

Candidates were expected to state that subsidiary books are used:

- As the primary record of transactions since they are the first to be written direct from the source documents.
- To provide greater details about transactions than the ledgers will do
- As backup for entries made into the ledger
- As means of classifying data obtained from business documents. It was a popular question. Average performance was recorded.

## **QUESTION 2**

**The question was on aspects of bank reconciliation statement. The first asked for the meaning of bank reconciliation statement. Candidates were expected to state that:**

- It is a statement prepared by a bank's current account holder on receipt of a bank statement.
- It is prepared to bring the firm's cash book (bank column) balance into agreement with its bank statement balance.

- Candidates focused on the second part, but even with that, the cash book (bank column) was simply stated as cash book writing the ‘bank column’.
- The ‘b’ part of the question required candidates to state three reasons for preparing a bank reconciliation statement. Most Candidates got two reasons. A third not mentioned is they are prepared in order to explain any difference between the balance as per the bank column of the cash book and the bank statement balance.
- The ‘c’ part of the question asked for explanation of the following terms:
  - i. Unpresented cheques
  - ii. Standing order
  - iii. Credit transfer
- For two marks awarded per question, detailed descriptions were not expected. Concise answers required and these were presented for unpresented cheques and standing orders. Only an aspect of credit transfers that these are payments made direct into a customer’s account in the bank was stated. The other part that they are made by third parties was omitted. It was a fairly popular question. Performance was above average.

### **QUESTION 3**

**This was a two – part question. The first part tested candidates on various terminologies associated with not- for- profit making organisations.**

**Candidates were to explain the following terms:**

- i. Accumulated fund**
- ii. Subscription in arrears**
- iii. Receipts and payments account**
- iv. Income and expenditure accounts**
- v. Entrance fees**

The additional points missing from majority of candidate’s answers were:

**i. Accumulated Fund:**

It is the difference between the total assets and total liabilities of a not-for-profit making organisation at any point in time.

**ii. Subscription in arrears:**

It is the amount of subscription that is outstanding or has not been paid by a member as at **the time preparing the accounts of the club**

**iii. Receipts and Payments Account:**

The debit side shows details of opening cash/bank balances and all cash receipts while the credit side indicates all cash/bank payments and their balances.

iv. **Income and Expenditure Account:**

It records only revenue expenditure and revenue receipts and it discloses a balance as surplus or deficit.

The 'b' of the question was on distinction between shares and debentures. Candidates were not expected to explain the terms separately but to show clear differences between them such as:

- Shares attract dividends while debentures attract fixed interest.
- Holders of shares are part owners of the company while holders of debentures are creditors to the company.
- Shares are fractions or proportions of members' interest or investments in a company while debentures are written acknowledgement of a long term loan given to a company.

It was quite a popular question which recorded average performance.

**QUESTION 4**

**This was a question on accounting ratios. The first part expected candidates to state four broad groupings of accounting ratios. The classifications which should be listed without descriptions and examples of each group are:**

- i. **Profitability Ratios/ Performance Ratios**
- ii. **Liquidity Ratios/Solvency Ratios**
- iii. **Efficiency Ratios/Asset Ratios/Activity Ratios**
- iv. **Capital Structure Ratios/Gearing Ratios/leverage**
- v. **Security ratios/Investor Ratios/Shareholder Ratios**

Few candidates attempted this question and performed poorly. Examples of ratios such as Current ratio, Gross Profit Percentage, ROCE were incorrectly stated as the answer.

The second part tested the understanding of the ratios. Nine statements were stated and candidates were expected to identify which ratio relates to each of them. The style of the question is a departure from previous ones on the topic which was mainly on computation of specific accounting ratios.

Few candidates attempted this question. Answers suggest guess work by candidates. For instance, Current ratio and Gross Profit Percentage were repeatedly stated as being applicable to a lot of the substances.

The ratios identifiable with the statements are as follows:

- i. Return on Capital Employed (ROCE)
- ii. Stock turnover; Inventories Days; Stock turn or Turnover of stock.
- iii. Debtor Days; Receivable days; Average Collection Period; Debtors Collection Period
- iv. Creditor Days; Payable Days; Average Payment Period; Creditors Payment
- v. Gross Profit Margin; Gross Profit Percentage; Gross profit to Sales Ratio; Gross Profit Sales

- vi. Current Ratio or Working Capital Ratio
- vii. Quich Ratio Acid – Test Ratio
- viii. Net Profit Margin; Net Profit Ratio; Net Profit Percentage; Net Profit to Sales Ratio, Net Profit Sales.
- ix. Interest Cover.

**QUESTION 5:**

**This was a practice question of an entity whose trial balance failed to agree. The undisclosed difference was placed in Suspense Account.**

**Subsequently, the errors accounting for the difference was discovered. Candidates were therefore required to prepare in the first part of the question, journal entries to correct the errors and in the second part a Suspense Account.**

In the ‘a’ part majority of the candidates were able to correctly pass five out of the seven journal entries. The two problem areas were items (iv) and (v). Candidates incorrectly stated the entries as follows:

	Dr.	Cr.
	\$	\$
Iv . Suspense Account	410	
Damilols’s Account		410
Instead of		
Damilola’s Account	410	
Suspense Account		410

Discount received from Damilola not posted now corrected.

V. Supplier’s Account	750	
Suspense Account		750
Instead of		
Supplier’s Account/Trade Creditors A/C	180	
Suspense Account		180

Value of goods returned understated in Supplier’s Account now corrected.

Candidates should note the following:

- Only errors which affect the agreement of the trial balance are corrected through the Suspense Account.
- Conventionally, debit entries are written first when preparing a journal followed by credit entries not vice – versa as few candidates did.
- The heading of ‘a’ should read “The Journal or “General Journal” NOT Journal Account or Journal Entries.

The ‘b’ part, the entries in the Suspense Account were incorrectly described. The same item, Suspense, was stated therein instead of the corresponding account. Example

## Suspense Account

	\$
I. Suspense	1000

Instead of:

	Suspense Account
	\$
i. Salako Account	1000

The difference in the Suspense Account should be described as 'Difference in the Trial Balance' (in this case \$740) NOT as balance carried down.

It was a popular question. An average performance was recorded.

### **QUESTION 6**

**The question was on preparation of a company's Manufacturing Trading and Loss Account. In the Manufacturing Account, Candidates were expected to demonstrate their understanding of the classification of components of prime cost and factory overheads leading to the ascertainment of cost of production.**

The additional task was the transfer of goods manufactured to Sales department at Cost plus 10%.

The prime Cost of Le 205400 arrived at by adding Cost of raw materials consumed (Le 173,500), manufacturing wages (Le 16,500 + 4000) and direct factory expenses (Le 11,400). Majority of the candidates wrongly treated the direct factory expenses of Le 11,400 as a factory overhead item. The factory overheads were fuel Le 15000 and depreciation of equipment Le 12,000 (not equipment of Le 12,000).

10% should be applied on the factory cost of production of Le 228,400 ie Le 22,840 termed as manufacturing profit to be transferred to the Profit and Loss Account.

The Total (Le 228,400 + 22,800) of Le 251,240 the value of goods transferred to the Trading Account. It was mistakenly described as Purchases by a lot of the candidates apparently confusing it with that of a trading account of a trading enterprise.

The profit and loss account discloses two profits brought down ie manufacturing profit of Le 22840 on manufacturing (from the manufacturing Account) and gross profit of Le 240,760 trading from the trading Account.

It was a fairly popular question. Performance was on the average.

### **QUESTION 7**

**The question was on preparation of trial accounts of a retailer who did not keep proper books of the accounts. From the balances extracted from the books and additional information provided, candidates were to prepare:**

- a. **Statement of affairs as at 01/01/2013**

**b. Income Statement for the year ended 31/12/2013 and**

**c. Bank Account**

The 'a' part was well attempted. It entailed listing all the assets as on 1/1/13, with no liability as at that date. The total assets of D 94,350 on that date was the same as capital. Candidates were at liberty to prepare the statement in vertical or horizontal form but certainly not merely adding the figures without any description of the items such as Capital = D (70,000 +

$$8,200+5,100+9,500+150+1,400) \\ =94,350$$

The 'b' part was poorly attempted. Candidates could not deduce the sales and purchases figures. These could be ascertained in statement form as follows:

Sales = shop takings + Takings not banked + Amount received from debtors

$$= D96,500 + D500 \times 12 + D408 + D1400$$

$$= D104,308$$

Purchases = Inventory purchased + Owings to suppliers

$$= D70500 + D7600$$

$$= D78,100$$

The miscellaneous expenses of D962 should be adjusted by the amount paid out of taking of D408 resulting in D1370 ie D962 + D408.

The 'c' part, even though quite simple was poorly attempted. The Bank account was to be debited with the balance as at 1/1/13 of D1,400 and all the items under money paid to the bank.

The account should be credited with payments made by cheque. The balancing figure of D22,418 is the bank balance as at 31/02/13

It was not a popular question was on the average.

**QUESTION 8**

**The question tested Candidates' understanding of the preparation of simple partnership accounts relating to Profit and Loss Appropriation Account and Capital Accounts.**

Candidates were not restricted in the 'a' part to any format. Either the vertical or the conventional format could therefore have been employed.

In the profit and Loss Appropriation Account should be shown:

	GH□	GH□
Net profit b/f		158,000
Less loan interest (Tuga)		2,500
(5% × GH□ 100,000 × 6/12)		
Adjusted profit before appropriation		155,500
Less Appropriation		
Partners Salaries		
Govu	25,000	
Kano	25,000	50,000
		105,500
Share of residual profits:		
Govu $\frac{2}{5} \times 105,500$	42,000	

Tuga $1/5 \times 105,500$	21,000	
Kano $2/5 \times 105,500$	42,200	105,500

The following incorrect treatments were noticed in candidates' preparation of the Profit and loss Appropriation Account.

- Salary of GH¢2000 to Kano
- Capital and current account balances treated as appropriation of profit
- Loan of GH¢100,000 advanced by Tuga, a partner applied against profit.

In the 'b' part, the requirement was specific; the preparation of Partners' Current Accounts in column or form. Separate accounts were therefore not to be shown likewise' capital account. The question Tuga's current account opening balance is a debit and not credit account. It was list popular question in the section B.

### **QUESTION 9**

**The question tested candidate's ability to prepare Department Trading profit and loss Account for three departments.** The test was on how to apportion common expenses on the basis stated in the question. It was a straight forward question with no prepayment and accrued expenses. It should be noted that balance sheet for each department was not applicable. It was popular and well answered question.

# **PRINCIPLES OF COST ACCOUNTING**

## **GENERAL COMMENTS**

All questions were of the required standard and was comparable to those of previous years' examinations. All the questions were within the limits of the WAEC examination syllabus and was designed to test candidates understanding of the relevant topics and their ability to apply the principles. The level of difficulty and details of requirements was also comparable to that of previous years.

Candidates' performance also followed the usual trend with some showing deep understanding of the subject and turning out very good performances while some as usual performed abysmally. Majority of candidates scored average marks.

Some question like question 1 on materials and question 7 on overheads were very popular with candidates and were quite well answered by those who attempted them while others were not that popular.

The graph of candidates' performance would show a normal distribution with the bulk of candidates in the average range.

## **SUMMARY OF CANDIDATES STRENGTHS**

Candidates strengths observed included the following:

- Candidates preparation for the examination appears better judging from the trend of responses to questions
- Candidates answered questions directly and did not indulge lengthy introductions.
- Some candidates showed good understanding of certain questions and were able to apply practical situations to illustrate answers.
- Many candidates were able to present their work in an orderly manner and show workings leading to the final answers.
- Some candidates also showed in-depth knowledge of topics especially in the essay type questions.
- Many candidates also attempted the required number of questions for the paper which is very encouraging.
- Q1 on materials and specifically on storekeeping and stocktaking and question 4 on Cost Accounts were particularly well answered from the theory section though question 4 was not that popular with candidates.
- Candidates also performed very well on question 6 on cost classification and question 7 on overhead absorption among the practice questions.

## **SUMMARY OF CANDIDATES WEAKNESSES**

The following weakness were observed among candidates:

- It was evident that candidates did selective preparation for the examination. This was evident from the lack of knowledge of the certain topics. Candidate generally avoided certain questions or performed poorly on them.
- Lack of good examination planning. Many candidates did not take their time to read and select the questions they could answer well before stating the paper as evident in the several attempts and cancellations before attempting new questions.
- The poor command of the English language also prevented some candidates from earning maximum marks especially in the essay type questions as candidates could not express the points well enough.
- Lack of understanding of questions. Some candidates did not take their time to read and understand the exact requirements of the question before attempting to answer it and this resulted in many cases in complete deviation from the responses required.
- Some candidates did not attempt the required number of questions or did not follow the rubrics and ended up answering more that the required number from the different sections leading to the cancellation of some answers from some sections.
- Candidates' performance on question 2, a theory question on standard costing and question 9 were particularly poor.

### **SUGGESTED REMEDY**

- Candidates are advised to prepare adequately for the examination. Poor preparation for the examination results in candidates providing poor answers to questions even where they understand the questions
- Candidates are also advised to read the instructions for the paper carefully and ensure that they fully understand the rubrics before they commence
- Candidates are also advised not to rush to answer questions but to carefully read through all the questions and select the ones that they are best prepared for.
- For theory questions, candidates are advised to give examples to support answers even if the question does not require them since examples clear and doubts about the candidates' intentions.
- Candidates are also advised to attempt the required number of questions and if possible not to waste too much time on any one question especially if all the questions carry equal marks
- Candidates are also advised to write their answers in clear and simple language to avoid any ambiguities.
- Candidates are also advised to show all workings leading to final answers because marks are mostly awarded for workings.

### **DETAILED COMMENTS**

#### **QUESTION 1.**

**This was an essay type question on materials and specifically on storekeeping and stocktaking.**

**Candidates were required to list five duties of a storekeeper in the first part of the question.**

**second part of the question required candidates to explain periodic and continuous stocktaking and state two advantages of each of the two methods of stocktaking.**

Candidates were expected to list the duties of the storekeeper to include

- i. Securing the stores from theft and fire
- ii. Protecting materials from damage and deterioration
- iii. Maintaining proper records on materials.
- iv. Receiving materials into store after inspection
- v. Issue of materials against proper authorization
- vi. Keeping store safe, tidy and in a congenial manner
- vii. Initiating material requisition when materials reach re order level
- viii. Reporting on wastes scrap and slow moving items
- ix. Organizing storage in a logical manner to enable easy and fast retrieval of items when needed.

Periodic stocktaking was to be explained as the physical count of materials which is done at regular intervals e.g. once or twice a year.

Continuous stocktaking is explained as the system whereby a section of the stock is counted daily such that, over the year, all items are counted at least once.

Advantages of periodic stocktaking includes the following

- i. Clerical work is reduced
- ii. Less expensive since stock is counted occasionally
- iii. Stock figures are more accurate and reliable than other systems
- iv. Less interruption of work since stock count is done usually at the end of the year

Advantages of the continuous stocktaking includes the following

- i. Early detection of fraud, theft and damages.
- ii. Discrepancies are detected on time and resolved
- iii. Slow and fast moving items are also detected and reported on time
- iv. It enhances stock control
- v. No loss of customers since activities do not stop for the purpose of stock count.

Candidates' performance on this question was very impressive. Many candidates were able to give all five duties of the storekeeper, though some candidates were only able to give two or three correct duties. Some wrong duties give included that he controls the activities of the business and that he purchases materials when stock levels reach the minimum stock level.

Candidates who attempted this question also explained periodic and continuous stocktaking very well and some of them earned the maximum marks for this part of the question. A few candidates however earned only part of the marks either because the explanation was incomplete or the language was poor.

Many candidates were also able to give the advantages of the periodic and continuous stocktaking correctly. Few candidates however reversed the advantages for the two systems of stocktaking and therefore lost marks.

## **QUESTION 2.**

**This question was an essay question on costing methods and specifically on process costing.**

**Candidates were required to state three characteristics of process costing, list three causes of losses in process costing and explain how normal and abnormal losses as well as abnormal gains are treated in process accounts.**

Candidates were expected to state the characteristics of process costing to include the following;

- i. Goods produced are of a homogeneous nature
  - ii. Production involves a series of sequential processes
  - iii. The identity of individual orders are lost in the general flow of production
  - iv. Each process is treated as a cost center
  - v. The output of one process constitutes the input of the next process
  - vi. Some losses in processing are unavoidable
  - vii. The cost of normal process losses are borne by good production
  - viii. Uncompleted products at the end of the process are converted into equivalent units.
- b. Causes of losses in process costing was expected to include the following
- Spoilage, wastage, accidents, evaporation, unskilled labour, defective machines and tools and the use of poor quality materials.

- c. The various losses and gains were to be treated as follows

Normal losses are not costed but absorbed by good production. The quantity of normal loss is credited to the process account to reduce the quantity of units produced.

Abnormal losses are valued at the same rate as good production and debited to abnormal loss account and credited to process account.

Abnormal gains are valued the same as normal production and debited to the process accounts and credited to the abnormal gains account.

Full marks were awarded to candidates who were able to correctly mention the correct entry in the process accounts only.

The first part of this question involving the characteristics of process costing was quite well answered by candidates. Some candidates lost marks due to poor expression of the relevant points. E.g. the output of one process becomes the output of the next process.

Candidates were also able to correctly list the causes of losses in process costing and earn the 3 marks allocated.

Candidates performance on the last part was however very poor. Many candidates just explained the losses and abnormal gain without explaining how they are treated in the process accounts and thus lost all the marks for that part. Candidates who took their time to read the question however answered that part very well.

### **QUESTION 3.**

**This was a theory question on standard costing.**

**Candidates were required to explain standard costing, explain two components of a standard cost variance and state two advantages and two disadvantages of standard costing,**

Standard costing was expected to be defined as the predetermined estimate of cost which is determined from management's standard of efficient operations.

The components of standard cost variance was to be explained as follows

- i. The value of the item which is expressed as price or rate variance
- ii. The quantity of the item which is expressed as usage or efficiency variance.

The advantages of standard costing includes the following;

- i. Promotes efficiency in operations
- ii. Reduces wastes and spoilage
- iii. Provides a suitable basis of performance evaluation
- iv. Provides a useful guide for fixing selling prices
- v. Motivates staff to increase productivity
- vi. Serves as a basis for rewarding hardworking employees

The disadvantages of standard costing includes the following

- i. Could be expensive and time consuming to install and operate
- ii. Standards could become outdated and unrealistic over time
- iii. Poor standards could lead to low productivity
- iv. Extremely high standards could discourage workers
- v. Standards may not be useful if it is too detailed and the users do not understand them.

Many candidates attempted this question, however the performance was quite poor.

Many candidates defined standard costing instead of standard cost and lost all the marks.

The explanation of the two components of a cost variance was also poorly done. Candidate gave either favorable and adverse variances or material and labour variances. Apparently candidates did not understand the requirements of the question.

Performance was however better in on the advantages and disadvantages of standard costing as candidates were able to correctly give the required answers

#### **QUESTION 4.**

**This question was a theory question on Cost Accounts.**

**Candidates were required to differentiate between interlocking and integrated accounts.**

**Candidates were also required to state three causes of differences between cost accounting profits and financial accounting profits and list three items each that appear in**

- a. Cost accounts only**
- b. Financial accounts only**

**Candidates were expected to explain interlocking accounts as the system where separate set of accounts are kept for financial and cost accounts and the two linked by control accounts while integrated accounts is the system where a single set of accounts are kept with no distinction between cost and financial accounts.**

The causes of differences between cost and financial profits are categorised into

- i. Differences in the treatment of items like depreciation and stock valuation
- ii. Pure financial transactions that appear only in financial accounts
- iii. Non finance items that appear in cost accounts only

Items that appear only in cost accounts include

- i. Imputed/notional cost; - rent, salary etc.
- ii. Cost of idle time
- iii. Cost of normal losses and waste
- iv. Over and under absorption of overhead
- v. Imputed interest on capital employed
- vi. Depreciation of fully depreciated assets

Items that appear only in financial accounts include

- i. Appropriation of profits and transfers to reserves
- ii. Financial charges;-interests, discounts, dividends etc.
- iii. Profits or loss on disposal of fixed assets
- iv. Provision for doubtful debts
- v. Goodwill written off
- vi. Taxation.

Though this question was not very popular with candidates, the performance of those who attempted was very good.

Most candidates were able to clearly differentiate between interlocking and integrated accounting systems and even explain how reconciliation is done in interlocking accounting.

The causes of differences between costing and financial profits was also quite well provided though examples of specific items were accepted for full marks.



Candidates' performance was quite encouraging. Candidates were able to prepare the contract account correctly apart from depreciation of plate which most candidates calculated on one year instead of ten months.

Many candidates also scored maximum marks for the contractee's account.

Candidates were however not able to obtain the expected profit on completion because many of them added the work done not certified to the deductions from the contract price and ended up with a lesser profit figure.

### **QUESTION 6.**

**This question was a practice question on cost classification. Candidates were required to classify a list of cost items into the following classes of cost;**

- i. Direct materials cost**
- ii. Direct labour cost**
- iii. Direct expenses**
- iv. Prime cost**
- v. Production overheads**
- vi. Total cost of production**

Direct materials cost:

Direct materials	250,000	
Carriage on purchases	<u>10,000</u>	260,000

Direct labour cost:

Wages of machine operators	120,000	
Manufacturing wages	<u>80,000</u>	200,000

Direct expenses:

Royalties on production	25,000	
Cost of special mold	45,000	
Cost of hiring machine	<u>25,000</u>	<u>95,000</u>

Prime cost

555,000

Production overheads

Factory rent and rates	50,000	
Depreciation of machinery	20,000	
Wages of machine cleaners	10,000	
Machine repairs	15,000	
Warehouse wages	50,000	
Factory managers wages	15,000	
Lubricants for factory machine	5,000	
Insurance of factory machinery	10,000	
Factory cooling and lighting	5,000	
Warehouse repairs and maintenance	<u>10,000</u>	<u>190,000</u>
Total cost of production		<u>745,000</u>

Candidates performed quite well on this question. A good number of candidates scored the maximum marks for the question.

Some candidates lumped all wages under direct wages. The classification of direct expenses also posed problems for some candidates as they included all sorts of expenses with 'factory' in their description.

Some candidates were able to obtain the total production cost correctly though some of the details were wrong.

### **QUESTION 7.**

**This was a practice question on overhead absorption. Candidates were required to compute predetermined overhead absorption rates based on direct materials cost percentage, direct labour hours and machine hours.**

**Candidates were also required to compute the cost of a job using direct material cost percentage and machine hour rate of overhead absorption.**

Computation of overhead absorption rates were expected to have been computed as follows;

$$\begin{aligned} \text{Direct materials cost percentage} &= \frac{\text{total budgeted overheads}}{\text{Direct materials cost}} \times 100 \\ &= \frac{100,000}{250,000} \times 100 = 40\% \end{aligned}$$

$$\begin{aligned} \text{Machine hour rate} &= \frac{\text{total budgeted overheads}}{\text{Machine hours}} \\ &= \frac{100,000}{40,000\text{hrs}} = 2.5 \text{ per machine hour} \end{aligned}$$

$$\begin{aligned} \text{Direct labour hour rate} &= \frac{\text{total budgeted overheads}}{\text{Direct labour hours}} \\ &= \frac{100,000}{50,000\text{hrs}} = 2.00 \text{ per direct labour hour} \end{aligned}$$

Cost of job using direct materials cost percentage

Direct materials	5,000
Direct wages	<u>4,000</u>
Prime cost	9,000
Overhead	<u>2,000</u>
Total cost	<u>11,000</u>

Cost of job using machine hour rate

Direct materials	5,000
Direct wages	<u>4,000</u>
Prime cost	9,000
Overhead	<u>3,750</u>
Total cost	<u>12,750</u>

Candidates' performance on this question was very good. Many candidates who attempted this question were able to score maximum marks. A few candidates were not able to compute the cost of the job using the rates calculated while others could not compute the budgeted overheads correctly and thus lost some marks.

### **QUESTION 8.**

**This question was on marginal costing. Candidates were required to statements showing the profit or loss for a company, using marginal costing and absorption costing techniques.**

Under the marginal costing technique, candidates were expected to compute the total contribution by deducting variable cost of goods sold from sales revenue and obtain the profit or loss as follows;

#### Marginal costing approach

	<u>GH¢</u>	<u>GH¢</u>
Sales		600,000
Less variable cost		
Direct materials	150,000	
Direct labour	150,000	
Variable factory overheads	<u>50,000</u>	
Cost of production	350,000	
Less closing stock	<u>70,000</u>	
Production cost of goods sold	280,000	
Variable selling and distribution cost	<u>100,000</u>	<u>380,000</u>
Total contribution		220,000
Less fixed cost		
Fixed factory overheads	150,000	
Administration cost	<u>50,000</u>	<u>200,000</u>
Net profit		<u>20,000</u>

Candidates could alternatively use the unit cost approach to the same effect.

Under the absorption cost technique, the total cost of sales, including fixed cost is deducted from sales to obtain profit or loss as follows.

#### The absorption costing approach

Sales		600,000
Less variable cost		
Direct materials	150,000	
Direct labour	150,000	
Fixed factory overheads	150,000	
Variable factory overheads	<u>50,000</u>	
Cost of production	500,000	
Less closing stock	<u>100,000</u>	
Production cost of goods sold	400,000	
Variable selling and distribution cost	100,000	
Administration cost	<u>50,000</u>	<u>550,000</u>
Net profit		<u>50,000</u>

Candidates recorded a mixed performance on this question. A few candidates scored maximum marks but a majority of candidates committed one error or another that affected their performance.

Common errors committed by candidates include;

- i. subtracting the variable selling and distribution expenses from production cost instead of adding it and therefor obtaining a contribution of GHC420,000
- ii. adding variable selling and distribution cost to production cost before calculating closing stock
- iii. omitting administration cost from the computation of profit
- iv. Omitting to calculate closing stock in both approaches.

### **QUESTION 9.**

**This question was on budgeting and specifically cash budgeting. Candidates were required to prepare a cash budget for a three month period after preparing schedules for receipts from sales and payment for purchases for the same period.**

Candidates were expected to prepare the schedules as follows:

Schedule of receipts from sales	January	February	March
	D	D	D
Cash sales	11,000	12,500	12,000
Receipts from debtors	<u>9,500</u>	<u>10,450</u>	<u>11,875</u>
Total	<u>20,500</u>	<u>22,950</u>	<u>23,875</u>

Schedule of receipts	January	February	March
Receipts for current month	9,000	10,800	10,800
Receipts for previous month	<u>4,800</u>	<u>6,000</u>	<u>7,200</u>
Total	<u>13,800</u>	<u>16,800</u>	<u>18,000</u>

The cash budget is as follows:

CASH BUDGET FOR THE PERIOD JANUARY TO MARCH 2018

	January	February	March
Opening balance	550	6,950	4,800
Receipts from sales	20,500	22,950	23,875
Rent receivable	<u>1,500</u>	<u>1,500</u>	<u>1,500</u>
Total cash	<u>22,550</u>	<u>31,400</u>	<u>30,175</u>
Payments to creditors	13,800	16,800	18,000
Expenses	1,800	1,800	1,800
Dividend	-	-	3,500
Equipment	<u>-</u>	<u>8,000</u>	<u>-</u>
Total payments	<u>15,600</u>	<u>26,600</u>	<u>23,300</u>
Closing balance	6,950	4,800	6,875

Alternative formats for the preparation of the cash budget were also accepted.

Candidates continue to perform poorly in question involving the preparation of budgets. Many candidates missed the preparation of the schedule of receipts from sales. Though candidates were able to calculate cash sales correctly, they deducted 5% from total sales instead of credit sales. Some candidates also failed to prepare the schedule of receipts but rather chose to show the details in the cash budget proper and therefore lost the marks for the schedule.

The schedule of payments for purchases was better prepared though.

The preparation of the cash budget itself was not better. Many candidates treated dividend payment as dividend received and a few candidates either treated the whole of expenses as payables instead of deducting depreciation from it. Some candidates even went ahead to add the depreciation to the expenses instead of deducting it. The other receipts and payment were mostly treated correctly though.

# **TYPEWRITING**

## **GENERAL COMMENTS**

The standard of the paper is comparable to that of the previous years. Candidates performed creditably well in various tasks, as they scored some high marks.

## **SUMMARY OF CANDIDATES' STRENGTHS**

Candidates exhibited good strength in the following areas:

- (1) Understanding of the rubrics and other marginal instructions;
- (2) Consistency in style of production work;
- (3) Use of correct date for the letter;
- (4) Proper use of envelope;
- (5) Correct use of cedi sign;
- (6) Correct ruling of tabular work;
- (7) Correct use of line spacing in letter and Tabulation; and
- (8) Good use of capitalization.

## **SUMMARY OF CANDIDATES' WEAKNESSES**

Candidates, in spite of the positive strengths demonstrated, showed weaknesses in the following areas:

- (1) Non completion of Speed Test;
- (2) Poor accuracy exhibited in the Speed Test;
- (3) Poor use of hyphen and dash;
- (4) Inconsistencies in the rendition of time;
- (5) Poor alignment of figures and sentences;
- (6) Inconsistencies in the style of display;
- (7) Poor centering and underscoring of headings;
- (8) Poor use of punctuation marks.

## **SUGGESTED REMEDIES**

- (1) More time should be allocated on the school's timetable for the study of the subject;
- (2) More practice should be done with the typewriter using the "touch" system;
- (3) More attention should be given to the typing of production work –check on typographical errors, overtyping, alignment inconsistencies and good use of capitalization
- (4) Candidates should start by typing the tasks they are comfortable with before moving on to tackle the more difficult ones. This will help them avoid spending too much time on one difficult task that will take all their time.

## **DETAILED COMMENTS**

### **TASK 1: SPEED AND ACCURACY TEST**

Some candidates were able to complete the Speed Test, whilst a greater number of them scored zero for short working. As some failed to type to the end, those who completed, however, made a lot of errors. The best score was 6 out of 10.

### **TASK 2: PROGRAMME**

Candidates were required to type a fair copy of a programme as found in the test. A greater number of candidates typed this question. Surprisingly, candidates failed to type as it was displayed in the question. It appeared to be a difficult task for the candidates. Some of the errors identified were as follows:

- (1) Time was not properly aligned as expected;
- (2) The poor use of colons as dots;
- (3) Poor division of proper nouns like names e.g Mr.George Addo was typed as ‘Mr’ or ‘ Mr George’ on one line and ‘Addo’ was sent to the next line;
- (4) Poor style of display with very large right margin;
- (5) Lack of knowledge in the proper use of hyphen and dash;
- (6) Wrong use of underscore;
- (7) Overtyping and too much use of capitalization. E .g BREAKFAST, COFFEE BREAK, DINNER and DEPARTURE.

### **TASK 3: LETTER AND ENVELOPE**

Candidates were required to type a letter. The manuscript was clear and it should not have posed a challenge to candidates. It was, therefore, not surprising a lot of candidates typed this task. Some candidates exhibited good typing skills, and they produced a good work; other candidates could not perform well in this task.

The following were some of the errors identified:

- (1) Typographical errors and a lot of overtyping;
- (2) Reference number typed on the envelope and full stop typed at the end of the date;
- (3) Poor rendering of date, either the date is wrong or not typed in full;
- (4) Name of writer and designation punctuated;
- (5) Mixed style ,that is, blocked and centred style used;
- (6) Poor indentation of paragraphs where paragraphs were typed less than five character spaces;
- (7) Poor paragraphing where a clear line space was left between paragraphs and thus making work blocked as if it were one paragraph work;
- (8) Omission of lines and words coupled with poor rendition of continuation sheets; and
- (9) Double line spacing used instead of single line spacing.

#### **TASK 4: MANUSCRIPT**

This was a straightforward task to be typed in double line spacing. A lot of candidates performed creditably well in this task except a few candidates who might have not prepared well for the examination.

The following errors were identified:

- (1) Typographical errors and overtyping;
- (2) Poor use of line spacing instructions, that is, single line spacing and one and half line spacing were used;
- (3) Omission of words and lines;
- (4) Wrong typing of 'cholesterol' as 'cholestrol', and 'debunk' typed as 'debuak';
- (5) Poor line end division of words like 'cooki-ng' and 'nev-er'; and
- (6) Lack of knowledge of correction signs.

#### **TASK 5: TABULATION**

Many candidates who typed this task performed well. However, some errors were identified as follows:

- (1) Cedi sign could not be typed well as most candidates used either the dollar sign or cent sign;
- (2) Candidates lacked knowledge in the use of dash and the use of hyphen;
- (3) Poor alignment of figures;
- (4) Transposition sign wrongly interpreted to cover the last column;
- (5) Instruction to transpose figures was ignored;
- (6) Some candidates failed to calculate the width of the table before starting the task and as a result creating larger space at the right column;
- (7) Poor ruling of vertical and horizontal lines.

#### **TASK 6: NOTICE OF MEETING**

The majority of candidates typed this task. Some performed creditably well, whilst others put up a poor performance. Some of the errors identified were:

- (1) Mixed style observed, that is, centered headings over indented paragraphs;
- (2) List of items typed inconsistently with the style;
- (3) Candidates typed 'Salas' as 'Sales' and 'Associate' as 'Association';
- (4) Failure to type 'Agenda' in spaced capitals as instructed;
- (5) Failure to obey rubrics to type in double line spacing;
- (6) Upper case characters typed in lower case;
- (7) Failure to render 'AOB', correctly as 'Any Other Business', as some candidates typed this as 'Any Other Memo' or 'Authority of Board'; and
- (8) Telephone numbers were wrongly typed.

# **RESUMÉ OF** **TECHNICAL SUBJECTS**

## 1. **STANDARD OF THE QUESTION PAPERS**

The standard of the papers compared favourably with those of previous years. All the questions were within the syllabus. The standard was the same in content and level of difficulty.

## 2. **PERFORMANCE OF THE CANDIDATES**

According to comments by the Chief Examiners, performances of candidates were encouraging in Technical Drawing 3 in some schools, and very poor in others. Technical Drawing 2 performance was not bad. Performance in Auto Mechanics 3 was better, whilst there is a serious decline of performance in Auto Mechanics 2.

Candidates' performances in Woodwork 2 and 3 were satisfactory and slightly better respectively. Those of Building Construction 2 and 3 were reported to have improved although some candidates in Paper 2 appeared not to be ready for the examination.

In Information and Communication Technology 2, the Chief Examiner reported of an average performance whilst the Paper 3 showed localized brilliant performances. That is to say, candidates in some schools performed excellently whilst others produced very poor work. Performance in Electronics 2 was described as poor and in Electronics 3, it was at par with that of the previous year. Most candidates did not perform well in Metalwork 2 according to the Chief Examiner, but performance in Metalwork 3 was satisfactory.

## 3. **A SUMMARY OF CANDIDATES' STRENGTHS**

The Chief Examiners identified the following commendable features in candidates' work.

### (1) **ORDERLY PRESENTATION OF ANSWERS**

It was mentioned in the reports of Metalwork 2, ICT 2, Building Construction 2 and 3 that an appreciable number of candidates adhered to the rubrics of their respective papers. Attempted questions were clearly numbered, handwritings were legible enough and most candidates attempted new questions on fresh pages.

### (2) **APPRECIABLE KNOWLEDGE OF THE SUBJECT MATTER**

The Chief Examiners pointed out that responses provided by candidates showed very good knowledge in their field of study.

In ICT 3 candidates showed an improvement in query creation. In Technical Drawing 3, most candidates who opted for the mechanical drawing showed improvement over previous years. The draughtsmanship of most candidates was encouraging. In Technical Drawing 2, candidates were accurate in their measurement of lines and angles and also proper convention for centre lines was adopted. Some candidates in Electronics 2 had in-depth knowledge of classes of amplifiers and combinational logic circuit. Calculating electrical power and energy in a d.c. circuit was well done in Applied Electricity 2. In Metalwork 3 candidates' familiarity with the technical terminology and ability to interpret detailed drawings were commended.

(3) **EXHIBITION OF GOOD PRACTICAL SKILLS**

It was reported that candidates' ability to interpret the working drawing and mark out correctly had improved in Woodwork 3 and in Electronics 3, majority of the candidates understood the questions and the circuit diagrams and performed the two experiments.

3. **A SUMMARY OF CANDIDATES' WEAKNESSES**

The Chief Examiners identified the following weaknesses in candidates' work:

(1) **POOR USE OF ENGLISH LANGUAGE**

Candidates of Building Construction 2 and 3 were said not to be able to spell simple four letter words used in the industry. In ICT 2, candidates had poor communication skills.

(2) **LIMITED KNOWLEDGE IN SUBJECT MATTER**

The Chief Examiners indicated in their reports that the responses candidates gave to some questions pointed to their limited knowledge in the subject matter. In Technical Drawing 2, some candidates were said to be drawing as if they were not using a combination of T-square and set squares resulting in parallel lines being unparallel. Then again candidates were given a figure that showed intersection of two square pipes but they drew elevation of two cylindrical pipes. Candidates for Auto Mechanics 2 used diagrams and sketches which were not workable in supporting descriptions of engine parts. Candidates could not answer questions on brakes nor give reason for decarbonizing an engine.

The Chief Examiner for Woodwork 3 reported that most candidates were unable to read and interpret the working drawings correctly and could not mark out correctly. In Woodwork 2, candidates could not state the reason why a lubricant is used on an oilstone when sharpening a tool. Most candidates did not apply the theory knowledge of the series connected resistors in a d.c. circuit in Electronics 3. Most candidates exhibited weakness in the definition of laws in Electronics 2.

The electronics section of Applied Electricity 2 was poorly answered. Transistor configurations and basic communication principles were not understood.

(3) **POOR PRACTICAL SKILLS**

Candidates showed poor practical skills in their failure to use well sharpened cutting tools and their inability to mark-out in Woodwork 3. It was observed from candidates' answers in Technical Drawing 3 that assembling of components is a problem to candidates who offered the mechanical drawing option. Candidates who offered building drawing had difficulty in using the scales. Candidates of Auto Mechanics 3 had difficulty in following the correct process of removing cylinder head and the process of slackening of wheel nuts. Candidates could not create L1 Query in ICT 3. Poor finishing and inaccuracies in work dimensions was a weakness in Metalwork 3.

4. **SUGGESTED REMEDIES FOR THE WEAKNESSES**

The Chief Examiners held the view that if the following suggestions could be taken by school authorities and candidates, they will help the candidates to overcome their weaknesses.

- (1) Candidates should use much of their time to read more on their subject and get in tune with technical expressions and words.
- (2) Candidates must be taught the rudimentary skill of using the T-square to draw parallel lines in Technical Drawing 2.
- (3) Books on the subjects need to be recommended for purchase by individual students.
- (4) Candidates should be given adequate exercises on design and drawing to enable them acquire the necessary skills for appreciable level of performance.

- (5) Heads of institutions must ensure adequate coverage of the syllabus before the examination.
- (6) Candidates must be exposed to more laboratory work to build their confidence and skill in practical activities.
- (7) Candidates should be provided with all the tools required in the acquisition of knowledge and skills and be motivated to develop good taste for accurate products.

# **APPLIED ELECTRICITY 2**

## **1. GENERAL COMMENTS**

The standard of the paper has remained the same. It is therefore expected that the overall performance of candidates would improve considerably this year especially in the area of Electronics.

## **2. A SUMMARY OF CANDIDATES' STRENGTHS**

- (1) Candidates' strengths found in the area of solving problems in
  - (i) a series Resistance Capacitance (RC) network and use values to calculate impedance (Z) of the circuit.
  - (ii) calculating Electrical Power and Energy in a d.c. circuit.

## **3. A SUMMARY OF CANDIDATES' WEAKNESSES**

Transistor configuration was not well understood by majority of the candidates.

## **4. SUGGESTED REMEDIES**

- (1) Much interest ought to be generated in students to take electronic section of the syllabus seriously.
- (2) Teachers must guide students to understand principles and theories of Applied Electricity.

## **5. DETAILED COMMENTS**

### **QUESTION 1**

- (a) Define the following terms:
    - (i) electric power;
    - (ii) electric energy.
  - (b) Three resistors are connected in parallel across a 12 volts supply. If the current flowing through each resistor for 45 seconds is 5 mA, 2 mA and 6 mA respectively, calculate the:
    - (i) quantity (Q) of electricity in the circuit;
    - (ii) electrical power (P) consumed;
    - (iii) electrical energy (W) consumed.
- (a) The definition of the terms: (i) electric power and (ii) electric energy did not pose much problem to many of the candidates. However, correct units were not given to the quantities defined.  
Some candidates chose to put down the formula, yet interchanged the units. The units and the correct formula for each quantity is shown below:

QUANTITY	UNIT	FORMULA
Electric Power (P)	Watt	$P = VR, I^2R$ or $\frac{V^2}{R}$ or $\frac{\text{Energy}}{\text{Time(sec)}} = \frac{E}{T \text{ sec}}$
Electric Energy (E)	Joules	Power x time (PT) = VIT
Quantity of Electricity (Q)	Coulomb	I t (where I = current; T= time in seconds or milliseconds Milli = $10^{-3}$ )

Candidates' performance was good.

### **QUESTION 2**

- (a) **Draw and label the power triangle.**  
 (b) **A series RC circuit has a resistance of  $3 \Omega$  and a capacitive reactance of  $4 \Omega$ , calculate the impedance of the circuit.**

A good answered question, especially section (b) which demanded candidates to calculate the impedance of a series RC circuit.

Though the question demanded draw and label the power triangle, unfortunately, some drew the impedance triangle. The triangles are the same but their labeling are different.

### **QUESTION 3**

- (a) **State two sources by which a battery can be re-charged.**  
 (b) **State the principle of operation of the following:**  
 (i) **solar cell;**  
 (ii) **accumulator.**

- (a) The two main sources of re-charging a battery is by using (i) solar cell/photo voltaic and (ii) D.C source obtained from a rectifier and not electric power stated by some candidates. An electric power or electricity is an alternating current (a.c.) and has to be converted to a (d.c.) direct current by the use of a rectifier.
- (b) A poor answered question by many candidates especially (b)(ii) Accumulator. An accumulator/Battery uses two dissimilar electrodes/metals immersed into an electrolyte and the whole unit connected to a d.c. source. This process is called charging. It is therefore an energy storage device which accepts energy and releases the electrical energy when needed.

Candidates' performance was fair.

### **QUESTION 4**

**State the function of the following in a d.c. generator:**

- (a) **yoke;**  
 (b) **poles;**  
 (c) **commutator;**  
 (d) **armature.**

A popular and well answered question. Many candidates were able to state the function of the yoke and poles.

Since they lack the principles of electromagnetic induction, candidates could not state well the function of a commutator and armature in a d.c. generator.

Candidates' performance was generally good.

### **QUESTION 5**

**Draw and label the following npn transistor configurations:**

- (a) **common emitter;**
- (b) **common base;**
- (c) **common collector.**

The circuit symbol and labelling of the three transistor configurations, namely Common Emitter, Common Base and Common Collector were poorly carried out by majority of the candidates.

The circuit connection is named after the electrode which is connected to the common line for the transistor input and output signals.

### **QUESTION 6**

- (a) **Define the gain of an amplifier.**
- (b) **Figure 1 is an inverting amplifier.**

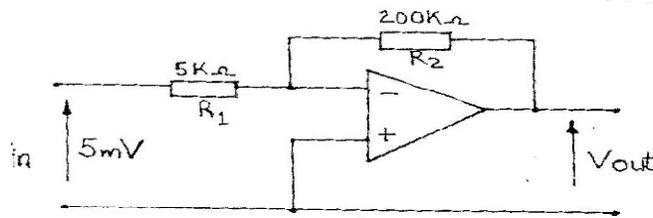


Figure 1

**In Figure 1, calculate the:**

- (i) **voltage gain;**
- (ii) **output voltage.**
- (c) **List two applications of an operational amplifier.**

Although many candidates managed to define the gain of an amplifier, they could not use the inverting op – Amplifier circuit drawn in fig. 1 to get the correct answers for (i) voltage gain and (ii) output voltage for the amplifier.

### **QUESTION 7**

- (a) **Define the term demodulation.**
- (b) **Sketch a labelled diagram of an amplitude modulated wave.**
- (c) **An audio signal of 2.5 kHz is used to modulate a carrier signal of 750 kHz. Calculate the bandwidth of the signal.**

Another poorly answered question. The question is based on basic principles of Radio Communication which some of the candidates lack. Hence, they could not

- (i) sketch the amplitude modulated wave and
- (ii) calculate well to get the correct answer for the bandwidth of the signal.

Candidates' performance was generally poor.

# **APPLIED ELECTRICITY 3**

## 1. **GENERAL COMMENTS**

The standard of the paper compared favourably with that of the previous years.

Candidates' performance in general was slightly below the previous years.

## 2. **A SUMMARY OF CANDIDATES' STRENGTHS**

- (1) Candidates used good scales in plotting their graphs.
- (2) Candidates were able to connect their circuits correctly and therefore had good values.
- (3) Majority of the candidates used the points of best fit in plotting their graphs.

## 3. **A SUMMARY OF CANDIDATES' WEAKNESSES**

- (1) Candidates were unable to compare the value of the slope with the value of the fixed resistor.
- (2) Few candidates could not connect the rheostat correctly.

## 4. **SUGGESTED REMEDIES**

- (1) Teachers should teach students how to connect a rheostat in a given circuit diagram.
- (2) Candidates should be given more exercises to reinforce their practical knowledge and skills.
- (3) Teachers must use Veroboards and Quicktest boards in demonstrating practical lessons to candidates.

## 5. **DETAILED COMMENTS**

**Candidates were provided with the following apparatus:**

**one variable d.c. power supply unit (0-30 V);**

**one rheostat (Rh) 10  $\Omega$ , 6.5 A;**

**one voltmeter (0 – 10 A);**

**one voltmeter (0 – 15 V);**

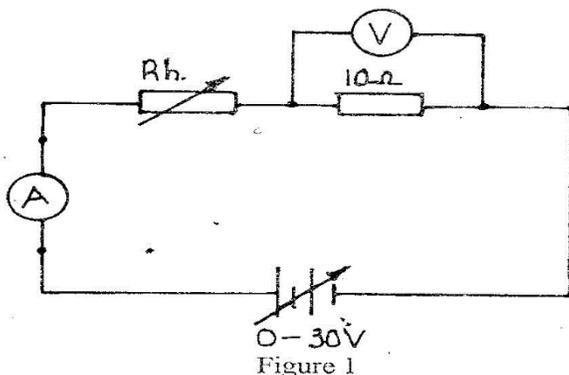
**two 10  $\Omega$ , ½ W resistors**

**a set of handtools;**

**connecting wires.**

## QUESTION 1

AIM: To demonstrate Ohm's law.



- Connect the circuit as shown in Figure 1.
- Ask the supervisor to check the circuit connection.
- Copy Table 1 into your answer booklet.

Table 1

Current (A)	Potential difference (V)
2.00	
1.80	
1.60	
1.20	
1.00	

- Adjust the power supply unit to 20 V and maintain this voltage throughout the experiment.
- Vary the rheostat to indicate a current of 2.0A on the ammeter.
- Read and record the corresponding value of voltage (V).
- Repeat steps (e) and (f) for the other current values in Table 1.
- Plot a graph of potential difference (V) on the vertical axis against current (A) on the horizontal axis.
- Determine the slope of the graph.
- Compare the value of the slope in (i) with the value of the fixed resistor.

Majority of the candidates were able to connect the circuit successfully and therefore had good results.

Few candidates could not connect the polarities of the rheostat and therefore the values of the potential difference varied.

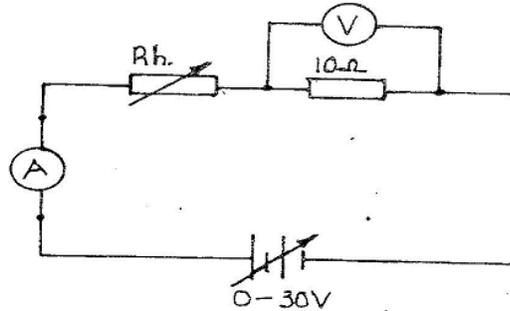
Candidates plotted good graphs using the points of best fits.

Candidates had difficulties in determining the slope of the graphs.

Candidates' performance was fair.

**QUESTION 2**

**AIM: To demonstrate the relationship between current, voltage and power in a d.c. circuit.**



**Figure 2**

- (a) Connect the circuit as shown in Figure 2.
- (b) Ask the supervisor to check the circuit connection.
- (c) Copy Table 2 in your answer booklet.

**Table 2**

Voltage ( $V_2$ )	Voltage ( $V_{R2}$ )	Current (A)(I)	Power (W) $IV_{R2}$
12			
10			
8			
6			
4			
2			

- (d) Adjust the power supply unit to 12 V.
- (e) Read and record the current (A) and voltage drop across the resistor  $R_2$ .
- (f) Repeat steps (d) and (e) for the other values of voltage in Table 2.
- (g) Complete Table 2.
- (h) Compare the voltage drop across  $R_2$  and the power calculated.

Majority of the candidates connected the circuit diagram and were able to vary the voltages to obtain the voltages drops across the resistors

Few candidates failed to indicate the values of power in the Table 2 provided.

Candidates' performance was generally fair.

# AUTO MECHANICS 2

## 1. GENERAL COMMENTS

The paper was comparable to those of previous years. Students' performance this year has seriously declined though a few of them did very well.

## 2. A SUMMARY OF CANDIDATES' STRENGTHS

- (1) Answers to question on precautions observed on checking electrolyte was good.
- (2) A number of candidates could identify some parts of the three sliding mesh gear box and listed the two types.
- (3) Performance on types of vehicle cooling system and the terms syphon was good.

## 3. A SUMMARY OF CANDIDATES' WEAKNESSES

- (1) Diagrams and sketches used in supporting descriptions were not accurate and workable.
- (2) Descriptions of concepts were nebulous.

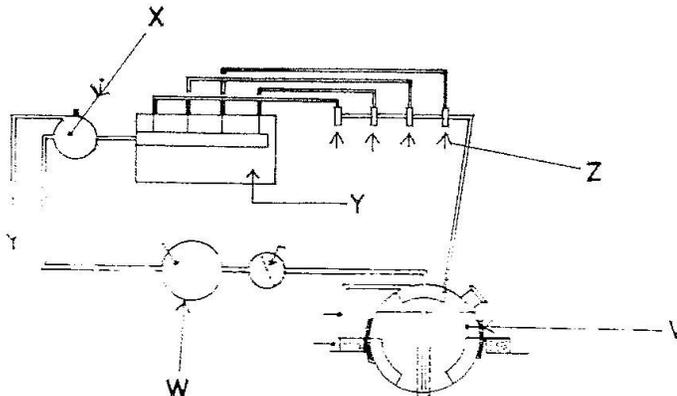
## 4. SUGGESTED REMEDIES

- (1) Candidates/students need to be motivated by instructors.
- (2) Instructors need to reconcile theory with practice.
- (3) Books on the subject need to be recommended for purchase by individual students.

## 5. DETAILED COMMENTS

### QUESTION 1

The sketch in Figure I shows the layout of the fuel supply system of a compression ignition engine.



- (a) **Identify the parts labelled V, W, X, Y and Z.**
- (b) **State the purpose of the part labelled X.**
- (c) **State two merits and two demerits of a compression ignition engine.**

This was the most popular question attempted by a larger number of candidates.

- (a) The correct names for the labelled parts were:
  - V - Fuel tank or tank
  - W - Lift pump or fuel pump
  - X - Fuel filter or filter
  - Y - Injector pump or Injection pump
  - Z - Injector/Atomizer

It is very unfortunate some candidates could not differentiate between the injection pump and injector. Funny names such as ignition pump, tank, ignition rotor, etc were answers given.

- (b) A good number gave the correct answer as fuel filter. The purpose of the fuel filter is to prevent water, sand and dirt from entering the injection pump which can cause corrosion and wear.
- (c) Among the good answers expected were the following:

MERITS

- Better fuel consumption or improved fuel economy
- Higher engine torque
- Less maintenance is required
- Less fire risk
- Greater thermal efficiency
- Cost of fuel is cheaper than petrol
- Exhaust gas is less harmful
- Longer engine life or more durable
- Engine is stronger and more reliable

DEMERITS

- Parts are heavier
- Engine is noisier
- Parts are expensive
- Slower rate of acceleration
- Higher maintenance cost

**QUESTION 2**

- (a) **List three types of oil pump.**
- (b) **Sketch one type of oil pump.**
- (c) **Describe how to change an engine oil.**

- (a) This was one of the questions poorly answered by candidates.

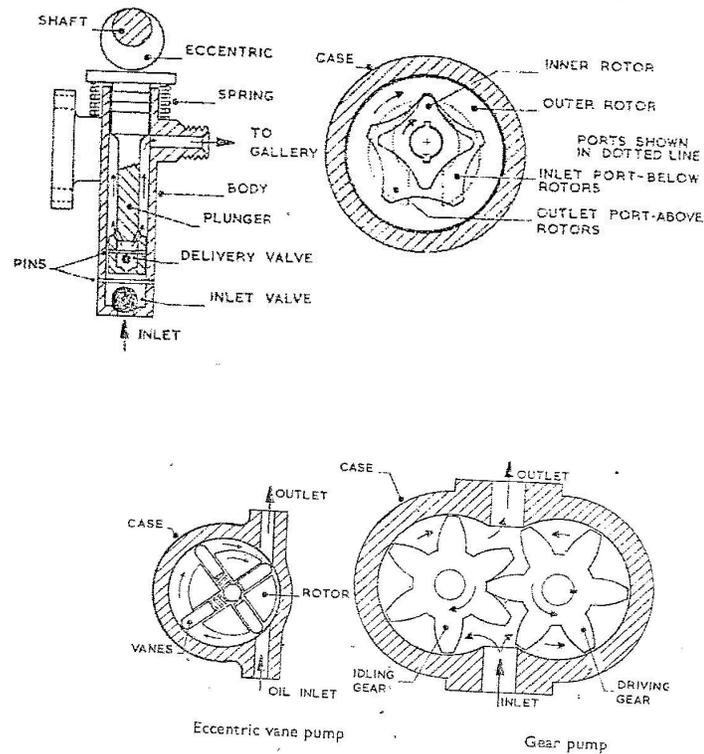
Three (3) types of oil pump include the following:

- Gear pump
- Plunger
- Eccentric vane pump
- Rotor or rotary pump

A lot of strange names such as; mechanical, lasentric, electrical and water pumps were given.

- (b) Sketches produced were nothing to write home about. Candidates were expected to take pains to make accurate sketches which are workable.

Examples of sketches required are shown below:



### QUESTION 3

- (a) State two safety precautions to be observed on each of the following:
- (i) checking the specific gravity of an electrolyte;
  - (ii) jacking a vehicle;
  - (iii) Working on an overheated water-cooled engine.
- (b) (i) What equipment is used to put out fire in an engine.  
(ii) Name the constituent of air that supports combustion.
- (a) (i) Attempts to answer the question were good.

Correct answers given include the following:

- Wear rubber apron or protective clothing
- Keep naked flame away from the battery
- Keep the top of the battery dry
- Avoid spilling of the electrolyte on the battery
- Keep the hydrometer vertically when taking the reading

(ii) This part of the question was not fully answered, some candidates were wrong when they stated that axle stands should be used when jacking a vehicle. Axle stands are used to support the vehicle after jacking the vehicle.

Safety precautions to be observed include:

- Ensure vehicle is on a level ground
- Ensure appropriate jack is used
- Use a jack in a good working condition
- Use wedges to chock the unraised tyres
- Place the jack at the appropriate point

(iii) This question was poorly attempted by candidates.

The required answers include:

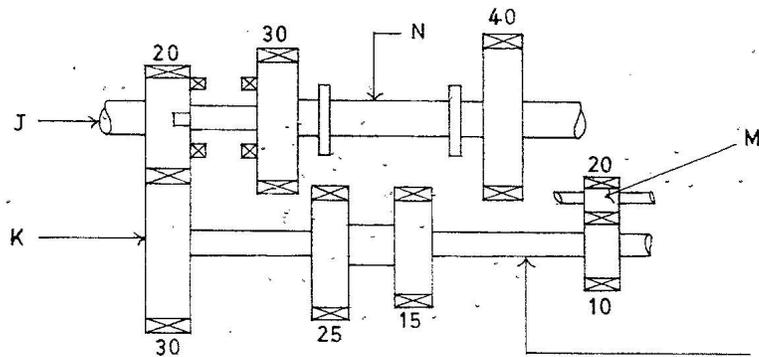
- Switch off the engine
- Open the bonnet
- Allow engine to cool down for a few minutes
- Turn the cap briefly to release the pressure in the system
- Allow the engine to cool down properly before refilling the radiator
- Never pour cold water into the radiator of a hot engine

(b) (i) A good number of candidates stated fire extinguisher.

(ii) A good number stated oxygen while others stated hydrogen.

#### **QUESTION 4**

The sketch in Figure 2 represents a three sliding mesh gearbox in a neutral position.



**Figure 2**

(a) Identify the parts labelled J, K, L, M and N.

- (b) Calculate the first gear ratio.
  - (c) Calculate the reverse gear ratio.
  - (d) List the two types of gear teeth used in a constant mesh gearbox.
- (a) A few of the candidates did well, others had problem with M, which they gave names as reverse gear, input gear, intermediate gear, etc.

The labelled parts were:

- J - Input, clutch, primary, first motion or spigot shaft.
- K - Constant mesh gear
- L - Layshaft or countershaft
- M - Reverse idler gear or idler gear
- N - Mainshaft, output or third motion shaft

- (b) Unfortunately no candidate was able to calculate the first gear ratio.

The first gear ratio is calculated as follows:

By formula;

$$\begin{aligned}
 G.R &= \frac{\text{Driven}}{\text{Driver}} \times \frac{\text{Driven}}{\text{Driver}} \\
 &= \frac{30}{20} \times \frac{40}{15} \\
 &= 4:1
 \end{aligned}$$

Gear Ratio in the 1<sup>st</sup> gear = 4:1

- (c) The calculation of the reverse gear ratio is as follows:

$$\begin{aligned}
 R.G.R &= \frac{\text{Driven}}{\text{Driver}} \times \frac{\text{Driven}}{\text{Driver}} \times \frac{\text{Driven}}{\text{Driver}} \\
 &= \frac{30}{20} \times \frac{20}{10} \times \frac{40}{20} \\
 &= 6:1
 \end{aligned}$$

- (d) Quite a good number of the candidates had it correct and others were wrong. Answers expected were: spur gears or Helical gears.

### **QUESTION 5**

- (a) List the two forms of cooling system employed in motor vehicle engines.
- (b) (i) With aid of a sketch, describe how the thermos-siphon system operates.  
(ii) Label four parts of the sketch in (b)(i).
- (c) Name the two types of thermostat used in a cooling system.

- (a) Candidates' performance was good but some were confused stating the types of cooling employed in the water cooling system.

The two forms of cooling system are:

(1) Air cooling and (2) Water cooling system.

- (b) Those who attempted to describe the operation of the thermos-syphon system did well.
- (i)&(ii) Sketches which were provided were different from the thermos-siphon pump assisted cooling.
- (c) The answers given were the Bellow and Wax type but even that, candidates had problem with how these two words were spelt.

# **AUTO MECHANICS 3**

## 1. **GENERAL COMMENTS**

The standard of this year's paper compares favorably to that of the previous years.

Candidate's performance was better this year.

## 2. **A SUMMARY OF CANDIDATES' STRENGTHS**

- (a) Most candidates were able to remove the cylinder head for De-carbonization of combustion chamber:
- (b) Examination of cylinder head gasket was fairly done by most candidates.
- (c) Some candidates were able to remove the brake drum and examine its inner parts.
- (d) Examination of brake shoes was properly done by most candidates.

## 3. **A SUMMARY OF CANDIDATES' WEAKNESSES**

- (a) Candidates could not Explain the purpose of de-carbonizing of cylinder head.
- (b) Candidates could not name the essential tools needed for de-carbonizing.
- (c) They could not follow the correct process of removing brake drums.
- (d) Candidates could not follow the correct process of slackening wheel nuts.
- (e) They had difficulty in the adjustment of brake band.
- (f) Answering of questions on brakes was a problem for candidates.
- (g) Most candidates had challenges with refitting of the road wheel.

## 4. **SUGGESTED REMEDIES**

### **QUESTION 1**

- (a) Teachers should give reasons to students why de-carbonizing is done during classes as well as explain the brake system to students.
- (b) Students should be guided to select and use all the necessary tools for de-carbonizing an engine.
- (c) Students should be guided to organize the process of decarbonizing an engine
- (d) Students should be guided in the use of the right tool and the correct procedure of removing and re-tightening of cylinder head as well as correct techniques of slackening of road wheels

## 5. **DETAILED COMMENTS**

### **QUESTION 1**

**From the engine provided:**

- (a) **Remove the cylinder head.  
Report to the examiner.**
- (b) **Examine the combustion chamber.  
Report to the examiner.**
- (c) **De-carbonize the combustion chamber.  
Report to the examiner.**
- (d) **Examine the cylinder head gasket.  
Report to the examiner.**
- (e) **Answer two relevant questions from the examiner.**
- (f) **Refit the cylinder head on the engine block.  
Report to the examiner.**

(a) Though candidates were able to remove the cylinder head, the procedure for the removal was not done orderly. Instead of being done radially it was mostly done serially.

This is done by using a socket of the correct size and a solid bar, starting from the centre and working radially outwards.

- (b) The combustion chamber is mostly in the cylinder head and so visually it is inspected for faults, i.e. cracks, carbon deposits, etc. This was fairly done by candidates.
- (c) Using a flat tool scrape off any carbon deposit in the combustion chamber. This was also fairly done by most candidates.
- (d) By visual inspection, the cylinder head gasket is examined if burnt or torn out. Perfectly done by candidates.
- (e) Most candidates did not know the causes of carbon deposit in the cylinder head.
- (f) The method of placing the cylinder head on the engine block, the selection of the correct tools to be used and the process of re-tightening were not well done by candidates.

## **QUESTION 2**

**From the vehicle provided:**

- (a) **Remove one rear wheel specified by the examiner.  
Report to the examiner.**
- (b) **Remove the brake drum and examine its inner part.  
Report to the examiner.**
- (c) **Examine the brake shoes.  
Report to the examiner.**
- (d) **Check the condition of the brake springs.  
Report to the examiner.**
- (e) **Adjust the brake.  
Report to the examiner.**
- (f) **Answer two relevant questions from the examiner.  
Report to the examiner.**
- (g) **Refit the brake drum.**

**Report to the examiner.**

**(h) Refit the road wheel.**

**Report to the examiner.**

- (a) Candidates lacked the correct techniques of slackening road wheels and in some cases could not select the right tools for the task.
- (b) Quite a good number of candidates were able to remove the brake drum. Using either a flat or star screw driver or a spanner of the correct size the brake drum is removed in order to gain access to the brake shoes.
- (c) This was properly done by most candidates.
- (d) Well done by all candidates.
- (e) Most candidates could not select the correct tool and did not know the correct process of adjusting brakes.
- (f) Answers to questions on brake operation and faults were not satisfactory.
- (g) & (h) Candidates had challenges in the correct process of refitting of brake drum and the correct process of road wheel re-tightening.

# **BUILDING CONSTRUCTION 2**

## 1. **GENERAL COMMENTS**

The standard of the paper compared favourably with that of the previous year. Candidates' performance was slightly better than that of the previous year. It was above average performance.

## 2. **A SUMMARY OF CANDIDATES' STRENGTHS**

- (1) Attempted questions were clearly numbered for easy identification.
- (2) Handwritings were legible enough.
- (3) Most candidates answered new questions on fresh pages.
- (4) Sub-questions for a particular question number followed in order as required.
- (5) Answers supplied by some candidates were in a logical manner indicating improvement in performance.

## 3. **A SUMMARY OF CANDIDATES' WEAKNESSES**

Candidates' weaknesses include:

- (1) Poor spelling of words.
- (2) Re-copying of the questions into the answer booklet without providing answers.
- (3) Provision of unrelated responses to questions.
- (4) Poor use of technical terms and jargons.

## 4. **SUGGESTED REMEDIES**

- (1) Candidates should take their preparation period for the examination very serious. They should have time to read and practise sketches so as to acquire the skills needed.
- (2) Teachers should give exercises and teach students how to answer them.
- (3) Candidates should be encouraged by their teachers to use the appropriate technical terms and jargons in their writings.
- (4) Students should visit construction sites to link theory to practice.

## 5. **DETAILED COMMENTS**

### **QUESTION 1**

- (a) **State three reasons for finishing a concrete floor with a cement sand screed.**
- (b) **With the aid of a sketch, illustrate the method of laying drain pipe using a gauge board and a spirit level.**

**(c) State two safety precautions to be taken in carrying out electrical installation work in a domestic building.**

- (a) Reasonable answers were given, yet some were of the view that the cement-sand screed prevents plant growth; beautifies the building and also increase the strength of the floor concrete.
- The provision of floor concrete is to prevent plant growth and not the screeding work.
  - The floor screed rather beautifies the floor and not the building.
  - The strength of the concrete cannot be altered by the application of the floor screed.

Some of the expected answers were:

- It is cheap.
- It has the ability to resist indentation.
- It is hand wearing.
- It is easy to lay or place in position.
- It is easy to produce on site.
- It can be laid to any thickness required.

- (b) Some candidates were able to sketch correctly, but most candidates sketched something different. A correct sketch should illustrate the following items in place:

- A drain pipe placed on pegs.
- A gauge board with a tapered side placed on the drain pipe.
- A spirit level placed on gauge board.
- The slope is determined by adjusting the pegs where necessary.

- (c) Some of the answers given by candidates were:

- Cover all electrical cables/wires.
- Put off all gadgets.
- The meter should be put off.
- Plugs should be tight.

The above answers did not satisfy the demands of the question because:

- Covering the electrical cables/wires were vague.
- Cable used for domestic installation work are already sheathed.
- Electrical gadgets are not part of the installation work.
- A meter in a domestic installation is only used for measuring consumption of power used.
- Fixing wall plugs play no part in an installation work.

Some required answers are:

- Use sheathed wires or cable for the work.
- Provide fuse to check overload.
- Provide earthen wire to check stagnant current.

- Use of correct wire sizes for installation.

## **QUESTION 2**

- (a) **State two reasons for providing temporary support to sides to excavation.**
- (b) **List four desirable properties of aggregates for the production of concrete.**
- (c) **Sketch a cross-section through a retaining wall and indicate the following:**
  - (i) **heel;**
  - (ii) **toe;**
  - (iii) **weephole;**
  - (iv) **retained earth.**

- (a) Good answers like
  - Preventing the sides of the trench from caving in.
  - To give protection to men working in the trench.
  - Safety of adjoining properties while the excavation remains open for a long time.
  - When the excavation is deep.
  - Where the soil is loose.were given:

However wrong answers like

- Supporting the foundation
  - Making the foundation straight and preventing rainwater into the trench
- were stated by some candidates.

- (b) The question examined candidates on four desirable properties of aggregates for the production of concrete. The term aggregates was used for both fine aggregate and coarse aggregate.

Property of an aggregate means either quality or distinctive feature(s) that must be taken into consideration before using the aggregate.

Some of the properties looked for are:

- Should be clean.
- Should have a satisfactory strength.
- Must be durable.
- Must be well graded.
- Must be inert
- Free from impurities.

Some candidates stated function of aggregates in a concrete mix instead of the properties.

- (c) The required answers for the question were:

- a retaining wall either in concrete or sandcrete brick/blockwall.
- introduction of weephole to reduce pressure behind the wall.
- indication of ground level.
- portion of the retained earth.
- heel and toe of the concrete foundation.

Sketches produced by candidates were not concise and therefore could not measure to what were expected.

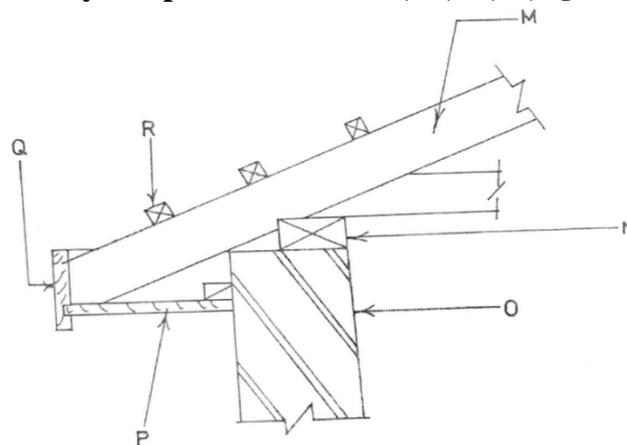
Some foundations for the retaining wall were horribly sketched. Retaining walls were not properly presented. Some did not have foundations to support the wall.

Ground level was shown at the top of the retaining wall defeating the purpose for erecting a retaining wall.

The position of the weephole in the wall could not drain water behind the wall to reduce water pressure.

### **QUESTION 3**

- (a) **List five walling materials for a domestic building.**
- (b) **State one advantage each for the use of the following:**
- metal window frames;**
  - timber window frames.**
- (c) **Fig. 1 shows the sketch of a section through a closed eaved roof. Identify the parts labelled M, N, O, P, Q and R.**



**Fig-1**

- (a) Some of the required materials are:  
Sandcrete block/brick, plastic, metal, glass, concrete, clay brick, stone, bamboo, timber and adobe blocks.

Surprisingly, candidates listed tools for laying walls. Other examples of wrong answers listed were: sand, gravels, paint, nails, reinforcement bars and clay.

- (b) Good answers were given or stated for one advantage each for the use of metal window frame.
- (c) Candidates could identify the elements in the closed eaved roof asked for. Nevertheless, some could not spell the names of the elements correctly. Others recopied the sketch into their booklets.

#### **QUESTION 4**

**(a) State one function each of the following in a water-closet cistern:**

- (i) ball valve;**
- (ii) overflow pipe.**

**(b) Sketch to illustrate a double-bowl kitchen sink.**

**(c) State three functional requirements of an inspection chamber.**

- (a) (i) Satisfactory answers were given by some candidates. Yet, some thought that the ball valve operates as the flushing arm or the overflow pipe.  
The only function of the ball valve is to control the water supply in a cistern.
- (ii) The overflow pipe takes excess water from the cistern to a convenient place to avoid flooding in the room and not a service pipe or a supply as stated by some candidates.
- (b) The sketch of a double-bowl kitchen sink was partially produced. The draining board of the sink extends on both the left hand side and the right hand side and not just bowls without draining board. Each bowl has a hole in it to drain water. Some bowls were without holes to drain off water.
- (c) Some functions of an inspection chamber are:
  - to exclude sub-soil moisture into the tank.
  - be water-tight to prevent leakage of the foul water in the tank.
  - allow access into drain for inspection.
  - allow access into drain for inspection and cleansing.

Some perfect expressions were made with regard to the demand of the question. Answers relating to constructional requirements of an inspection chamber were wrongly supplied as answers to the question.

#### **QUESTION 5**

**(a) Sketch the conventional symbol for each of the following:**

- (i) bath tub;**
- (ii) switch socket outlet;**
- (iii) kitchen sink;**
- (iv) water closet.**

**(b) State causes of accident on site.**

- (a) The performance indicates that candidates were not abreast with the use of symbols. Some reasonable sketches were made for bath tub and switch socket outlet. Incomplete sketches were also made for the kitchen sink and the water closet. Some sketches could not be explained or construed.
- (b) Moderate answers were given for the three causes of accident on site. The question looked at causes of accident on site and not effect of accident on site.

# **BUILDING CONSTRUCTION 3**

## 1. **GENERAL COMMENTS**

The paper compared favourably with that of the previous year. The pattern of questioning, difficulty or flexibility of structure has not changed. Candidates' performance was average.

## 2. **A SUMMARY OF CANDIDATES' STRENGTHS**

Candidates demonstrated the following strengths:

- (1) Most candidates numbered their responses very well and arranged their work neatly.
- (2) Almost all the questions were attempted by the candidates.

## 3. **A SUMMARY OF CANDIDATES' WEAKNESSES**

These include:

- (1) Poor spelling of words and technical terms.
- (2) Poor sketches of objects and inappropriate methods of labelling objects.
- (3) Poor indication and use of dimensioning lines and arrows.
- (4) Lack of understanding of the questions in their context.
- (5) Inability of candidates to use the appropriate technical terms and jargons.

## 4. **SUGGESTED REMEDIES**

- (1) Candidates should be encouraged to read wide on the subject.
- (2) More exercises should be given to student to practise how to sketch and label parts of objects.
- (3) Teachers should endeavour to complete the syllabus with students before they sit for the examination.
- (4) Teachers should use the technical terms and jargons in their lessons and encourage students to use them.

## 5. **DETAILED COMMENTS**

### **QUESTION 1**

**Fig. 1 shows a pictorial sketch of part of a building built with sandcrete block walls and corrugated roofing sheets. Use it to answer the following questions:**

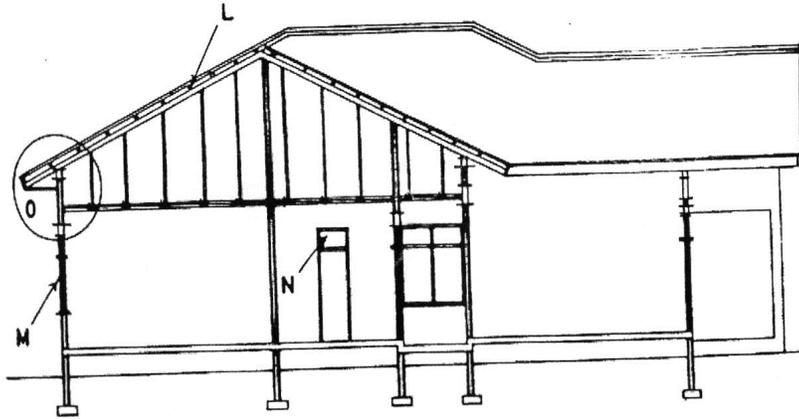


Fig.1

- (a) (i) Identify the elements labelled L, M, and N.  
(ii) State one function of each of the elements labelled in (a)(i).
- (b) Sketch to illustrate how the subsoil moisture is prevented from getting to the top of the ground slab and label the following elements:  
(i) external wall;  
(ii) damp proof course;  
(iii) damp proof membrane;  
(iv) concrete foundation;  
(v) external render;  
(vi) sand blinding.
- (c) Show the constructional detail at O, to illustrate how birds are prevented from getting into the building and label any two parts.
- (d) A framed, ledged braced and battened door is used for the garage. Sketch a vertical section through the door and label the following:  
(i) frame;  
(ii) ledge;  
(iii) brace;  
(iv) batten.
- (a) (i) Candidates answered well.  
(ii) Responses were good though a few deviated in the answers.
- (b) The exact positions of the damp proof course, damp proof membrane, sand blinding and finished ground levels were poorly located on the sketch.
- (c) Sketching was poor. Actual positions of requested roof members were not well indicated.
- (d) Majority of the candidates produced the elevation of the braced batten door instead of the cross-sectional details asked for. Many more presented panel doors for answers.

## **QUESTION 2**

- (a) **State four advantages of using precast concrete over in-situ concrete in lintel construction.**
- (b) **Sketch a cross-section through a pad foundation and label the following parts:**
  - (i) **main reinforcement in column;**
  - (ii) **stirrup in column;**
  - (iii) **main reinforcement in foundation;**
  - (iv) **concrete in pad foundation.**
- (c) **A trench measuring 2000 mm deep and 450 mm wide is to be excavated in a moderately firm soil. State two factors that would necessitate the use of mechanical plant for its excavation.**

- (a) Candidates' responses lacked the needed technical substance. There was clear evidence that candidates knew very little about precast components and its construction.
- (b) Generally, candidates' sketches were poor. The reinforcement elements were poorly sketched and their positions wrongly indicated on the sketch.
- (c) Quite a good number of candidates who attempted this question seemed not to have understood the question and its context. There was much deviation. Candidates' answers mostly centred on the nature of soil.

## **QUESTION 3**

- (a) **Sketch to illustrate how the following operations are carried out when bonding blockwalls:**
  - (i) **plumbing the edge of a wall;**
  - (ii) **levelling the top of a wall.**
- (b) **State five processes required to cast a solid ground floor slab on a compacted hardcore filling.**

- (a) The bonded walls was well sketched. Majority indicated the required operations using the appropriate tools.
- (b) Majority could not answer the question well. This area of the syllabus needs to be revisited.

## **QUESTION 4**

- (a) **State one reason for each of the following site practices:**
  - (i) **erection of site hutments;**
  - (ii) **providing a first aid box on site;**
  - (iii) **a visit by the factories inspectors to the site.**
- (b) **State the purpose for providing each of the following drainage facilities:**
  - (i) **soakaway pit;**
  - (ii) **septic tank;**
  - (iii) **water closet sanitary fitting.**
- (c) **State two methods of jointing P.V.C. drain pipes.**
- (d) **List two types of safety clothing to be worn when performing each of the following operations:**

- (i) **placing concrete in an upper floor;**
  - (ii) **digging of foundation trench.**
- (a) (i) Good responses.
  - (ii) Good attempts with good responses.
  - (iii) Majority of candidates answered wrongly. Most responses described the job of the Building Inspector or Clerk of Works.
- (b) (i) Responses was generally poor.
  - (ii) Very poor responses. Most candidates exchanged water resevoirs with the septic tank.
  - (iii) Candidates could not answer well.
- (c) Answers were not good. Candidates lacked in-depth knowledge of the topic.
- (d) Good responses but poor spelling of the names of the element dominated.

### **QUESTION 5**

- (a) State four functional requirements of a roof.**
- (b) State four factors that affect the quality of clay bricks during manufacture.**
- (c) State four reasons for the use of a kerb in access road construction.**

- (a) Good attempt with good responses.
- (b) Most answers given by candidates were wrong.  
It is as if most candidates did not understand the question and its context. as indicated earlier.
- (e) The topic on road kerbs will need an emphasis and treatment. This is because abstract responses were received. Many indicated that road kerbs prevent accidents on the road, etc.

### **QUESTION 6**

- (a) Sketch the plan of each of the following types of stair:**
  - (i) open well;**
  - (ii) dog leg.**
- (b) Explain two methods of curing concrete on site.**
- (c) Explain the difference between a balustrade and baluster.**
- (d) State the main reason for covering steel reinforcement bars on site.**

- (a) Majority provided the required sketch. A few however went ahead to sketch sectional views thereby deviating.
- (b) Two methods of curing was poorly answered. The problem was with the explanation.

- (c) The difference between balustrade and balusters were not well answered.
- (d) This question was well answered by the majority who attempted.

# **ELECTRONICS 2**

## 1. **GENERAL COMMENTS**

The standard of the paper was good and compared favourably with that of the previous years.

Performance of the candidates compared with that of the previous year was poor.

## 2. **A SUMMARY OF CANDIDATES' STRENGTHS**

- (1) Some of the candidates had in-depth knowledge of classes of amplifiers and combinational logic circuit.
- (2) Some of the candidates too were able to recall the difference between transistors and valves correctly.
- (3) Some of the candidates had fair knowledge in the use of oscilloscope.

## 3. **A SUMMARY OF CANDIDATES' WEAKNESSES**

- (1) Majority of the candidates did not demonstrate knowledge and understanding in Electronics.
- (2) Majority of the candidates did not answer their questions satisfactorily.
- (3) Most candidates had difficulty in drawing circuit symbols correctly.
- (4) Most of the candidates did not prepare adequately for the examinations.
- (5) Most candidates exhibited weakness in the definition of laws.

## 4. **SUGGESTED REMEDIES**

- (1) Candidates should be taught the techniques of answering questions.
- (2) Candidates should read electronic textbooks widely to broaden their knowledge in the subject.
- (3) Some recommended Electronics textbooks should be made available to students.
- (4) Heads of Institutions must ensure adequate coverage of the syllabus Electronics before the examination.

## 5. **DETAILED COMMENTS**

### **QUESTION 1**

- (a) **Draw and label the circuit diagram required to convert a galvanometer to**
  - (i) **an ammeter;**
  - (ii) **a voltmeter.**
- (b) **List four quantities that can be measured with the cathode ray oscilloscope.**

- (a) (i) Candidates' response to the question was fair. Some candidates were able to draw and label the circuit diagram required to convert a galvanometer to an ammeter correctly while others could not. The overall response to the question was fair.
- (ii) Most of the candidates could not draw and label the circuit diagram correctly. Candidates lacked knowledge in this direction and the overall performance was poor.
- (c) Candidates' response to this question was fair. Some candidates were able to list the four quantities correctly.

## QUESTION 2

- (a) **State Kirchhoff's current law.**

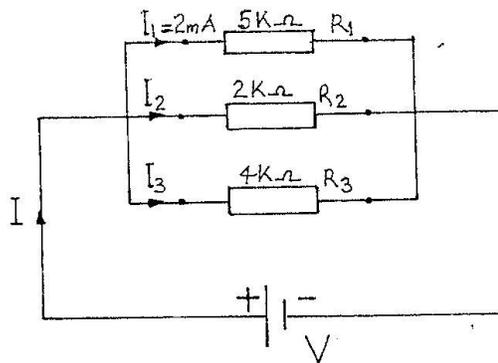


FIG. 1

- (b) **In figure I, calculate**

- (i)  $V$ ;  
(ii)  $I_2$ ;  
(iii)  $I_3$ ;  
(iv)  $I$ .

- (a) Candidates' response to the question was fair. While some candidates defined the law accurately, others were found wanting. However, the overall response to the question was fair.
- (b) Some candidates exhibited knowledge in calculating voltage and branch currents. Other candidates exhibited weakness in that direction. The overall performance of candidates was fair.

## QUESTION 3

- (a) **Define electric field strength.**
- (b) **Draw the circuit diagram of a**
- (i) **charging capacitor;**  
(ii) **discharging capacitor.**

- (a) This question was not popular among candidates. Majority of the candidates could not define electric field strength correctly. Candidates have very little knowledge in this area. The overall performance was very poor.
- (b) (i) This question was also not popular among candidates. Majority of candidates could not draw the circuit diagram of a charging capacitor correctly. Candidates lacked knowledge in this area (CR circuit) Candidates' performance was also very poor.
- (ii) Majority of the candidates exhibited the same weakness as in 3(b)(i). Candidates' performance was very poor.

#### **QUESTION 4**

- (a) **List four classes of amplifiers.**
  - (b) **State the class of amplifier with the**
    - (i) **least collector efficiency;**
    - (ii) **highest collector efficiency.**
  - (c) **Draw and label the circuit diagram of an inverting operational amplifier.**
- (a) This question was popular among candidates. The overall performance of candidates was very good.
  - (b) (i) Majority of the candidates lacked knowledge in the area of amplifiers and their efficiencies. Most candidates performed poorly. Candidates could not respond to the question.
  - (ii) Majority of the candidates lacked knowledge in this area as well. The overall performance of candidates was very poor.
  - (c) This question was not popular among candidates. Majority of the candidates could not draw and label the circuit diagram of an inverting operational amplifier. Candidates lacked knowledge in this area. The overall performance of candidates was very poor.

#### **QUESTION 5**

- (a) **State four advantages of the transistor over the thermionic valve.**
- (b) **Draw and label the circuit symbol of a P-channel field effect transistor.**
- (c) **A transistor amplifier connected in common emitter mode has a collector load resistance of 2,000  $\Omega$ . If the short-circuit current gain (h<sub>fe</sub>) of the transistor is 100, and its input resistance ( $R_{in}$ ) is 1,000  $\Omega$ . Calculate the voltage gain.**

- (a) Some candidates were able to list four advantages of transistor over thermionic valve correctly. On the other hand, some candidates fell short in this direction. The overall performance of candidates was fair.
- (b) Most candidates could not draw and label the circuit symbol of a P-channel FET.
- (c) This was not a popular question. Candidates exhibited lack of knowledge in voltage gain. Majority of the candidates performed poorly.

### **QUESTION 6**

- (a) **Draw the**
  - (i) **Combinational logic circuit for the Boolean expression:**  

$$F = \overline{AB + CD}$$
  - (ii) **Truth table for an EX – OR logic gate.**
  - (iii) **Circuit symbol of the EX – OR logic gate.**
- (a) (i) This question was fair to candidates. Some candidates were able to draw the combinational logic circuit correctly while some could not. The overall performance of candidates was good.
- (ii) Candidates' performance was average. Some candidates could draw the truth table of an EX-OR gate correctly. However, some could not live up to expectation.
- (iii) This question was not popular. Majority of the candidates could not draw the circuit symbol of EX-OR gate. Candidates' performance was very poor.

### **QUESTION 7**

- (a) **Explain the effect of feedback in control systems.**
- (b) **Describe how thermostat in the following appliances provide feedback:**
  - (i) **Air conditioner;**
  - (ii) **Refrigerator.**
- (a) This was not a popular question. Candidates lacked knowledge in basic control systems. The overall performance of candidates was very poor.
- (b) (i) This was not a popular question. Majority of the candidates could not respond to the question. Candidates exhibited lack of knowledge in control systems. Candidates' performance in this question was very poor.
- (ii) This question was also not popular among candidates. Candidates exhibited lack of knowledge in control systems. Candidates' performance in this question was also very poor.

# ELECTRONICS 3

## 1. GENERAL COMMENTS

The standard of the paper is comparable to that of the previous years. Candidates were allowed to use alternative components and apparatus where necessary. Performance of the candidates compared to that of the previous year was at par.

## 2. A SUMMARY OF CANDIDATES' STRENGTHS

- (1) Majority of the candidates understood the questions and the circuit diagrams and performed the two experiments.
- (2) Candidates followed the instructions and the steps as demanded in the two experiments.

## 3. A SUMMARY OF CANDIDATES' WEAKNESSES

- (1) Few candidates had negative current readings thinking that since Zener diode is reversed biased the readings will be in the reverse directions.
- (2) Most candidates did not apply the theory knowledge of the series connected resistors in a d.c. circuit.
- (3) Candidates lacked the understanding that varying a series bleeder resistance and varying a load resistance will affect the output voltage of a Zener diode.

## 4. SUGGESTED REMEDIES

- (1) Candidates should be exposed to more laboratory work to build their confidence and skill in practical activities.
- (2) Teachers should teach candidates how to select correct scales for drawing graphs from experimental results.

## 5. DETAILED COMMENTS

### QUESTION 1

The aim of the experiment is to investigate the effect of varying load on the output of a Zener diode.

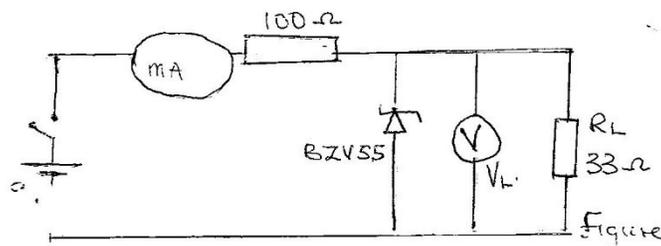


Figure 1

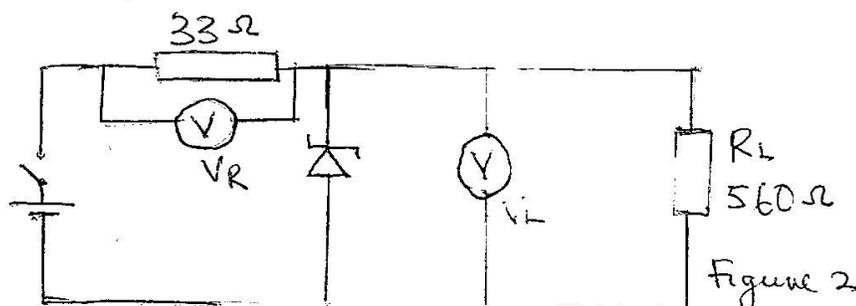
**Table 1**

$R_L$	$V_L$	$I(\text{mA})$
33 $\Omega$		
47 $\Omega$		
100 $\Omega$		
1 k $\Omega$		
10 $\Omega$		

- Experiment one tested the effect of varying load on the output of a Zener diode.
- Few candidates were not able to read the ammeter correctly.
- Majority of the candidates obtained good results but were not able to plot accurate graphs.
  
- Performance was generally fair.

**QUESTION 2**

The aim of the experiment is to investigate the effect of varying the input voltage on the output of a Zener diode.



**Table 2**

$R(\Omega)$	$V_R(\text{V})$	$V_L(\text{V})$
33 $\Omega$		
47 $\Omega$		
100 $\Omega$		
470 $\Omega$		
1k $\Omega$		

- Experiment two tested the effect of varying the input voltage on the output of a zener diode.
- Majority of the candidates did not obtain good results due to inability to read the instruments correctly.
- Candidates did not apply the theory knowledge of voltage divider rule as demanded in the experiment set up circuit.
- Performance was generally fair.

# **INFORMATION AND COMMUNICATIONS**

## **TECHNOLOGY (ELECTIVE) 2**

### 1. **GENERAL COMMENTS**

The standard of the paper compared favorably with the previous papers in the areas of content and level of difficulty.

The paper was well within reach of the candidates and the general performance was similar compared to that of last year.

### 2. **SUMMARY OF CANDIDATES' STRENGTHS**

- (1) In general, candidates responded to the questions as demanded by the rubrics.
- (2) A few candidates exhibited good knowledge of the subject matter.
- (3) A greater number of candidates expressed themselves much better in the English Language than exhibited before.
- (4) Only a few candidates answered all the questions or more than required, contrary to the situations of the previous examinations.

### 3. **SUMMARY OF CANDIDATES' WEAKNESSES**

The following were the main candidates' weaknesses identified:

- (1) Inability to appreciate the key requirements of the questions.
- (2) Apparent inadequate preparation.
- (3) Little or no evidence that candidates planned answers before writing them down.
- (4) Poor communication skills.
- (5) Some of the candidates had bad handwriting.
- (6) Some candidates demonstrated in their answers that they had little or no knowledge of the examination syllabus.

### 4. **SUGGESTED REMEDIES**

- (1) Candidates should carefully read through the questions, selecting those to be attempted and planning the answers before writing them out.
- (2) Candidates should learn with suitable textbooks and material on ICT and carefully use the Internet as a learning tool.

- (3) Candidates should avoid the use of inappropriate standards of communication such as those on the various social media platforms.
- (4) Candidates should plan to read through their answers to correct any errors as well as add further details.
- (5) Teachers of the ICT Elective subject should learn to adhere to the syllabus as much as possible.

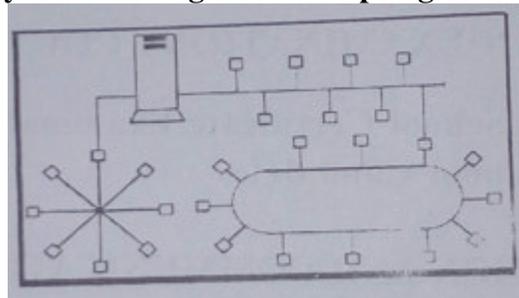
5. **DETAILED COMMENTS**

**QUESTION 1**

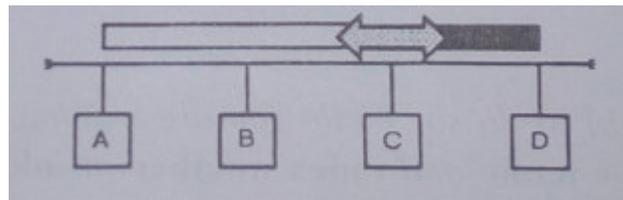
(a) What is *physical topology* with respect to computer networking?

(b) Identify the following network topologies:

(i)



(ii)



(c) Explain the topologies identified in 1(b).

A good number of the candidates answered (a) and (b) fairly well but (c) was poorly tackled by almost all the candidates. In the case of (c), candidates based their explanation on the way they saw the diagrams rather than the actual topologies. For instance, the hybrid was explained as a topology comprising a bus, star, and ring topologies. The bus was explained as comprising nodes connected to a cable in a straight line. .

The expected solution is as follows:

- (a) Physical topology is the layout/arrangement of computers/nodes in a network.
- (b) (i) Hybrid topology  
(ii) Bus topology
- (c) (i) Hybrid topology is the combination of two or more of the primary topologies (i.e. bus, star, ring and mesh) to form a new network.  
(ii) Bus topology is the physical arrangement of computers or nodes in a network such that each computer/node in the network is connected to a

common shared transmission medium.

## **QUESTION 2**

- (a) **Explain *e-business*.**  
(b) **State *three* benefits of e-business**

Almost all the candidates who attempted this question got the requirements entirely wrong.

E-business was taken to be e-commerce and the benefits were mainly on e-commerce. They failed to realize that e-commerce is only an aspect of e-business

The required solution is as follows:

- (a) Electronic business is the term used to describe the information systems and applications that support and drive business processes most often using web technologies.

E-business allows companies to link their internal and external processes more efficiently and effectively, and work more closely with suppliers and partners and better satisfy the needs and expectations of their business partners, leading to improvements in overall business performance.

- (b) **BENEFITS OF E-BUSINESS**

- It streamlines business processes with integrated back office systems.
- It reduces communication and travelling costs using online meeting tools and shared workspace.
- It maximizes lead conversion by using customer relationship management (CRM) systems to track and monitor interactions with prospects and clients.
- It improves supplier relations and productivity through collaborative tools and workspace.
- It benefits from license-free open source software.

## **QUESTION 3**

- (a) **What is:**  
(i) **relationship as used in database;**  
(ii) **lookup field?**
- (b) **Explain the following database relationship types:**  
(i) **one-to-one;**  
(ii) **one-to-many;**  
(iii) **many-to-many.**

This was the worst question answered by candidates. Although the syllabus includes the explanations of certain database terminologies including relationships, it was evident that candidates were either not taught well or decided to apply common sense approaches to answering the question.

The suggested solution is as follows:

- (a) (i) - A relationship establishes an association between common fields in two tables
- (ii) - A lookup field is an attribute that provides a list of values from which a user can choose an option.
  
- (b) (i) **One-to-one:**  
This is an association between two tables in which each record in the first table contains a field value that corresponds to the field value of one record in the other table.
  
- (ii) **One-to-many:**  
This is an association between two tables in which the primary key value in each record in the primary table (i.e. the one side of this relationship) corresponds to the value in the matching field or fields of many records in the related table.
  
- (iii) **Many-to-many:**  
This is an association between tables in which one record in either table relates to many records in the other table.

#### **QUESTION 4**

- (a) **What is:**
  - (i) **computer port;**
  - (ii) **computer bus;**
  - (iii) **clock speed of a central processing unit (CPU)?**
- (b) **State *one* difference between:**
  - (i) **data bus and address bus;**
  - (ii) **magnetic disk and optical disc.**

There were only a few good answers to this question.

The expected solution is:

- (a) (i) A computer port is an interface between the computer and other computers or peripheral devices. Physically, a port is a specialized outlet on a piece of equipment to which a plug or cable connects.
  
- (ii) A computer bus is a pathway through which the processor communicates with the internal and external devices attached to the computer. Bus transfers the data between the computer subsystems and between the computers and sends the instructions to and from the processor and the different devices. It connects all

internal computer components to the main memory and the central processing unit.

- (iii) The clock speed of a CPU is the frequency at which the processor executes instructions or data are processed. This clock speed is measured in millions of cycles per second or megahertz.
- (b)
  - (i)
    - (1) A data bus carries data while an address bus carries instructions.
    - (2) A data bus carries the information that is going to be stored or read using the location the address bus gives to the memory. On the other hand, an address bus gives the memory instructions and where to place the actual data that it will store or read (map location).
    - (3) A data bus is bi-directional because bus transactions can be read or written. On the other hand, the address bus is uni-directional because no bus slave device ever provides an address on the address bus.
    - (4) The data bus specifies the data, send only while the address bus specifies the data, send and receive.
  - (ii)
    - (1) A magnetic disk requires a read/write head which does the reading and writing electromagnetically without the head touching the surface of the disk (except for the floppy disk). On the other hand an optical disc requires a laser beam of high frequency to write on one surface only and a beam of low frequency to read the data.
    - (2) A magnetic disk surface has a number of concentric tracks divided into sectors while an optical disc has a surface only a single spiral-shaped track.

### **QUESTION 5**

- (a) **Explain *Internet chatting*.**
- (b) **What is a *cookie*?**
- (c) **List *four examples of browsers*.**

In (a), candidates realized the concept of communication but majority lost sight of the need for simultaneity. Part (b) attracted a few good answers but (c) was well answered.

Suggested solution for (a) and (b) are:

- (a) Internet chatting primarily refers to direct one-on-one communication or text-based group of communication in a half- duplex mode. Tools such as instant messaging applications are used.
- (b) A cookie is information that a web browser puts on a user's computer hard disk so that it can remember something about the user at a later time. It enables a website you often visit to recognize you if you visit it again.

# **INFORMATION AND COMMUNICATIONS**

## **TECHNOLOGY (ELECTIVE) 3**

### 1. **GENERAL COMMENTS**

The standard of the paper and that of the previous year examination is the same. It was noted that, candidates' performance is average compared to the previous year.

It has, however, been observed that performances continued to be localized even though the level has reduced, i.e. excellent performances are concentrated at some schools while bad performances are also concentrated at other schools.

### 2. **SUMMARY OF CANDIDATES' STRENGTHS**

- (1) Candidates were able to enter data.
- (2) Candidates were able to code HTML.
- (3) Candidates were able to create database.
- (4) Candidates query creations has improved.

### 3. **SUMMARY OF CANDIDATES' WEAKNESSES**

- (1) An insignificant few number of candidates used Microsoft Excel for the database application.
- (2) HTML files were saved as ".html.html" files
- (3) Candidates had difficulty with L1Query creation.

### 4. **SUGGESTED REMEDIES**

- (1) Teachers must cultivate logical reasoning skills in candidates to help in the development of programming skills.
- (2) Teachers must pay attention to the curriculum requirements and should not underrate the expectations of the ICT curriculum. They must stress on technical approach in teaching ICT.
- (3) Candidates must be encouraged and assisted to pick up personal ICT projects structured in a manner which will compel them to eventually be practical in their approach to the subject and cover significant aspects of the subject

### 5. **DETAILED COMMENTS**

#### **QUESTION 1**

##### **HTML**

The question required candidates to use a Text Editor to create an HTML web page. Candidates used text editors properly in coding the HTML. Majority of the candidates' performance on this question was good.

The solution to the question is expected to follow the pattern explained below.

HTML is a standard and the layout follows a specific structure to allow for correct interpretation for presentation. The structure of an html document is as follows:

```
<!DOCTYPE html>
<html>
<head>
<title>Title of the document</title>
</head>

<body>
The content of the document.....
</body>

</html>
```

It must be noted that the title is part of the head tag. Placing it outside the head is not a correct structuring even though you can have the title correctly displayed.

The body tag is not part of the head tag as some candidates portrayed in their work.. Even though an example of indentation has been given in the question, candidates still fail to indent properly.

The arrangement

```
<p>
    <u>Items</u>
</p>
```

has been given in the question as *an example*, yet candidates did not perform indentation. `<p>...</p>` is a set of paragraph tags. Within this paragraph a content of the paragraph is entered as *Items*. This content is underlined using the `<u>...</u>` set of tags.

The following is the solution of some candidates which is very good.

```
<html>
<head><title> CANDIDATE'S NAME INDEX NUMBER </title></head>
<body>
    <fieldset>
        <legend> Customer Name: </legend>
        <formaction="process.php" method="post">
        First Name:
            <inputtype="text" name="name"size ="30" /><br />
        Last Name:
            <inputtype="text" name="name" size="30" /><br />
        </form>
    </fieldset>
</body>
</html>
```

The expected coding with indentation is as follows:

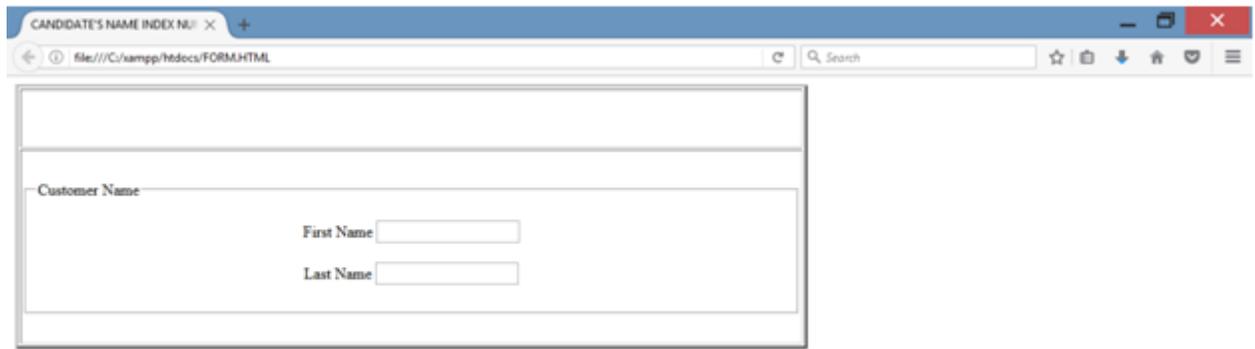
```

C:\xampp\htdocs\FORM.HTML - Notepad++
File Edit Search View Encoding Language Settings Macro Run Plugins Window ?
new 2 php.ini top_db.sql topadmin.sql women wearing veils in church.bt FORM.HTML
1 <html>
2 <head>
3 <title> CANDIDATE'S NAME INDEX NUMBER</title>
4 </head>
5 <body>
6 <table border="3">
7 <tr>
8 <td width =800 height=60> </td>
9 </tr>
10 <tr>
11 <td width=800 height=200>
12 <fieldset>
13 <legend> Customer Name </legend>
14 <p align="center">
15 First Name <input type="text" > <br><br>
16 Last Name <input type="text" >
17 </p>
18 </fieldset>
19 </td>
20 </tr>
21 </table>
22 </body>
23 </html>
24

```

Hyper Text Markup Language file length: 476 lines: 24 Ln: 8 Col: 48 Sel: 0|0 Dos\Windows UTF-8 w/o BOM INS

### DISPLAYED OUTPUT IN BROWSER



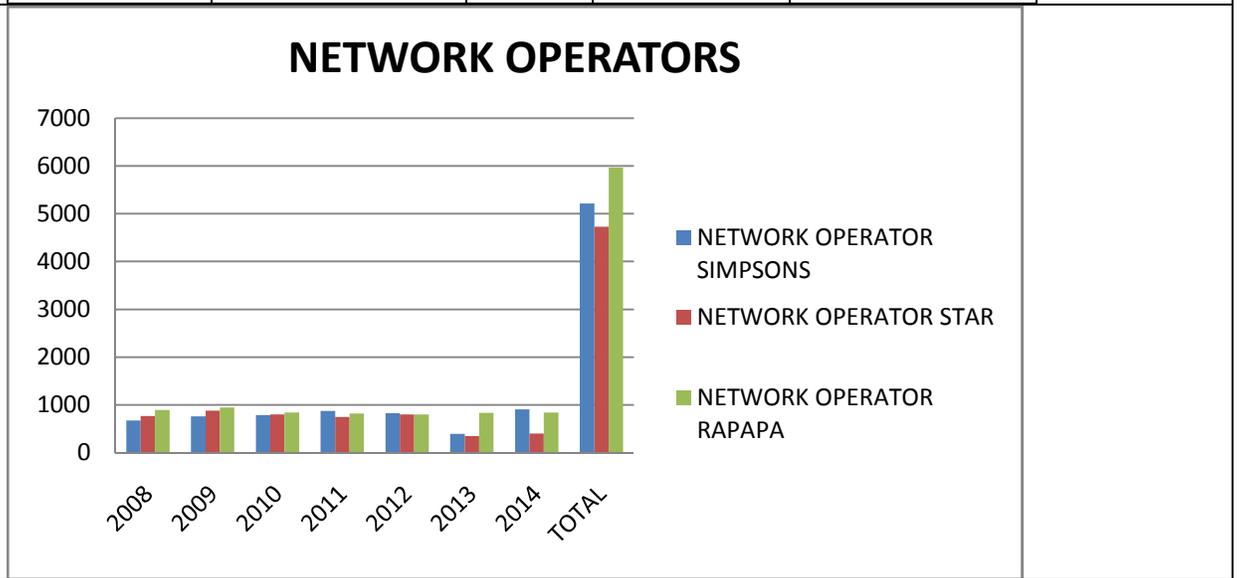
### QUESTION 2

#### EXCEL

Candidates were on the average able to carry out this work except a few.

Candidate solution 1				
YEAR	NETWORK OPERATOR			GRANDTOTAL
	SIMPSONS	STAR	RAPAPA	
2008	673	764	894	
2009	761	876	948	
2010	788	797	837	
2011	872	747	821	
2012	827	802	797	
2013	392	347	833	
2014	903	399	837	
TOTAL	=SUM(B3:B9)	=SUM(C3:C9)	=SUM(D3:D9)	=SUM(B10:D10)

Result				
YEAR	NETWORK OPERATOR			GRANDTOTAL
	SIMPSONS	STAR	RAPAPA	
2008	673	764	894	
2009	761	876	948	
2010	788	797	837	
2011	872	747	821	
2012	827	802	797	
2013	392	347	833	
2014	903	399	837	
TOTAL	5216	4732	5967	15915



This bar chart includes the Totals as part of the operators. This is however **not** the requirement of the question.

### **QUESTION 3**

#### **DATABASE**

- (1) The requirement is to use a database application to create a database and name it DATA in the folder created.

The very exact naming of the database is critical. Its placement in the folder created is critical. You can manually search for a document on the computer through various techniques even if you forgot the name. However, during the execution of a program, the name and its location must be *exact* otherwise the program cannot find it.

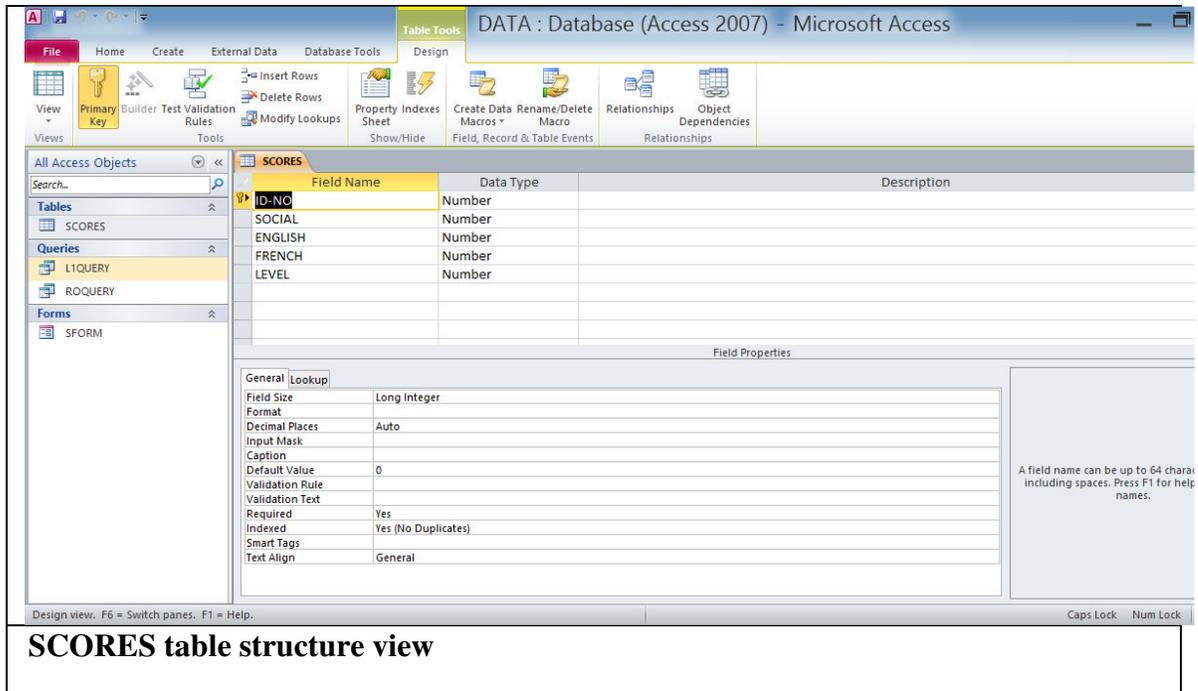
Some candidates used Microsoft Excel to answer this question which was wrong because Microsoft Excel is not a database application for this examination.

- (2) The table created required appropriately defined fields. Defining the fields appropriately implies that the field names must be correct and their data types and data size must be correct. A table with a wrong field data type is not a correct table.

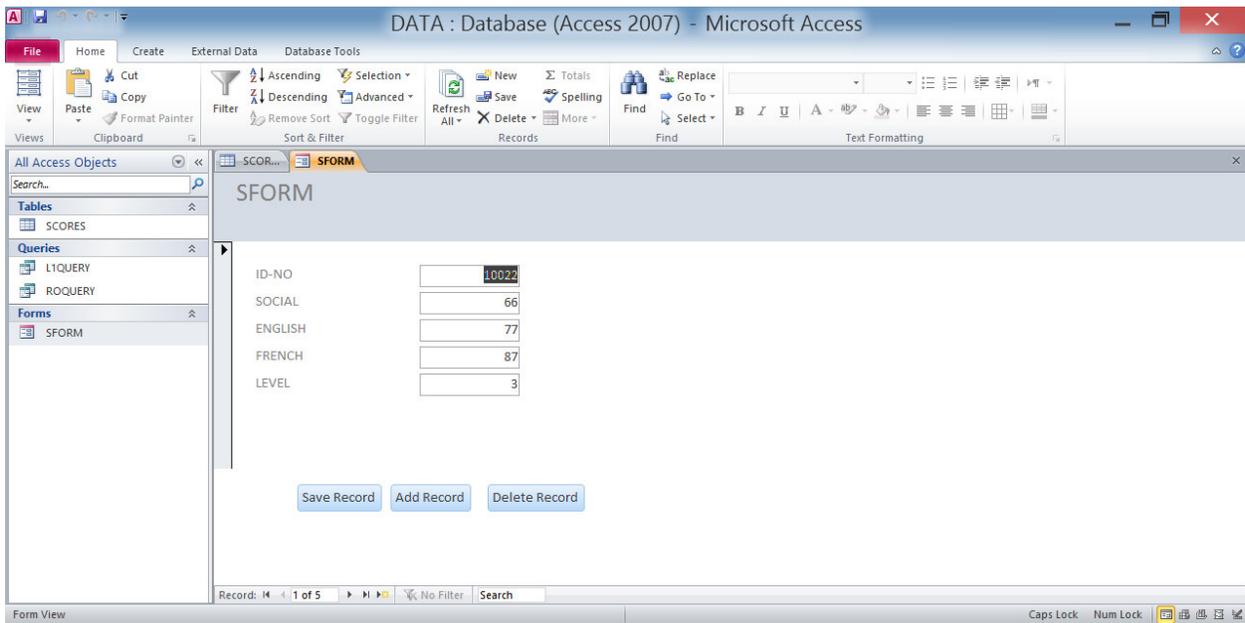
Some candidates did not name the tables properly. Others also defined all fields as type Text which was also not correct in some instances.

- (3) A form is also to be created for entry into the table. Majority of the candidates created the form correctly.

The general performance on this question was poor.



A form is to be created and used for the data entry. The snapshot of a typical form is shown below.



### Form -SFORM

DATA : Database (Access 2007) - Microsoft Access

Datasheet View

ID-NO	SOCIAL	ENGLISH	FRENCH	LEVEL	Click to Add
10022	66	77	87	3	
10064	67	89	90	1	
10077	54	55	22	2	
10097	87	65	77	1	
10099	76	84	70	2	
*	0	0	0	0	

Record: 6 of 6

After entering data, table SCORES will look as above.

## Query L1QUERY

The following snapshot show various types of attempts by candidates to execute Query L1QUERY

DATA : Database (Access 2007) - Microsoft Access

ID-NO	SOCIAL	ENGLISH	FRENCH	LEVEL
10064	67	89	90	1
10097	87	65	77	1
*	0	0	0	0

Query L1QUERY output not well arranged as required by the question.

Its appropriate SQL query view looks as follows:

```
(SELECT SCORES.[ID-NO], SCORES.SOCIAL, SCORES.ENGLISH, SCORES.FRENCH, SCORES.LEVEL  
FROM SCORES WHERE (((SCORES.LEVEL)=1));)
```

# **METALWORK 2**

## 1. **GENERAL COMMENTS**

The standard of the paper compares favourably with that of previous years. All the questions were within the syllabus and satisfied all requirements. However, like previous years, most candidates could not perform well.

## 2. **A SUMMARY OF CANDIDATES' STRENGTHS**

- (1) A few candidates provided quality answers and performed creditably. Their answers were straight to the point, orderly and accurate.
- (2) An appreciable number of candidates adhered to the rubrics of the paper as they attempted only the required number of questions.

## 3. **A SUMMARY OF CANDIDATES' WEAKNESSES**

- (1) Inadequate preparation and lack of understanding of the subject matter.
- (2) Inability to understand the requirements of some questions. Some of the candidates simply set their own questions and answered them.

## 4. **SUGGESTED REMEDIES**

- (1) Teachers and candidates should ensure that they cover the entire syllabus and have enough time for revision.
- (2) Candidates should be given more assignments to do in class and at home.
- (3) Teachers should monitor learning activities of candidates.

## 5. **DETAILED COMMENTS**

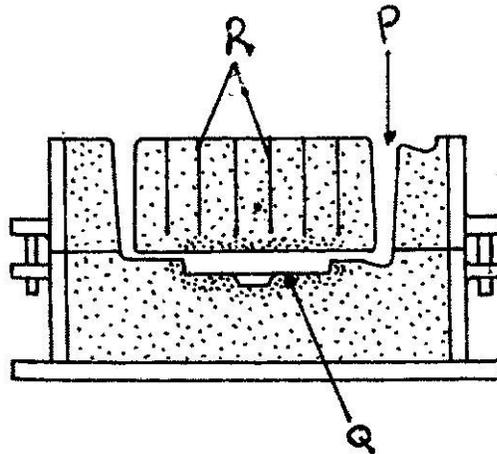
### **QUESTION 1**

- (a) **State the reason why files without handle should not be used.**
  - (b) **Sketch an odd-leg callipers.**
  - (c) **Describe the production of pig iron with reference to the following:**
    - (i) **the furnace used;**
    - (ii) **the charge;**
    - (iii) **the impurities.**
  - (d) **State two properties of each of the following:**
    - (i) **cast iron;**
    - (ii) **steel.**
- (a) A popular question. Many scored average marks as they provided good responses.
- (b) Answers to sketching an odd-leg callipers was satisfactory.

- (c) (i) Answers provided by most candidates were not satisfactory. In pig-iron production, a blast furnace is used.
- (ii) In the production of pig iron, the charge consists of iron ore, coke and limestone, however majority of the candidates who attempted this question appeared to know nothing about the charge.
- (iii) Performance was not satisfactory, because candidates failed to include the following impurities: Sulphur, Silicon, Phosphorous, Manganese which combine with limestone to form slag.
- (d) Candidates were able to state two properties correctly.

### **QUESTION 2**

- (a) **The sketch below shows a profile of a sand mould.**



- (i) **Identify the parts labelled P, Q and R.**
- (ii) **State the function of the parts labelled P and R.**
- (b) **State one effect of each of the following:**
- (i) **using a pinned file;**
- (ii) **too great a cutting speed;**
- (iii) **too long a rivet tail;**
- (iv) **drill bit ground off-centre.**
- (a)
- (i) The parts were P-spruehole, Q-cavity and R-vent holes. Performance was average.
- (ii) Answers provided by most candidates to this question were satisfactory.
- (b) Majority of the candidates rightly gave one effect each of the following:
- (i) using a pinned file – it will prevent effecting cutting.
- (ii) too great a cutting speed – it will cause overheating.
- (iii) too long a rivet tail – the tail will bend and prevent proper head formation.
- (iv) drill bit ground off-centre – it produces an oversized hole.

### **QUESTION 3**

- (a) (i) **Explain the term design brief.**
- (a) (ii) **State two reasons for writing specification in designing.**
- (b) **State three operations that can be carried out on the shaping machine.**
- (c) **State the difference between speed and feed in turning operation.**

- (a) (i) Only a few candidates answered this question. Most of them could not explain the term 'design brief'. It is a short statement that describes what the designer intends to do.
- (a) (ii) Some candidates could state two reasons for writing specification.
- (b) Majority of the candidates could not state three operations that can be carried out on the shaping machine. Candidates were required to state the following: Horizontal shaping, vertical shaping, groove cutting, keyway cutting and angular shaping.
- (c) This part of the question was poorly answered by most candidates. The difference between speed and feed in turning operation is: feed is the depth the drill penetrates into the work per revolution while speed is the circumferential distance the cutting edge of a tool moves per unit time.

### **QUESTION 4**

- (a) **State one reason why the following heat treatment processes is carried out on metals.**
  - (i) **Normalizing;**
  - (ii) **Annealing;**
  - (iii) **Case hardening;**
  - (iv) **Tempering.**
- (b) **State one function each of the following:**
  - (i) **flux;**
  - (ii) **electrode.**
- (c) **State one safety precaution to be observed when welding with oxy-acetylene gas.**
- (d) **What is the filler metal for brazing?**

- (a) This was a popular question with some candidates giving a fairly good reason each why the heat treatment processes are carried out on metals. However, some candidates described the processes involved in the heat treatment processes which was not required.
- (b)(i)-(ii) Candidates could state one function each for flux and electrode.
- (c) Majority could state one safety precaution to be observed when welding with oxy-acetylene gas.
- (d) This part of the question was poorly answered. Candidates were expected to identify the filler metal for brazing, however, they gave wrong answers. The expected answer was spelter.

### **QUESTION 5**

- (a) State one result of each of the following when working on the centre lathe:**
  - (i) Cutting tool set too high above the centre line;**
  - (ii) Cutting tool set too low below the centre line.**
- (b) (i) List two striking tools used in sheet metalwork;**
  - (ii) Sketch any one of the tools listed in 5(b)(i);**
  - (iii) Label two parts of the tool sketched in 5(b)(ii).**
- (c) With the aid of a sketch, show the process of swaging in forging.**

(a) Candidates failed to answer this question properly. They were to state one result each when the cutting tool is set too high above the centre line and when the cutting tool is set too low below the centre line when working on the centre lathe. Majority of them provided sketches instead of stating the required result for each activity.

(i)-(ii) When the cutting is set too high above the centre line, it will increase the top rake angle and therefore decrease the front clearance angle. However, the front clearance angle is increased when the cutting tool is set below the centre line. Candidates should be taken through some of these activities on the lathe practically.

(b) (i) Candidates' performance was not encouraging. Some even listed cutting tools, holding tools and supporting tools. Candidates should identify all metal work tools used in the workshop.

(ii) The sketching of any one of the tools listed in 5(b)(i) was poorly done. Candidates should practise how to sketch objects.

(iii) A few candidates could label two parts of the tool sketched in 5(b)(ii).

(c) A few candidates could sketch the process. Some even sketched the sand mould, chiselling, hollowing, etc. It appeared that candidates had little knowledge of the process of swaging.

# **METALWORK 3**

## 1. **GENERAL COMMENTS**

The general performance of candidates in this examination was satisfactory.

The standard of the paper and candidates' performance are comparable to those of previous years.

## 2. **A SUMMARY OF CANDIDATES' STRENGTHS**

Candidates' strengths in the examination include:

- (1) attempting all parts of the exercise.
- (2) being specific about constructional details.
- (3) familiarity with the technical terminology and ability to interpret detailed drawings.
- (4) observation of workshop safety rules.
- (5) selections of appropriate tools and equipment as regards the performance of the exercise.
- (6) safe handling of all the selected tools and equipment used.
- (7) minimal spoilage of materials meant for the exercise.

## 3. **A SUMMARY OF CANDIDATES' WEAKNESSES**

Candidates' weaknesses in the performance of the test exercise include:

- (1) poor finish – burrs and sharp edges were left unremoved posing danger.
- (2) inaccuracies in work dimensions – ineffective manipulation of tools to obtain the desired shape and size.
- (3) poor hacksawing – cutting waste material more than expected.
- (4) poor chiselling - difficulty in cutting out slot.
- (5) poor drilling practices – contributing to misaligning of parts.
- (6) failure of marking out – to include dot punching of work part profile.  
Obtaining the correct marked out shape of the work is necessary to work within the specified tolerance.

## 4. **SUGGESTED REMEDIES**

- (1) Candidates should be encouraged to adopt correct fitting practices.
- (2) Candidates should be provided with all the tools required in the expected knowledge and skills acquisition.
- (3) Candidates should be engaged in regular practical work in the school workshop.

- (4) The teachers in charge, should help students to develop good taste for accurate products.

5. **DETAILED COMMENTS**

Two questions were given to form the paper.

Question 1 was designed to involve the necessary fitting skills in line with the specified syllabus.

**QUESTION 1 -FITTING EXERCISE**

Candidates were supplied with one flat mild steel plate, 102 mm x 62 mm x 3 mm; one flat mild steel plate, 62 mm x 52 mm x 3 mm; one flat mild steel plate 72 mm x 62 mm x 3 mm and mild steel rod 6 mm x Ø4 mm – 4 off to prepare a fitting exercise in order to produce the article shown in a given assembly. They also showed the detailed views of each part required in the fitting exercise.

**PART A**

Candidates were expected to cut and file the given mild steel plate to size 100 mm x 60 mm x 3 mm to obtain the shape indicated in part A view.

**PART B**

Candidates were required to mark out and dot punch to obtain the size and shape shown in the detailed view of part B. The shape should be obtained hacksawing, chiselling and filing through the marked out lines.

**PART C**

Again, candidates were expected to mark out per the given dimensions on the Part C. The lines should be further dot punched to indicate clearer lines to be cut through hacksawing.

The cut out piece should be carefully filed to the specified dimensions to obtain the required size and shape.

All the parts produced ought to be assembled together and drilled in the marked out positions with 4 mm drill.

Candidates were finally required to prepare four pins per the dimension indicated on the part labelled D.

The pins ought to be prepared such that they could be smoothly inserted into the four drilled holes to obtain good transition fit.

Many candidates worked out to obtain all parts with purposeful diligence and were able to score high marks for their performance.

However, candidates could do more by paying much attention to final finishing of the article produced.

### **QUESTION 2 - MACHINING EXERCISE**

**Question 2 was also designed to cover the machining aspects of the syllabus – it covered wide range of skills in machining – using the lathe machine in particular.**

**Candidates were supplied with one piece free cutting mild steel rod, Ø50 mm x 100 mm to produce the machine part shown in detailed view.**

**Candidates were expected to turn the rod down to 40 mm diameter and face at both ends to the given length of 76 mm. The work could be held in the four jaw chuck and further turned down to diameter 30 mm to 50 mm length from one side, allowing 26 mm length to 40 mm diameter remain in the chuck to be finally finished to the knurled shape.**

**The projected end ought to be machined to the given taper to a length of 30 mm.**

**After machining both the parallel shoulder and the taper, the workpiece could be changed so that the parallel stem is held in the chuck to enable both the undercut and the knurling to be performed**

**After these operations had been performed, the two chamfers should be produced to the stated dimension – 2 mm x 45° to make the ends of the diameter 40 mm x 26 mm length safe and neat.**

Very unfortunately, no candidate attempted this particular question.

# **TECHNICAL DRAWING 2**

## 1. **GENERAL COMMENTS**

The standard of the paper for this year was on the average as compared with the previous years. All the questions were within the syllabus. General performance of candidates was on the average.

## 2. **A SUMMARY OF CANDIDATES' STRENGTHS**

- (1) All the given views were drawn to the correct dimensions.
- (2) Lineworks were accurate.
- (3) Outline were clearly identified from the projection or construction lines.
- (4) The plan of the square pipe was drawn to perfection and the development was done accurately using the given seam.
- (5) The construction of the true shape of the lamina was well done.
- (6) The plan and end view of the truncated right cone were done neatly and accurately.

## 3. **A SUMMARY OF CANDIDATES' WEAKNESSES**

- (1) The given figure showed intersection of two square pipes but candidates drew elevation of two cylindrical pipes. The plan was produced as two circular pipes and the development was in the form of that of a cone.
- (2) The two views of the lamina were constructed wrongly. Some candidates extended lines from the apex at random at both sides of the plan and drew perpendiculars to the extended lines without further construction.
- (3) After the construction of the given elevation, the cutting plan was wrongly placed. The cutting plane was either placed at  $30^\circ$  or  $45^\circ$  without using the given heights.
- (4) Some candidates constructed the hexagon across corners with the side 40 mm on the horizontal. After drawing the auxiliary line X, Y, some were unable to transfer the various dimensions on the plan to construct the auxiliary view.
- (5) The conversion of the length of the beam, 2 m to the given scale 1 mm = 0.1 m was poorly done. Likewise, candidates could not construct the force line to the correct scale of 1 mm = 0.5 kN, thus the force diagram was poorly done, that affected the funicular/link polygon. Some candidates failed to draw parallel line to a point on the force line which determined the magnitude of parallel to a point on the force line which determined the magnitude of the reactions.
- (6) Shear force diagram was constructed instead of bending moment.

#### 4. **SUGGESTED REMEDIES**

- (1) Candidates should read the question carefully before answering.
- (2) Candidates' revision should cover all the topics within the syllabus.
- (3) Candidates are therefore advised to read and digest every question thoroughly before answering.
- (4) To obtain the true shape, all dimensions are taken from the plan and transferred to the corresponding lines accordingly.
- (5) Scale conversion and drawing of parallel lines need constant practice and candidates are advised to do more work on the force work.

#### 5. **DETAILED COMMENTS**

##### **QUESTION 1**

For question 1 the partial plan is first constructed before the elevation is completed. The square is constructed and lines are projected up to locate the distance across corners. The end view of the branch pipe Y is drawn with projectors intersecting those lines from the plan to obtain the line of intersection in the elevation.

Five horizontal lines are extended to the right of the elevation with the height as KK. One side of the square pipe X on plan is measured and used as radius and stepped off five times on the base line to obtain the perimeter. The middle/edge line is then used as the area for the development of the hole for pipe Y.

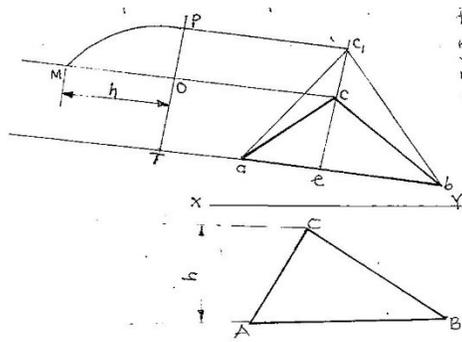
Candidates' performance was good.

##### **QUESTION 2**

Before constructing the two given views, line X-Y is drawn as a datum. The elevation and plan are drawn using the given dimensions.

There are two methods for constructing the true shape of the lamina.

- (a) The base length on the elevation is extended to one side. A perpendicular line is drawn to the extended line with another parallel line from the apex to intersect at point O. Point T is taken as centre and TM as radius to draw arc to intersect to point P. A line is drawn from P to intersect line EC extended at C<sub>1</sub>. The true lamina is triangle ABC<sub>1</sub>.
- (b) The second method is to find the true length of each side of the lamina. Then later use the new true length to construct the true shape of the lamina.



Candidates' performance was average.

### **QUESTION 3**

The elevation is constructed by using the given dimensions with the cutting plane at its correct position. The base circle i.e. the plan is divided into twelve equal parts. Projectors from each divisional points on the circle pass through the base length and to the apex of the cone.

To obtain the cut surface on plan, the intersecting points on the cutting plane are projected to the corresponding dimensional lines. The intersecting points are then joined with a smooth curve to obtain the cut surface. The surface is then hatched.

For the construction of the end elevation, lines are projected from the front elevation and the plan to obtain the outlines of the truncated cone. Lines are projected from the divisional points on the circle on the plan to the base line of the end elevation are drawn parallel to the surface on plan. The intersecting points are then joined with a smooth curve and then hatched.

Candidates' performance was average.

### **QUESTION 4**

#### (a) Construction of the square and heptagon

The base length AB as 40 is drawn and the square ABCD is constructed on it. A perpendicular bisector is erected on AB and  $45^\circ$  line is drawn to cut the bisector at E. Another  $60^\circ$  line is drawn at B to cut the bisector at F. The distance between points E and F is further bisected to obtain point G. Radius EG or GF is used on the perpendicular bisector at point H. A circle is drawn with point H as centre and AH or BH as a radius through the points A and B. Line AB is used as a radius to locate other five points on the circle. The points are joined to obtain the required heptagon.

Most candidates' construction was neat and accurate. Few candidates did poor work and could not divide, equally, the perpendicular line to locate point H as the centre for drawing the circle.

(b) Auxiliary Plan

The given two views are drawn and parallel lines are drawn from the various corners of the elevation to intersect the X, Y axis at  $90^\circ$ . Various distances between the base line XY on the elevation and the corresponding points on plan are measured and transferred accordingly to the line X, Y to obtain points for the auxiliary view. The various points are then joined with outlines and short dashes to obtain the required auxiliary plan.

Candidates drew the two views but unable to continue the construction. Few candidates constructed the auxiliary plan partially and some of the hidden lines were omitted.

Candidates' performance was good.

**QUESTION 5**

The force diagram is reversed and parallel lines are drawn to the radial lines. The two ends are closed to obtain the bending moment diagram.

Few candidates did well in all the constructions but unable to measure and convert correctly the magnitudes of the reactions.

Some candidates constructed the shear force diagram which was not part of the question.

Few candidates left the spaces of the forces for labelling the Bow's notation. Some candidates were unable to apply the given scales for their constructions.

Candidates' performance was average.

# **TECHNICAL DRAWING 3**

## 1. **GENERAL COMMENTS**

The standard of the paper has not changed. The quality and the type of questions has been maintained. The performance of the candidates, as compared with that of the previous years was encouraging.

## 2. **A SUMMARY OF CANDIDATES' STRENGTHS**

The general performance of candidates was an improvement over the previous years. Candidates, especially those who opted for the mechanical drawing was very encouraging. The draughtsmanship of most candidates was also encouraging and must be duly enhanced for both mechanical and building drawing.

## 3. **A SUMMARY OF CANDIDATES' WEAKNESSES**

- (1) Assembling of components is a problem to candidates who offered the mechanical drawing option.
- (2) Most candidates could not assemble the pulley, washer and the pin at their right positions.
- (3) Candidates who offered building drawing, had difficulty in using the scales.
- (4) The right symbols for door, window, wardrobe and other conventions like concrete, hardcore and earth filling were not drawn at the right positions and were poorly represented.
- (5) Sectioning was also a challenge for candidates who offered the mechanical drawing.
- (6) Most of the candidates were not able to identify the hand tools.
- (7) Freehand sketching of the bracket was poorly done, most candidates decided to use guided instrument and then use freehand through it.

## 4. **SUGGESTED REMEDIES**

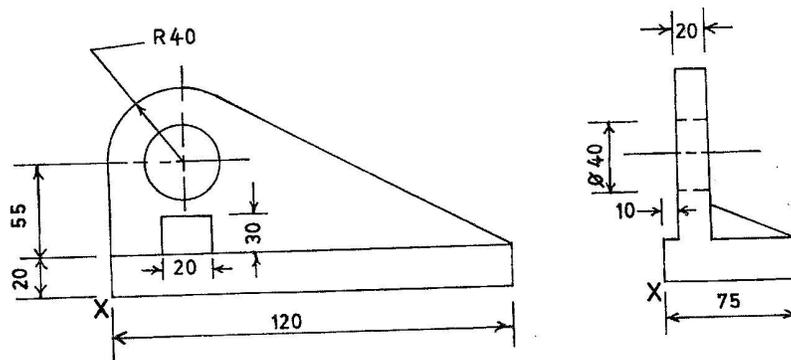
- (1) Teachers are to improve the teaching and also have enough time to treat the application of type of lines which is the core requirement of a good drawing. Most candidates could not show differences in their lines, short dashes was used for centre lines, and cutting plane was poorly drawn in most cases.
- (2) Most candidates seem to have little or no knowledge of the principles of assembling drawing and sectioning, an important component in mechanical drawing. Teachers are encouraged to use models and other forms of teaching aids to teach or deliver this important topic to their students.

- (3) A lot of effort should go into the teaching and practice of freehand sketching. Constant practice with only pencil in freehand sketching would go a long way to improve the skills of candidates.
- (4) Candidates must be introduced to basic tools used in their areas of specialization, i.e Building and Mechanical workshops.

5. **DETAILED COMMENTS**

**QUESTION 1**

The figure below shows two views of a bracket in first angle orthographic projection. Make a freehand isometric drawing of the bracket making X the lowest point.



Two views of a bracket were shown in first angle orthographic projection, i.e. front elevation and an end elevation.

Candidates were asked to convert the views by using freehand into an isometric block, making 'X' the lowest point. Freehand isometric drawing was required.

Most candidates chose to use guided instruments to draw the bracket, which candidates were penalized for using the instruments, other than pencil only.

The few who drew without guided instrument could not draw it accurately.

**QUESTION 2**

**Make a neat freehand pictorial sketch of a double-sledge hammer.**

Candidates were asked to make freehand pictorial sketch of a double faced sledge hammer. It is a heavy duty hammer used in the mechanical workshop.

Only a handful of candidates who attempted this question were able to sketch the correct tool.

Most candidates drew various type of some known types of hammers, which was a total deviation. Identification of the correct tool was a problem.

### **QUESTION 3**

**Make a neat freehand pictorial sketch of a centre punch.**

This question, like question two, also intended to test candidates' ability to identify common hand tools used in the workshop or on site.

In this instance, the tool to be identified and sketched in pictorial view was the centre punch a common tool used in the metal workshop.

It may be noted that, both tools, this time were all metal work tools.

Most candidates who attempted this question were able to sketch the correct tool, only a few candidates were unable to sketch the tool. Also the candidates were unable to sketch the tool. Also the candidates' sketches were not proportional.

### **QUESTION 4**

A sketch plan of a three bedroom bungalow with accompanying specification from foundation to roof was provided.

Candidates were asked to study the given specifications and draw to a scale of 1:100 a floor plan and a front elevation, and to a scale 1:50 a sectional elevation on plane Y – Y.

Most candidates provided good answers to this question, but the scales used were not the correct scale.

Generally, the draughtsmanship of a few candidates was very encouraging. On the whole, the roof of the building was poorly drawn. Most candidates were not familiar with the concrete roof and were therefore drawing different types of roof.

Teachers are encouraged to teach students the various type of roof used in building construction, also teachers should teach students the correct conventions of building material using the BS 1149 international standards.

Candidates' performance was good.

### **QUESTION 5**

This question demands the knowledge of functional parts in an assembly. The correct positions of the parts are therefore critical in the assembly, it should be arranged in a well-accepted manner.

A very unpopular question, however most candidates who attempted it did well, except that they have problem with the placement of the views, e.g. sectional front elevation and the plan.

Candidates also have difficulty in imaging how the components will appear in the views. There were problems in the sectioning of the parts.

Lines such as centre lines, outline and direction of sectional lines were poorly drawn.

Candidates' performance was generally average.

# **WOODWORK 2**

## 1. **GENERAL COMMENTS**

The standard of the paper was of good quality and compares favourably with that of the previous year. The performance of the candidates was just average as compared to the previous year.

## 2. **A SUMMARY OF CANDIDATES' STRENGTHS**

A few of them performed very well in the following areas:

- (1) Naming a suitable joint for joining the sides of the trinket box.
- (2) stating three general safety precautions that should be taken during the use of woodworking machines.
- (3) naming two types of metals used in woodwork.
- (4) preliminary freehand pictorial sketches of the bookcase.
- (5) orthographic drawings of the bookcase in the First Angle Projections.

## 3. **A SUMMARY OF CANDIDATES' WEAKNESSES**

Most of the candidates showed weaknesses in the following areas:

- (1) candidates found it very difficult to make the pictorial sketch of the decorative joint named for the trinket box.
- (2) candidates could not label correctly the parts of the cross-section of the log sketched.
- (3) candidates could not state the reason why a lubricant is used on an oilstone when sharpening a tool.
- (4) inability to provide the required features of the bookcase, i.e one shelf, one panel glazed door, hinges for hanging the door, lock and handle.
- (5) poor dimensioning and lettering.
- (6) failure to name the views.

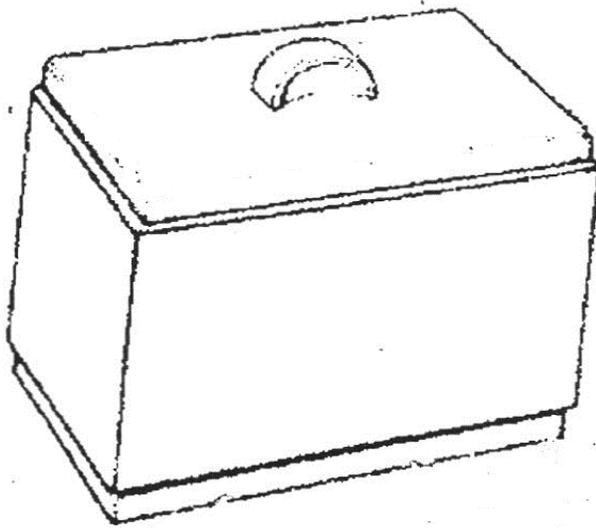
## 4. **SUGGESTED REMEDIES**

- (1) Tutors should encourage students to practise adequately freehand sketches of wooden joints and their uses.
- (2) Students should be introduced to the types of test carried out when hand planing a stock to finished size.
- (3) Students should be given adequate exercises on design and drawing to equip them and enable them acquire the necessary skills for appreciable level of performance.

## 5. **DETAILED COMMENTS**

### **SECTION A - SHORT STRUCTURED QUESTIONS**

**Figure I shows the sketch of a trinket box which is to be constructed. The top of the box is to be covered with plastic laminate. Use it to answer question 1 (a).**



### **QUESTION 1**

- (a) (i) Name a suitable decorative joint for joining the sides of the box.  
(ii) Make a pictorial sketch of the joint named in (a)(i).
- (b) (i) Name two tests carried out when hand planing a stock to finished size.  
(ii) List three tools used when preparing a stock to finished size.
- (a) (i) Majority of the candidates answered this question satisfactorily. The required joints are: Through dovetail; combed/pin/finger/box joint; secret mitred dovetail; plain mitred butt; lap dovetail and double lapped dovetail.
- (ii) Most of the candidates found it very difficult to make a pictorial sketch of the joint named.
- (b) (i) Majority of the candidates were able to name the two tests correctly. The possible tests are: Test for flatness; Test for straightness; Test for squareness, etc.
- (ii) Most of the candidates answered this question satisfactorily

### **QUESTION 3**

- (a) State three general safety precautions that should be taken during the use of woodworking machines.
- (b) List the two operations required for keeping the cutting edge of a tool keen.
- (c) State one reason why a lubricant is used on an oilstone when sharpening a tool.
- (a) Most of the candidates stated general safety precautions instead of those to be taken during the use of woodworking machines. However, a few were able, to state the answers correctly. For example, never get distracted while operating a

machine; never make any adjustment to a machine while it is running; allow machine to reach maximum speed before feeding.

- (b) A few candidates were able to provide correct answers to this question.

The correct answers are:

- grinding;
- sharpening/honing.

- (c) Majority of the candidates failed to state the correct reason. The possible answers are:

- to aid the movement of the tool over the oilstone.
- to reduce friction.
- to float away the particles of steel which are left on the oilstone.
- to reduce the clogging of the oilstone.

#### **QUESTION 4**

- (a) (i) **Sketch the cross-section of a log.**  
(ii) **Label the following parts of the log sketched in Question 4(a)(i).**  
(1) **sapwood;**  
(2) **medullary rays.**
- (b) **Name two types of metals used in woodwork.**
- (c) **List two methods of producing veneer.**

- (a) (i) Some candidates used a pair of compasses to draw the cross-section of a log instead of using pencil only to sketch it.
- (ii) Most of the candidates could not label correctly the required two parts of a log, i.e. Medullary rays and sapwood.
- (b) Majority of the candidates were able to name the two types of metal used in woodwork. For example, cast iron; steel; copper; brass and aluminium, etc.
- (c) This question was well answered by most of the candidates.

#### **SECTION B - DESIGN AND DRAWING**

The question set is as follows:

**A bookcase is to be designed to the following specifications:**

**Height** - 350 mm  
**Width** - 360 mm  
**Depth** - 210 mm

**The bookcase is made from 20 mm solid wood.  
It has one shelf and one panel glazed door.**

1. **Make two preliminary freehand pictorial sketches each for a different design of the bookcase.**
2. **Select one of the sketches in Question 1 and indicate the sketch selected with a tick (✓). To a scale of 1:2, draw in the First Angle Orthographic Projection the following views of the sketch selected:**
  - (a) **the front elevation;**
  - (b) **plan with top removed.**

### QUESTION 1: PRELIMINARY FREEHAND PICTORIAL SKETCHES

Some of the candidates presented designs that agreed with the given specifications. However, majority of the candidates presented designs with additional features which were not required. There were evidence where candidates produced the preliminary freehand pictorial sketches with the aid of drawing instruments instead of drawing freehand with pencil only. In some cases most candidates failed to indicate with a tick (✓) the selected design.

Tutors should discourage this practice.

### QUESTION 2

#### (a) FRONT ELEVATION

All the candidates attempted this question. Majority of the candidates failed to show the following:

- carcass members: (2 sides, top piece, bottom piece, shelf in hidden details)
- door members: (2 stiles and 2 rails)
- door details: (one glazed panel, one pair of hinges, lock, and a handle)

A few of the drawings presented omitted the three main dimensions and names of the views. However, there were instances where very good drawings were presented by some candidates.

#### (b) PLAN WITH TOP REMOVED

Most of the candidates failed to draw this view in its appropriate position in the First Angle Orthographic Projection.

In some cases, the sections of the following members were omitted on the drawing:

- carcass members;
- cabinet back covering;
- rail in elevation;
- name of the view.

Tutors should take note and give adequate exercises on this aspect of the drawing.

## DRAUGHTSMANSHIP

(i) Border line

Majority of the candidates failed to draw the border lines as required.

(ii) Title block

Majority of the candidates failed to provide the title block.

Candidates are advised to ignore the provision made at the right hand top corner of the drawing sheet and do the right thing as required by the basic principles and conventions.

(iii) Layout

Most of the candidates failed to plan their work properly. Candidates should therefore observe the basic principles and requirements by drawing conventions.

(iv) Neatness

Candidates should observe the following practices for a neat drawing presentations:

- Avoid the use of dirty drawing instruments.
- Use recommended pencil for a specific drawing.
- Arrange views in their respective segments.
- Avoid over-shading of sketches.

# **WOODWORK 3**

## 1. **GENERAL COMMENTS**

Generally, the standard of the paper was within the scope of the syllabus. The paper was well constructed and satisfactory enough to cater for the level under review.

The performance of candidates as compared with that of previous years was slightly higher.

## 2. **A SUMMARY OF CANDIDATES' STRENGTHS**

Some commendable strengths observed in the performance of candidates included the following:

- (1) All the candidates attempted the question.
- (2) Most candidates were able to work to the given dimensions.
- (3) Most candidates were able to assemble their final work.

## 3. **A SUMMARY OF CANDIDATES' WEAKNESSES**

Some weaknesses exhibited by candidates included the following:

- (1) inability to read and interpret the working drawing correctly.
- (2) inability to mark-out accurately.
- (3) failure to use well sharpened cutting tools.
- (4) failure of candidates to dress the work.

## 4. **SUGGESTED REMEDIES**

- (1) Teachers should intensify the teaching of orthographic drawings.
- (2) Candidates should be given adequate practical exercises which involve the reading and interpretation of working drawings.
- (3) Teachers should demonstrate the correct procedure for marking-out practical exercises.
- (4) Candidates should be exposed to the finishing aspects of the practical work, such as assembling, squareness and most especially the dressing of the work to give it the needed appeal.

## 5. **DETAILED COMMENTS**

### **QUESTION 1**

**Candidates were given working drawing of a model of a plinth. They were required to interpret the drawing and construct the model, using already prepared workpieces.**

**The work involved the following processes:**

- (a) **Construction of lapped dovetail joints;**
- (b) **Construction of finger joints;**
- (c) **Construction of through dovetail housing joints;**
- (d) **Finishing.**

(1) Lapped Dovetail Joints

The construction of the lapped dovetail joints was attempted by all the candidates. Quite a good number of candidates were able to mark-out accurately and produced fairly good joints.

However, a few of the candidates lacked the requisite skills to cut and remove waste wood from the tails and sockets of the joints and as a result produced very poor work. Very few candidates were unable to mark-out the dovetails accurately. Some of the candidates marked-out the pitches of the dovetails far out of proportion. A small percentage of the candidates constructed through dovetail joints instead of the lapped dovetail joints shown on the drawing.

(2) Finger Joints

The construction of the finger joints was to form the body of the plinth as well as to add beauty to it. This question was attempted by all the candidates. Most candidates were able to mark-out correctly and constructed good joints. Few candidates however, cut one pin instead of the two pins demanded by the rubrics. Some of the candidates made the joints too loose that they could not be assembled to form the plinth. Some candidates cut the sides of the pins unevenly and were unable to clean the bottoms of the sockets properly. This was the result of the use of blunt cutting tools by the candidates.

(3) Through Dovetail Housing Joints

The construction of the through dovetail housing joints was attempted by about 65% of the candidates. Few candidates only marked-out but did not cut out the joints. Others also constructed the ordinary through housing joints instead of through dovetail housing joints. Notably some candidates found it difficult to cut the sloping sides of the dovetail pins from the corner edge of the workpiece as this required a special skill and the use of very sharp cutting tools.

(4) Finishing:

(i) Assembling

About 68% of the candidates were able to assemble the work, 22% did partial assembling while 10% could not assemble but did well to tie the workpieces together for easy identification.

(ii) Squareness

Few candidates were able to have all four corners of the plinth meeting at 90° which was quite commendable.

(iii) 3 Major Dimensions

Candidates were required to work to obtain the three main dimensions namely the length of plinth, width and height as provided on the working drawings.

About 50% of the candidates were able to work to the given dimensions. A good number of the candidates produced the work slightly bigger than required. In one exceptional case, candidates were provided with workpieces which were about 10 times the given length of the plinth. This did a lot of disservice to the candidates.

(iv) Dressing

Almost all the candidates failed to dress the work. Candidates were expected to clean up all the pencil marks and short of the allowable waste margin using the smoothing plane. This is a perennial problem and teachers should find solution to it.

# **RESUME OF ART SUBJECTS**

## **1. STANDARD OF THE PAPERS**

All the Chief Examiners reported that the standard of this year's papers compared favourably with that of the previous years.

## **2. PERFORMANCE OF CANDIDATES**

- (1) The Chief Examiners reported that candidates performance varied, ranging from below average to improvement over that of the previous years.
- (2) Candidates' performance this year in Clothing and Textiles 2 was poor as compared to that of the previous years.
- (3) Above average performance was reported for General Knowledge in Art 2 and 3A and 3B, Textiles 2 and Leatherwork 2.
- (4) The Chief Examiners reported that the performance was average in General Knowledge in Art 1B, Management in Living 2 and 3, Picture Making 2, Foods and Nutrition 2B.
- (5) Below average performance compared to previous years was reported for candidates in Foods and Nutrition 2, Graphic Design 2, Textiles 2, Leatherwork 2, Sculpture 2, Ceramics 2 and General Knowledge in Art 3, Ceramics 2, Picture Making 2, Sculpture 2, Clothing and Textiles 2 and Jewellery 2.

## **3. SUMMARY OF CANDIDATES' STRENGTHS**

The Chief Examiners highlighted the following strengths in candidates work:

- Improved knowledge and use of the sewing machine in Clothing and Textiles 3 and preparation of dishes in Foods and Nutrition 1.
- Correct use of terminologies was exhibited by candidates in Textiles 2, Sculpture 2 and Picture Making 2.
- Better understanding of the questions was reported in Textiles 2, Sculpture 2 and Picture Making 2.
- Candidates had fairly good knowledge of the topics the question were based on in Leatherwork, Clothing and Textiles 2 and Jewellery 2.

- Candidates showed that they had been taught by trained art teachers in Picture Making.
- Improvement in candidates' illustration was noted in Ceramics 2, Clothing and Textiles 2 and Graphic Design 2.
- Improvement in spelling of words and terminologies were noted in Jewellery 2, Management in Living 2 and Basketry 2, General Knowledge in Art 2.
- Improvement in handwriting was reported for candidates in Clothing and Textiles Foods and Nutrition 2B, Management in Living 2 & 3 and Picture Making 2.
- Fewer candidates answered more than the required number of questions. This was noted in Ceramics 2, Textiles 2, Sculpture 2 and General Knowledge in Art 2 and Jewellery 2.
- Skilful use of tools and materials was exhibited in General Knowledge in Art 2B & 3A, 3B and Clothing and Textiles 1. Ability to support answers with illustrations was displayed in Sculpture 2 and Basketry 2. Majority of candidates started each question on a fresh page. This was noted in Ceramics 2 and Visual Art 2.
- Improvement in the use of English Language was evident in Foods and Nutrition 2B, Textiles 2, Management in Living 2 and Management in Living 3, Ceramics 2, General Knowledge in Art 2 A & B and Jewellery 2.
- Adherence to rubrics was observed in Foods and Nutrition 1, Foods and Nutrition 2B, Management in Living 3, Clothing and Textiles 2B, Picture Making 2 and Visual Art 3.
- Most candidates remembered to write their index numbers, unlike the previous years in Foods and Nutrition 2B.
- Cancellation of work by candidates was neatly done in Foods and Nutrition 2B.
- Candidates displayed in-depth knowledge on healthy studio practices in Ceramics 2 and Sculpture 2.
- Many of the candidates had good knowledge of the computer in Graphic Design.

#### **4. SUMMARY OF CANDIDATES' WEAKNESSES**

The Chief Examiners found the following weaknesses in the performance of the candidates:

- Poor drawing skills were reported in General Knowledge in Art 2A, Clothing and Textiles 1, Jewellery 2 and Visual Art 3 and Leatherwork 2.
- Inability of candidates to apply certain principles to practical situations was evident in General Knowledge in Art 2A, Clothing and Textiles 3, Management in Living 3, Textiles 2 and Visual Art 3. Writing more than one answer on a page was evident in Management in Living 2 and Sculpture 2.
- The candidates used unacceptable items like stencils and computer designs in the execution of their work. This was detected in General Knowledge in Art 2A.
- Some candidates from the new schools were not able to appreciate the works they produced in Visual Arts 3.
- Poor time plans made by candidates in Foods and Nutrition 1.
- Poor expression and spelling in Management in Living 2 and Clothing and Textiles 2, Visual Arts 3, General Knowledge in Art 2A and 3b.
- Poor expression in English Language and grammatical errors was a common weakness in Management in Living 2 & 3, Picture Making 2 and Graphic Design 2, Clothing and Textiles 2 and Leatherwork 2.
- Poor spelling of basic terminologies and words was a weakness in Clothing and Textiles 2B, Jewellery 2, Management in Living 3, Ceramics 2, Foods and Nutrition 2B, Picture Making 2 and Basketry 2, Leatherwork 2 and Sculpture 2.
- Lack of indepth knowledge of subject matter was reported in General Knowledge in Art 1B and there were many spelling mistakes by candidates in managing key words in Visual Art 3A and 3B, Leatherwork 2, General Knowledge in Art 2 and Sculpture 2.
- Candidates showed very low technique for answering questions which demanded the application of knowledge in Clothing and Textiles 2, Visual Arts 3, General Knowledge in Art 3A, Leatherwork 2, and a significant number demonstrated poor knowledge of the subject matter.
- Non-adherence to rubrics was observed in Ceramics 2, Sculpture 2 and Management in Living 2 and there were issues with poor understanding of questions in Management in Living 2, Leatherwork 2, General Knowledge in Art 2, Sculpture 2 and Textiles 2.
- Unacceptable use of shorthand and abbreviations in the writing of words was also

observed in Foods and Nutrition 2B and Basketry 2.

- Poor handwriting was reported in Sculpture 2, Visual Art 3 and in Clothing and Textiles 2.
- Most of the compositions of items were not done according to instruction in General Knowledge in Art 3A.
- Background and foregrounds were poorly shown in drawing General Knowledge in Art 3A.
- Candidates were generally not able to design to suit a cultural troop in Visual Art 3.
- A number of candidates did not indicate their schools name and motto in the crest.
- Some candidates answered two questions on one page, this was evident in Sculpture 2.

#### **5. SUGGESTED REMEDIES**

- Candidates should be advised to spend enough time to read and understand the questions before answering them.
- Candidates must also devote time to read through the finished answers before leaving the examination hall.
- Candidates need to read through the rubrics and to ensure they follow the instructions spelt out.
- Students should be given more assignments which involve all types of drawing and shading.
- Students should be encouraged to read prescribed textbooks in addition to notes given by their teachers and in general cultivate the habit of reading.
- Students must be taught to reduce their dependence on computer generated designs and to be more creative in their drawings and designs.
- Teachers should teach students how to handle tools and materials well and should use as many text books as possible to teach.

- Teachers should use correct terminologies in their instructions and students should be encouraged to use these terminologies correctly. Qualified teachers who are knowledgeable should be engaged to handle subjects that they specialized in.
- Teachers should give a lot of assignments which include answering of question. This will help candidates to know how to answer questions and how to correct their mistakes.
- Teachers should encourage students to read and use the library more often to improve their spelling, vocabulary and expressions in English.
- Topics in the syllabuses should be adequately covered.
- Students should be supplied with the prescribed textbooks and they should be encouraged to use them appropriately.
- Practical lessons should be undertaken more often for improvement.
- Students should be advised to read the rubrics of the papers and they should adhere to them.
- The Chief Examiners reports should available to teachers to help them in their teachings.
- Teachers who have not been trained as teachers for specified subject areas should read more and widely and should seek help whenever necessary.
- Candidates should desist from answering more than one question on the same page.
- Invigilators and Supervisors should check on candidates name and index numbers.
- Candidates should desist from giving one word answers which most often are meaningless.
- Instructors who arrange objects for candidates should be made aware to read the questions and understand the details before setting the items in front of candidates.
- Teachers should explain question to candidates as the paper is given to candidates two weeks before the practical paper in the case of General Knowledge in Art 3A.

## **BASKETRY 2**

### **1. GENERAL COMMENTS**

The standard of the paper compares favourable to that of the previous years.

### **2. A SUMMARY OF CANDIDATES STRENGTHS**

Some commendable features noticed in the candidates' scripts:

- Candidates generally showed much improvement in their illustrations. A few of the candidates exhibited excellent drawing skills and showed details in their work.
- Spelling was generally good.
- Legible handwritings from most of the candidates and that made reading of their scripts easier.
- Most candidates were able to submit their responses in whole sentences or wording rather than a single word as answer.
- There was evidence of a deeper knowledge on terminologies in candidates' answers.

### **3. A SUMMARY OF CANDIDATES' WEAKNESSES**

The following are some weaknesses noticed in the candidates' scripts:

- Most of the candidates presented very faint sketches as detailed illustrations thus rendering marking extremely cumbersome.
- Candidates could not identify with the industrial processing of sisal.
- About 95 % of candidates could not accurately describe the processing of coconut shell.
- Over 40% of candidates could not correctly indicate the various colour components of the 12-part colour wheel.

### **4. SUGGESTED REMEDIES FOR THE WEAKNESSES**

The following are some suggested remedies to the candidates' weakness:

- Teachers should teach candidates drawings and illustrations. The illustrations should be marked clear and not presented as faint sketches.
- Teachers should pay attention to Basketry processes. Students should be encouraged to read more books, especially in the subject area in order to help them improve on their understanding of preparatory processes of materials in Basketry.
- Conscious effort should be made to teach the industrial processing of various basketry materials especially, bamboo, sisal, rattan.

## **DETAILED COMMENTS**

### **Question 1**

- (a) State and explain three major challenges facing the local basketry industry.**  
**(b) Suggest three solutions to the challenges explained in (1a).**

Question 1 was the most attempted question. Almost all candidates provided answers that were related to the expected responses. It was generally well answered. A few candidates could however not suggest solutions as was required but gave further reasons to buttress why they were challenges.

Candidates were not only expected to state reasons but also to explain how the challenges affected the local basketry industry.

Expected challenges include:

- indiscriminate bush burning
- lack of co-operatives
- poor technology
- poor finances
- low patronage of locally made articles.
- low government support.
- Competition from synthetic products.
- Destruction of materials as a result of mining activities.

Explaining three major challenges facing the local basketry industry.

- Indiscriminate bush burning reduces the availability of basketry raw materials.
- lack of co-operatives prevents the growth of the local industry as individual efforts do not yield adequate results.
- poor technology prevents maximum yields in outputs.

- poor finances impede expansion and growth.
- low patronage does not allow maximum profits and at times results in losses.
- low government support affects availability of modern technology and tools.
- Insufficient protection from government to favour local basketry industry.

**(b) Three solutions to the challenges explained in (1a).**

- Public education on best bush clearing practices and regulations
- Encourage the formation of co-operatives to access funding and information
- Government and cooperatives to make technology accessible to practitioners in the local basketry industry
- Banks and government to institute schemes to make access to funding easier.
- Adequate and positive information on patronizing locally produced articles to the public.
- Government's initiative and policy to support the local industry would help turn the industry into very viable establishments.
- Effective legislation to protect the local industry would promote the local basketry industry.

**Question 2**

**(a) Describe in three steps how sisal is processed for making articles.**

**(b) List six articles that are woven from sisal.**

**(c) In three steps describe the industrial process of extracting fibre from sisal leaf.**

The demands of this question are clear. Three categories of responses are needed to answer it correctly, which are:

- Traditional/local processing of sisal
- Listing of six woven articles from sisal
- Industrial extraction of fibre from sisal.

The following were observed in candidates' responses to this question.

- Over 70% of candidates who answered this question indicated a fair working knowledge about the extraction of fibre from sisal which mostly centred on the processes of retting (soaking to soften leaf) and beating (done with a mallet).
- Almost every candidate could list six articles as was required.
- Only three (3) candidates' demonstration knowledge on the industrial processing of fibre from sisal. While some candidates simply repeated the traditional processes for the industrial, others invented their imaginary methods which were described many times as twisting, plying etc.

The expected answers would be:

### Processing of sisal

- The leaves are soaked in water (to allow softening of outer core)
- The softened leaf is removed and washed (fibre separation)
- Alternatively, they are beaten over a surface with a mallet
- The separated fibres are dried.
- The process is known as Retting.

### Articles made from sisal.

- Ropes, twines, belts, bags, mats, carpets, curtains, mattresses, door mats, fiberglass, etc

### Industrial process of extracting sisal fibre.

- A set up of rotating wheel with blunt knives is established and the sisal leaves are cut and positioned for processing.
- The cut leaves are crushed and beaten by the rotating wheels of blunt knives (Break outer covering)
- The exposed fibres are brushed to clean them up.
- The process is known as decortication.

### **Question 3**

**(a) Explain the term Lark's head.**

**(b) Describe with illustrations, the three stages in the formation of the Lark's head.**

This question was not answered thoroughly. Majority of the candidates who indicated an understanding of the question could not adequately describe Lark's Head or offered illustrations that looked very sketchy and lacked detail and form.

The second part of the question, Q.3 (b) consequently had similar shabby treatment to it.

Considerable marks were lost in Question 3.

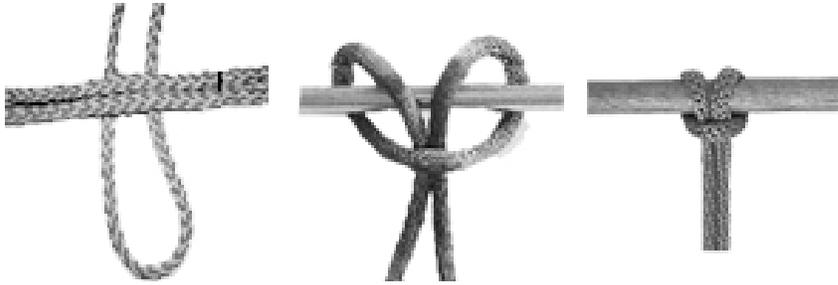
In sharp contrast, less than ten candidates were able to present very good and accurate drawings. Some had the initial loop pointing upward rather than downward while others illustrated the reverse Lark's head.

Following are the expected responses:

### Explanation of Lark's Head

- The Lark's Head is a mounting knot. It is employed in fastening or securing a working cord to a ring or anchor strand.

### Illustration of Lark's head



### Formation of Lark's head

- Fold a cord along the middle into two and place the two ends against a bar or ring with the loop pointing downward
- Gather the two ends over the bar and back through the loop downward.
- Pull the two ends tight downward into a knot to form the Lark's head.

### Question 4

**(a) Describe in three steps how coconut shell is processed for use in macramé work.**

**(b) With illustrations, describe any three knots that are commonly used in macramé work.**

The following are the observations from the scripts of the candidates.

- Most of the marks of candidates were lost in answering Q.3(a).
- About 98% of the candidates who answered this question mistook the processing of coconut shell for use in macramé work for the processing of fibre from coconut.

This could happen from the fact that they were used to the expression coconut fibre and so did not spend time studying the demands of the question.

The appropriate responses should have been:

#### Steps in processing coconut shell

- Shells are cut/carved into desired shapes
- Rubbing against smooth stone or surface (reduce roughness)
- Further smoothing if desired is done by using sandpaper.
- Shinning is done by applying varnish or other oils/coatings.

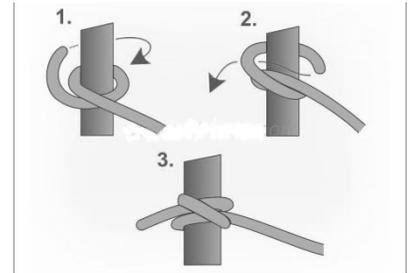
Question 4(b) was about knots frequently employed in macramé work. The responses were in sharp contrast to 3(a) as they were answered quite adequately. The challenges were with

the quality of illustrations presented. They were sketchy and often very faint. Following are some of the expected knots.

### Frequently used macramé knots

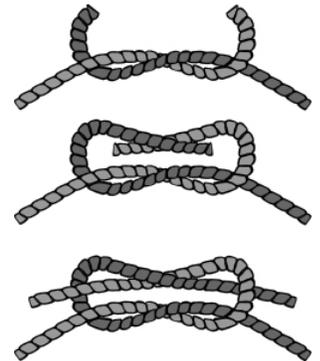
#### **The clove/Ratline hitch**

- Wrap a cord over a pole or bar
- Repeat the wrap, this time across the first wrap.
- Slip the working end under the last wrap
- Pull tight.



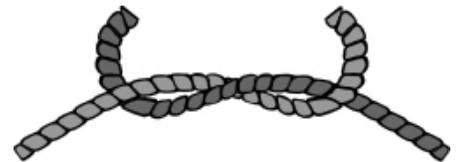
#### **The square knot**

- Take two cords and lay the right cord over the left one
- Wrap the right hand cord under the left hand one
- Bring the right hand cord back over the left one
- bring the original right hand cord over the other cord
- Pull the original cord under the other one
- Pull on both ends firmly to tighten.



#### **The half knot**

- Take two cords and lay the right cord over the left one
- Wrap the right hand cord under the left hand one
- Bring the right hand cord back over the left one.



#### **The Overhand/Bead knot**

- Hold a cord and form a loop. Bring the right end over the left.
- Pass the right end through the loop from the back.
- Pull all ends to tighten.



### Question 5

(a) State and explain four traditional methods for treating bamboo.

(b) State three methods of finishing bamboo articles.

This question was averagely answered. There were various methods ascribed to the treatment of bamboo. While some of the answers are regarded as true to bamboo, they were mostly chemical or industrial ways of treating bamboo. The question bordered on traditional or local methods of treating bamboo.

Candidates have a fair idea of finishing bamboo articles. Some of the marks lost were redeemed here.

#### Traditional methods of treating bamboo

- Clump curing
- Smoking
- Soaking
- Open air treatment

#### Explanations

##### **Clump curing**

- Bamboo culms are cut.
- They are left in a place at vertical positions
- The evaporation in the leaves reduces the starch content.

##### **Smoking**

- Bamboo is stored above a fireplace
- The smoke from the fire blackens the culm.
- Caution is observed in excessive heating to prevent cracking.

##### **Soaking**

- The culms are immersed in water immediately after harvesting.
- Stones are used to keep the culms immersed in water for several weeks.
- They are then removed and dried in the shade away from the sun until fully dried.

##### **Open air treatment**

- Bamboo is treated by drying it under shade in the open.
- A lot of air is allowed around it.
- It is kept under this condition for about two months to season.

(b) Three methods of finishing bamboo

Smoking

Lacquering

Painting/spraying

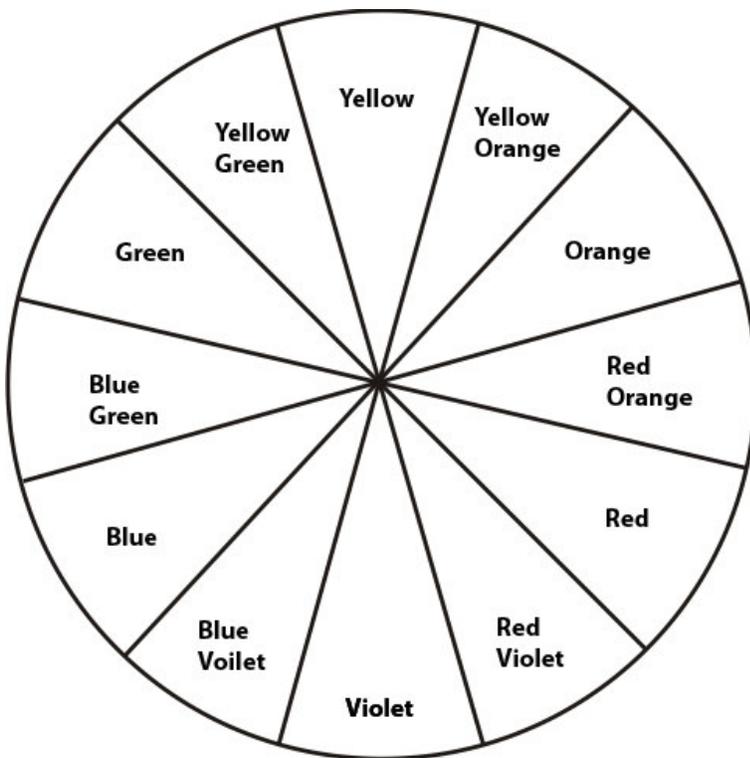
### Question 6

- (a) Explain the term colour wheel.
- (b) With Ghanaian colour symbolism in mind, write notes on the following colours:  
(i) Blue (ii) Yellow (iii) Red (iv) White

Apart from Question one, this is the question where candidates gained most of their marks. Candidates seem to have a firm hold on challenges facing the Basketry industry and the solutions to such challenges. There were no marked difficulties in candidates' responses to this question. Almost every candidate adequately answered this question. Following are some of the expected answers:

#### Colour wheel

- Colours of the spectrum arranged in a circular form to show how they are related.



Notes on colours

**Blue**

Shows serenity  
Associated with colour of the sky  
Symbolizes love  
Female tenderness  
Puberty rites  
Marriage ceremonies

**Yellow**

Riches  
Kings ornaments  
Symbolizes royalty  
Warmth  
Prosperity  
Affluence

**Red**

Colour of blood  
Ripe tomato  
Close blood relations  
  
Anger/Aggression,  
Violence  
Riots/War  
Danger  
Death  
Funeral clothing

**White**

Cotton  
Egg shell  
White clay/kaolin  
  
Victory/Happiness  
Purity  
Virginity  
Faultlessness  
Outdooring  
Birth

# **CERAMICS 2**

## **L. GENERAL COMMENTS**

The general assessment of the paper was that it was very balanced. It explored candidates' mastery over the theoretical as well as practical knowledge of the subject. It tested candidates' mastery of basic terminologies in ceramics such as shrinkage, water smoking, warping etc. Candidates' assimilation of various processes and procedures in undertaking some practical hands-on experiences were also assessed.

Candidates were required to describe with precision the processes of making press mould and ceramic mural. Candidates' content knowledge in the characteristics of secondary clay and healthy studio practices were all explored. These areas assessed are broad enough to cover a significant portion of the syllabus without disenfranchising any schools or candidates who probably were unable to complete the syllabus within the course time frame.

However, the performance of the candidates this year was below average compared to that of last year. A significant number of candidates scored zero in answering some of the questions. This abysmal performance could be attributed to the lack of exposure to practical hands on training by the candidates.

## **2. A SUMMARY OF CANDIDATES STRENGTHS**

Generally, candidates' adherence to the instructions was satisfactory. Fewer candidates answered more than four questions. Also only a negligible number of candidates answered more than two questions on a page. It was refreshing to note that candidates displayed in-depth knowledge on healthy studio practices which when properly internalised may translate into safe and minimized accidents in the studios of various second cycle schools. There was some improvement in candidates' illustrations, even though there is still room for improvement.

Some other attributes of candidates included:

- Planning their answers carefully and well. They put down the sub-heading before writing out the details.
- All answers were numbered well for identification.
- Correct choices of questions were made to avoid cancellations.
- Answers were legible and precisely presented in plain language. Candidates did not waste time on unnecessary introduction before giving required answers to questions.

## **3. A SUMMARY OF CANDIDATES' WEAKNESSES**

Practical knowledge of the various procedures and processes in producing ceramic wares was a major contributor to candidates' poor performance. Many candidates were exposed when they attempted to answer questions which demanded sequential description of processes required in the execution of a given task.

For example most candidates could define shrinkage but were unable to describe how to test for shrinkage in the laboratory. Similar challenges were encountered in describing the processes of making press mould and ceramic murals. Another challenge was candidates' inability to list tools and materials needed in the execution of a given exercise.

A significant number of candidates failed to provide a list of tools and materials needed in the execution of a given task which caused them to lose some vital marks. Another major concern was candidates' inability to express themselves in the English Language which is the lingua franca in Ghana. It is a great indictment on Ghana's education system that students who have gone through formal education for twelve years cannot construct simple sentences. Some of the write-ups of the candidates were simply unintelligible to say the least, hence their poor performance.

Questions which demanded description of processes in producing ceramic wares were poorly handled by candidates. Their knowledge on standard test and procedures in ceramics were found to be shallow. These reinforce the suspicion that lack of practical experience was the shortcoming of most candidates who performed poorly in the examination.

This could stem from schools inability to provide teachers with the requisite teaching and learning resources which would have complemented the theoretical classroom teaching.

#### **4. SUGGESTED REMEDIES**

Ceramic is a practical subject and without hands on experience in the subject it will be difficult to perform satisfactory in examinations. Ceramics cannot be taught in abstraction without the full complement of studio practice. Hence heads of second cycle institutions should endeavour to provide the needed teaching and learning resources to facilitate the teaching and learning of the subject.

Teachers should also devote more time to practical work to complement the classroom teaching. Students are also advised to pay more attention to studio work which will not only improve upon their skills but reinforce the theoretical knowledge taught in the classroom.

Again, they should organize their thoughts properly before attempting to answer any question. Ceramic teachers should pay more attention to students' usage of the English Language both oral and written to improve on students' comprehension and expression.

We keep hammering and insist that Visual art teachers be encouraged to constantly read the Chief Examiner's reports. This will thus enable them pay much attention to the

teaching and learning of ceramic terminologies and processes. For without a firm grip on these terms, many candidates are likely to display these kinds of weaknesses every year.

Candidates are also advised to take their time to read over question, make sure they understand the dictates of the questions, draw a layout of their answers to the question and to satisfy themselves that they have what it takes to attempt the question before they go ahead to answer them.

## **5. DETAILED COMMENTS**

### **Question 1**

**(a) Explain the meaning of the term, shrinkage?**

**(b) In four steps, describe how the test for shrinkage is conducted using two appropriate sketches.**

This question demanded that candidates define shrinkage and describe four steps to be taken in conducting shrinkage test. As part of the description of the process for conducting the shrinkage test, it was expected that candidates would state the formula for calculating shrinkage. Again candidates were expected to do two illustrations.

Candidates' performance in answering this question was below average that is; most candidates scored five marks out of fifteen marks. Most of the candidates had no problem defining shrinkage. However, the description of the process proved to be the challenge. In conducting a standard test for shrinkage a well kneaded ball of clay is rolled into a slab. The slab is allowed to dry to the leather hard state. With the help of a ruler and cutting knife a number of tablets are made from the slab. A line of predetermined length is measured and drawn horizontally across the tablet.

This is recorded and allowed to dry. When the tablets are bone dried the line is measured again and recorded. The difference between the measured line in the green state of the tablet and the bone dried state constitutes the lineal shrinkage of the clay. Shrinkage is determined and presented in percentages.

Shrinkage is calculated by subtracting the dry length from the wet length and dividing the value obtained by wet length and multiplying it by hundred. Most candidates had the idea alright but were unable to describe this standard test for shrinkage. They wrote that shrinkage could be tested by producing a ware and allow it to dry to the bone dried state. The difference in size is shrinkage. This description was Unacceptable.

### **Question 2**

**Describe each of the following ceramic terms:**

- (a) Water smoking,**
- (b) Saggers**
- (c) Warping**

Question two focused on terms in ceramics. It assessed candidates' knowledge on some terminologies in ceramics. Candidates were expected to define the terms and provide three additional feature or characteristics about the term. The performance of candidates in answering this question was average that is; most candidates scored between 8 and 9 marks over fifteen. A fair number of candidates could not at all define a single term. The term sagger had featured in almost all ceramic paper two questions for the past five years, yet some candidates still could not define what a sagger is.

They confused sagger with kiln furniture such as bats and props. A sagger is a rectangular refractory container into which ceramic wares are packed for firing. Again, the question was to describe each of the following ceramic terms. It was therefore expected that after given a brief definition of the term candidates would go ahead and give some two or three additional information about each term in question but a number of the candidates stopped at the definition without providing any additional information causing them to lose vital marks.

### **Question 3**

**(a) Define mould**

**(b) With illustration, describe the process of making a press mould**

This question demanded that candidates define a mould and describe the processes of making a press mould. This was a very straight forward practical question which candidates should have scored very high marks. Sadly, candidates' performance was below average. Majority of the candidates scored between zero to three marks out of fifteen marks. Surprisingly, a significant number of candidates could define what a mould was but were unable to describe the processes of making a press mould. A press mould, is one of the simplest forming processes in ceramics.

It requires the development of the master mould or working mould. Preparation of the clay and subsequent rolling of the clay slab. Oiling or soaping of the mould to avoid the slab from sticking to the mould. Pressing of the slab into the mould to produce its copy. Cutting of excess clay from the mould and smoothing of the edges. Allow the ware to dry to the leatherhard state and subsequent removal from the mould. Allow the ware to dry and there after firing. These were the processes the question demanded from the candidates.

However, what most candidates prescribed could be likened to hand pinching. Then again, most candidates failed to provide a list of tools and materials which further caused them to lose vital marks.

### **Question 4**

**Discuss five healthy studio practices for the ceramist.**

Healthy ceramic studio practices were the focus of question four. Candidates were expected to discuss five healthy studio practices for the ceramist. It was simply refreshing marking this question. Most candidates scored fifteen and thirteen marks out of fifteen with just a few scoring (ten marks or below). This question was the most popular and best answered out of the six questions posed. A higher majority of the candidates were able to list five healthy studio practices and went ahead to explain their points and supported their arguments with examples.

### **Question 5**

#### **State and explain five characteristics of secondary clay.**

Question five demanded that candidate state and explain five characteristics of secondary clay. The performance of the candidates in this question was above average that is, the scores ranged from ten to thirteen.

Most candidates were able to state four characteristics of a secondary clay correctly and were able to explain the characteristics. However, there were few candidates who were able to state the characteristics of a secondary clay but were unable to explain the characteristics very well. Their attempt to explain the characteristics of secondary clays was just a restatement of the point they had raised earlier.

For example, *secondary clays had fine particle sizes than primary clay. Explanation, secondary clay has smaller particle size than primary clay.* Subsequently such an answer will attract just the two marks for the statement and lose the one mark for the explanation.

### **Question 6**

#### **(a) Define a ceramic mural**

#### **(b) With illustration, describe the process of producing a ceramic mural.**

This question was a practical question which demanded that the candidates define a ceramic mural and describe the process of making a ceramic mural for fifteen marks. The general performance was below average, with most candidates scoring three to five marks. The definition of mural was not well defined by candidates.

They asserted that a mural is any art object hanged on the wall. This definition is too general in the sense that, it is too broad to include mask, wall vase, wall painting, collage etc.

This misconstrued definition led many to describe the process of making a hanging ceramic wall vase. What makes this observation very obvious was the candidates' description of creating a hole on the produced object to be used to hung on the wall. Quite a few candidates also discussed the production processes of the sculptural application of chiselling the wall which has nothing too do with a ceramic mural. Most candidates never mentioned Tools and Materials when describing processes in ceramics production.

## **CLOTHING AND TEXTILES 2**

### 1. **GENERAL COMMENTS**

The paper compares favourably with those of previous years. The questions were suitable for candidate's level. They were simple straight-forward and within the clothing and textiles syllabus.

Candidates with good command over the English Language expressed themselves very well and thus performed creditably well. A significant number of candidates could not express themselves very well even where there was evidence that they had a fair knowledge of the topics. For some candidates it was just a matter of putting letters and words together to form meaningless sentences.

It is necessary to point out that in some schools; candidates answered the same questions in the same order. They also provided the same answers and similar spelling mistakes.

Candidates' performance is on the decline. Compared to previous years, this year's candidates performed poorly with majority scoring between 20 and 25. A good number of candidates also scored zero.

### 2. **SUMMARY OF CANDIDATES' STRENGTHS**

Candidates performed creditably well in questions which demanded the recall of facts and those that required a word or two.

- There was significant improvement in candidates illustrations though labelling is still a problem.
- The presentation of candidate's answers was quiet good. Almost all candidates started each question on a fresh page, numbered the sub-questions and left spaces in between sub-questions. However, a few answered their questions in a disorderly manner with no reference made to where the continuation of the answers were.
- There has been some improvement in candidates handwriting.
- Candidates demonstrated a good knowledge in the following topics:
  - \* Stain and stain removal
  - \* Stitches
  - \* Fibre identification
  - \* Uses of pockets

### 3. SUMMARY OF CANDIDATES' WEAKNESSES

- \* English Language continues to be a problem – poor spellings and expressions and wrong use of words. e.g tuck instead of tack, nut instead of knot, bond instead of bound, parch instead of patch.
- \* Questions that demanded the application of knowledge were poorly answered likewise questions on laundry work. This gives the impression that the laundry aspect of the subject is not being treated well.
- \* A significant number of candidates demonstrated poor knowledge in the subject matter, thus scoring below 10. Basic topics like stitches and seams were mixed up. The impression created is that, either the candidates did not have qualified tutors or the tutors themselves are not putting in much effort in their delivery.

### 4. SUGGESTED REMEDIES

- \* There is the need to employ qualified teachers to handle the subject.
- \* Candidates should be encouraged to read the prescribed test books in addition to notes given by tutors.
- \* To assist candidates to improve their spellings, teachers should dictate notes to them and the notes should be marked. Tutors should ensure that mistakes in the notes are corrected. Also new and important words in the notes must be underlined and highlighted.
- \* Candidates must be made aware that, whenever a question demands that, they should use diagrams to describe a process, they should have at least two diagrams. The diagrams should be well labelled indicating R.S. and W.S and the 'stage' and 'heading'
- \* Laundry work should be taught with seriousness.

#### Question 1

The questions were clear and manageable but performance was generally poor. Not many candidates attempted it but those who did performed well in some sub-questions.

#### (a) **State four ways of identifying fibres.**

This was fairly well answered by majority of the candidates. They provided answers like:

- Burning test
- Microscopic test
- Visual test

- Feel and handle
- Use of chemicals
- Absorbency test

A significant number of candidates provided four correct answers with a few providing three correct answers.

**(b) (i) State six special finishes given to cotton fabrics.**

This sub-question was poorly answered by majority of the candidates who attempted question one. They confused edge finishes with the finishing treatment given to cotton. A good number however, provided correct answers which included: mercerization, sanforization, embossing colendering, crease resistance, sizing, singeing and proban. Spelling of some of the words was a problem so they could not score the full mark.

**(b)(ii) List six absorbent fabrics suitable for a child's school uniform in the tropics.**

Majority of the candidates could not answer this sub-question well. Some answers given were cotton, nylon, wool, silk, polyester, rayon.

The expected answers included:

Poplin,	rayon,	grey baft
Denim,	gingham	corduroy
Khaki,	calico,	cotton/polyester blend

However, cotton fabric was accepted where other cotton fabrics (specific) were not mentioned.

**(c) Explain two characteristics of linen fabrics that make it suitable for skirt.**

This was poorly answered by majority of the candidates. Those who answered it correctly provided answers like:-

- Linen is strong
- Linen is absorbent
- Linen is cool to wear

Candidates were expected to explain each point but a significant number of candidates failed to provide the explanation and thus could not earn the full mark.

**(d) State one important point to consider when laundering articles made from blends.**

This was poorly answered. Only a handful of candidates provided one of the possible answers. That is: - follow instructions on care labels attached to the article. None of the candidates provided the other alternative. That is:

‘follow laundering instructions for the weaker fibres’.

## Question 2

This was a very popular question. Performance was generally good though some sub-questions were fairly well answered.

### (a) (i) **Explain the term seam.**

This was fairly well answered by a majority of the candidates. The answer provided was:

- A seam is a process used for joining two or more layers of fabrics neatly and securely.

Some candidates however failed to provide important words like ‘process’ ‘neatly and securely’ and therefore could not earn the full mark. A good number of candidates also provided the following:

‘ a seam is a line of stitching used for joining!.....

This is totally wrong though it is found in some unprescribed text books so candidates should be discouraged from providing this explanation.

### (a)(ii) State three points that determine the choice of seam in clothing construction.

This was fairly well answered by a significant number of the candidates. They provided the correct answer as:-

- the fabric being used
- the garment/article being made
- the position of the seam

Only a handful of candidates provided a fourth point as follows:-

- the shape of the seam

### (b) **State the five general rules for working seams.**

A significant number of candidates provided the correct answer as follows:

- thread must be suitable for the fabric
- the colour of thread should match the colour of fabric
- all seams of the same type must be of similar width
- seams must lie flat and be neat
- press work
- neaten seams on wrong side.

However, a good number of candidates also provided statements on the general rules for working stitches, which was not the expected answers.

(c) **State three points that affect the depth of seam allowance.**

This sub-question was poorly answered. None of the candidates was able to provide two correct answers. The only correct answer provided was – ‘the fabric’.

Though the answer was incomplete candidates were not penalized. They were expected to provide the following answers:

- texture of the fabric
- fraying qualities of the fabric
- the method of neatening chosen
- strength of fabric

(d) **With the aid of a diagram show the first stage in the making of an open seam.**

Though the question was simple and straight-forward, a significant number of candidates seemed not to have understood it. This sub-question did not require candidates to provide the different stages and instructions but a good number of them provided such answers. Others also provided the final stage in the making of an open seam. Most of the candidates also failed to label the wrong side and the right side.

Most of the candidates who provided the first stage were unable to sketch the two layers and so could not earn the full marks.

### Question 3

This was the most unpopular question. Majority of the candidates who attempted this question answered sub-questions (c) and (d). Performance for the (c) and (d) sub-questions was just average. Performance was generally poor especially with sub-questions (a) and (b).

(a)(i) **State one difficulty that may be encountered when sewing jersey fabric.**

This was poorly answered. Those who provided the correct answer stated that:

‘the fabric is slippery and puckers under the sewing machine’.

The expected answers are as follows:

- it has the tendency to curl at the edges.
- the shape may be distorted when cutting out.
- it moves out of position after it is placed flat.

(ii) **Explain how to overcome the difficulty mentioned in a(i) above.**

This sub-question was poorly answered. As a sequel to a (i) even if a(ii) was correct but a(i) was wrongly stated, the candidate was marked wrong. This implies that some candidates could not identify the problem but knew the correct solution.

A significant number of candidates provided the following explanation as to how to overcome the difficulty identified in a(i):-

a(i) answer:

“the fabric is slippery and puckers under the sewing machine”

a(ii) “place a piece of tissue paper in between two layers of fabric and stitch through”

**(b) Describe how to test for colour fastness in fabrics.**

This was poorly answered. None of the candidates provided the correct answer. Those who attempted it stated that ‘cut a piece of fabric and put it in water’. Only important point that was missing in the above answer was the ‘temperature of the water’.

The expected answer s is as follows:

- Soak a small piece of fabric in lukewarm water.
- Put it on a dry towel.
- Traces of colour will be left on the towel, if colour is not fast.

**(c) Give two examples each of the following:**

- (i) Neatening stitches**
- (ii) Joining stitches**
- (iii) Decorative stitches**
- (iv) Permanent stitches**
- (v) Temporary stitches**

This was very well answered by a significant number of candidates. Surprisingly a good number of the candidates confused stitches with seams while others also could not provide correct answers for temporary and permanent stitches which are basic topics every clothing and textiles student is exposed to.

The correct answers provided included:

- Neatening stiches- loop, blanket, hemming, overcasting, machine stitch herringbone.
- Joining stitches – running stitch, machine stitch, back stitch, oversewing stitch
- Decorative stitches- satin, stem chain, French knots, lazy daisy.
- Permanent stiches- all examples mentioned under neatening, joining and decorative stitches
- Temporary stitches:-even tacking, tacking, basting, long and short tacking, tailor’s tacks.

- (d) Sketch the front view of a dress showing fullness, suitable for a soft and pliable fabric.

This was fairly well done by a few of the candidates but a good number of such candidates failed to label their diagrams. Some candidates provided excellent sketches.

Though the question specifically mentioned the ‘front view of a dress,’ some candidates provided sketches of skirt and blouse, skirt or a pair of trousers. If the question had been on ‘a garment’ then they could have been marked correct but in a situation like this they deviated.

Some candidates provided sketches which lacked certain details. For example – if a candidate sketched a gathered dress, the folds must be clearly seen at the hem of the dress and whichever position the gathering begins from. Some failed to provide such details and so were marked down.

#### Question 4

This was a very popular question but performance was poor. Sub-questions b(i) and (ii) were fairly well answered by majority of the candidates whilst sub-questions (a) and (c) were poorly answered.

(a) **Classify pockets into three groups.**

Very few candidates were able to provide the correct answer. From all indications, candidates had a good knowledge on the topic pockets’ but it appears the classification aspect is not taught.

The expected answer is:

- Patch pocket, with or without flap
- Set-in pocket with special opening made in garment (welt bound)
- Pocket incorporated into a seam/concealed pocket/in seam pocket
- Pocket cut-in-one with part of garment

(b)(i) **List six examples of pockets.**

A significant number of the candidates provided the correct answer whilst those who had no knowledge of it provided answers like:

- Round pocket
- trouser pocket
- breast pocket
- flat pocket
- front pocket.

Correct answers provided by candidates included:

- Bound pocket
- Welt pocket
- Patch pocket
- Flap pocket
- Slit pocket
- Kangaroo/pouch pocket

(b)(ii) **State three uses of pockets in garments.**

This was very well done by almost all the candidates who attempted this question majority had two correct answers whilst a handful provided three correct answers.

They provided answers like:-

- To carry items
- As decoration
- As a style feature

Very few candidates provided the following:-

- For warmth
- As a camouflage

(c) **With the aid of diagrams describe how to attach a pocket on a man's shirt.**

This sub-question was poorly answered. A good number of candidates provided boxes representing men's shirt with a patch pocket. Candidates were expected to sketch the shirt. A good number of candidates provided several diagrams starting with the cutting out process.

The expected answer is as follows:

- Neaten the top edge of pocket
- Turn in the other edges of the pocket on to the wrong side.
- Tack, press and snip turnings
- Trim the edges and cut away the thickness at the corners.
- Pin and tack the pocket in place on the right side of shirt.
- Stitch pocket and secure ends.

### Question 5

A very popular question but performance was just average. Sub-questions 'a' and 'd' were fairly well done but 'b' and 'c' were poorly done.

(a)(i) **Explain the term wardrobe planning as used in clothing and textiles.**

Majority of the candidates who attempted this question had knowledge of the term but almost all of them provided an explanation which lacked facts.

Candidates answer was:

‘wardrobe planning is the collection of clothing and cosmetics!

They were expected to provide the following answers:

‘wardrobe planning is the process of carefully selecting and maintaining family clothing!

(a)(ii) **Explain two benefits of wardrobe planning.**

This was fairly well done by the candidates. Though the candidates were expected to explain the benefits, a significant number of them just provided the points.

Candidates provided the following answers:-

- It helps to save money.
- It helps to avoid repetition of items.
- It enables one to have a variety of clothing for all occasions.

(b) **State three characteristics of a well-made hem opening on the front of a shirt.**

This sub-question was poorly answered by almost all the candidates who attempted this question. The answers provided gave an indication that candidates had no knowledge of hem opening. The best answer provided by a handful of candidates was:-

- It should lie flat.

The correct answers are:

- The two edges of the opening should overlap.
- Both sides of the opening must be of equal length.
- Opening should lie flat when fastened.
- The wrap should be wide enough to prevent gaping.
- The wrap should be wide enough to take the width of the fastening.

(c) **State three factors that determine the choice of fastening when making garments.**

This was poorly answered by majority of the candidates. Only a handful of candidates were able to provide three correct answers.

The answers provided by candidates included:

- The fabric being used
- The garment/article being made
- The position of the fastening
- The age of the wearer

(d) **Suggest two suitable fastenings for each of the following:**

- (i) waist band of a skirt;
- (ii) wrap opening of a blouse
- (iii) faced slit opening of a jumper

This was very well answered by majority of the candidates. A significant number also made a mess because they failed to identify the type of openings which required the fastenings.

Candidate's answers included:

- (i) Waistband of a skirt – hook and eye, hook and bar Velcro, button and button hole
- (ii) Wrap opening of a blouse – button and buttonhole, Velcro, press fasteners.
- (iii) Faced slit opening of a jumper – button and loop, zip, rouleau loop and button.

### Question 6

This was the most popular question. Over ninety percent of the candidates answered this question, and performance was satisfactory.

(a) **Explain the term stain.**

This was very well answered by majority of the candidates. Majority of the candidates demonstrated a good knowledge in the topic.

The candidates answer was:-

- A stain is a fixed dirt or a discolouration on an article.

- (b) (i) List four types of stains.
- (ii) Give two examples of each stain mentioned in b (i) above.

This was very well answered by majority of the candidates. Some candidates answered the questions separately while others put the two together. Others also tabulated their answer.

Candidates answer included:-

- (i)(a) Vegetable stain
- (b) Animal stain
- (c) Mineral stain
- (d) Grease stain
  
- (ii) Vegetable stain – tea, tomato juice, coffee, grass

Animal stain – milk, blood, egg

Mineral stain – ink, lipstick, paint

Grease stain – oil, palm oil, engine oil.

**(c) Outline six general guidelines for removing stains.**

Candidates answered this question very well and general performance was good. They provided the following answers:-

- Stain must be removed as soon as it occurs.
- Know the age of the stain.
- Know the nature of the stain.
- Know the correct cleaning or care method
- Test stain removal on an invisible part
- Start with the simplest method

**(d) List two stain removal agents.**

This sub-question was also very well answered by majority of the candidates. Candidates answers included:-

- Water
- Detergent
- Kerosene
- Bleach – parazone
- Turpentine
- Sunlight
- Lime/lemon

# **CLOTHING AND TEXTILES 3**

## **1. GENERAL COMMENTS**

The standard of the paper compares favourably with those of the previous years. The instructions for the making up of the article were precise and clear.

The general performance of candidates was average.

## **2. SUMMARY OF CANDIDATES' STRENGTHS**

Commendable features noted in the work of candidates include the following:

- Lowering of needle into work before lowering presser foot.
- State by stage pressing during the making up.
- Using paper of appropriate dimensions to label work.
- Proper fitting of self garments presented for course work.

## **3. SUMMARY OF CANDIDATES' WEAKNESSES**

The following weaknesses in the work of candidates were observed:

- Lifting work during pinning of pattern piece to fabric and during cutting out.
- Inability to transfer pattern markings, especially minute details.
- Inability to make the sewing processes demanded for making up the article.
- Leaving pins and needles in the articles at the end of the test.

## **4. SUGGESTED REMEDIES**

- The various sewing processes and all practical aspects of the syllabus should be correctly taught by teachers and correctly practised by students.
- Various textbooks on the subject should be consulted before sitting for the examination.

## **5. DETAILED COMMENTS**

Candidates were provided with one pattern piece (which had three Sections – A, B and C) to cut out shapes from the following items to make a lady's purse:

- Plain cotton fabric
- Gingham
- Foam material

The following instructions were to be used to make the purse:

- Basting together the three cut out items (with foam in-between gingham and plain fabric).
- Tacking and machine stitching along the stitching lines indicated in Sections A and B.
- Binding all edges completely using bias binding.
- Folding section A over Section B with plain fabric facing.
- Joining sides of purse with overcasting stitch using embroidery thread.
- Using button and worked loop as fasteners.

## 1. **GENERAL EFFICIENCY**

### **PREPARATION AND CUTTING OUT**

#### **Graining of fabric**

Some candidates grained their fabrics along the weft as expected.

Few incorrectly grained along the warp. A good number of candidates did not grain at all. There were some who grained only one fabric especially the plain cotton fabric.

#### **Pressing of fabric**

Majority of candidates pressed their fabrics. Some of those who did not grain their fabrics pressed their work.

There were few candidates who pressed their work before graining.

#### **Laying out fabrics and foam material**

This year, the test did not demand the folding of fabric but rather the laying out of fabrics in layers flat on working table without foam being inserted in-between them. Majority of candidates got this right. Few candidates, however, did the laying out of items one at a time.

#### **Laying out of pattern piece**

Many candidates placed their pattern piece economically on their fabrics and foam materials. Some candidates wasted fabrics by placing the pattern piece in the centre of arranged layers of fabrics and foam material. In some situations, candidates were not able to match grain line of pattern piece with those of fabrics.

#### **Pinning**

Pins used to hold pattern piece in place were either too many or too few. Some candidates lifted their work during pinning. This was wrong. Many candidates did well by not having their pins going beyond the cutting line.

## **Cutting out**

Candidates were expected to use short strokes on curved edges and long strokes on straight edges when cutting out. Some candidates' did what was expected. Others however, used short stokes throughout.

It was wrong to lift work when cutting out. This was done by some candidates.

Some candidates' cut-off notches making it difficult to match edges during the making up. During the cutting out, some candidates were not consistent in placing hand on pattern.

## **Transfer of pattern markings**

Majority of candidates were able to transfer some of the main seamlines whilst only a few were able to transfer all the necessary symbols including the stitching lines within Sections A and B, and the position of button.

The light shading of some of the improvised carbon paper used for the transfer made it difficult to see what had been transferred very clearly.

## **Use of equipment and tools**

Few candidates handled the sewing machine correctly by doing the following:

- Using the balance wheel to start and stop work.
- Lowering needle into article before lowering presser foot and removing article either to the side or back of sewing machine.
- Some candidates wrongly lowered the presser foot before lowering the needle into article. Some candidates wrongly passed hand over sewing machine to lower presser foot.
- Few candidates who could not use the sewing machine, used only thread and needle for hand sewing for the whole test.
- Almost all candidates did not use the thimble even though some of them had them visibly displayed on their tables. Some of the few who tried to use them were not skilful.
- Almost all candidates used the hand sewing needle. Some threads for hand sewing were too long.
- The pair of scissors was effectively used during the cutting out and the making up.

## **Pressing**

Majority of candidates systematically pressed their articles during the making up.

## **2. MAKING UP**

- (a) Placing foam material in-between plain fabric and gingham

Majority of candidates placed foam in position as expected. Some candidates, including those who cut off notches of pattern piece during the cutting out faced some difficulty matching the edges of pieces of fabric and foam material.

Few candidates did not have foam in the Section C part of work. Few also stitched foam to gingham without the plain fabric.

(b) **Machine stitching along stitching lines indicated on Section A and Section B.**

Some candidate did straight stitching using stitches of correct length and tension along the indicted lines on Sections A and B.

The following weaknesses were observed in some of the articles:

- Some of the stitchings were extended into Section C.
- Fewer stitching lines were made especially in cases where one or few stitching lines were transferred.
- Some stitches were not of the correct length and tension.
- Some foams were too thick posing problem when stitching.
- In some cases no machining was done along any of the stitching lines.
- Some candidates stitched along the fold lines and symbol for button.

(c) **Binding edges using bias binding**

Only few candidates carried out this task correctly. The unacceptable outcomes were as follows:

- Uneven width of binding
- Finished binding was not flat
- Raw edges of biding showing on either one or both sides of work
- Unmatching of seamlines of bias binding and those of the articles
- Untrimming of excess seam allowance
- Some raw edges of articles exposed especially where thick foams and narrow bias bindings were used.
- Ends of bias binding were either not joined or improperly joined
- Using more stitching lines to hold bias binding in place
- Using only pins to hold binding in place
- Making facing instead of binding.

(d) **Folding Section A over Section B**

Section A was to be folded over Section B along the indicated fold line in such a way that the gingham would show on the right side of work.

Even though majority of candidates did not fold exactly along the fold line, their gingham showed on the right side of work. Some gingham showed on the wrong side of work. Few candidates did not fold their articles.

(e) **Joining sides of article**

Sides of article were to be joined using overcasting stitch. The lengths of stitches should be equal. The stitches should be spaced at regular intervals and their ends securely fixed. Few candidates performed to expectation at this task.

Some candidates used blanket stitch, machining and tacking to fix the sides. Few candidates used only pins to fix sides in place.

On the whole many stitches were not of even length and many spacing were not regular. Some ends were not securely fixed.

(f) **Embroidering initials**

Candidates were expected to embroider their initials on the right side of Section C, stitches like chain, stem, etc. could be used. The sizes of the initials should not be too large or too small. Contrasting embroidery thread should be used. The stitches should not be too tight and the wrong side of work should be neat.

Only few candidates produced embroidery work with the given qualities.

The following weaknesses were observed in the work of many candidates:

- Making embroidered initials on other parts of article other Section C.
- Some ends of thread showed on the right side of work.
- Wrong side of work was not neatly done.
- Some initials were either too small or too large.
- Threads of contrasting colours were not used.

A number of candidates did not make the embroidered initials.

(g) **Fixing button**

Button was to be neatly and firmly stitched in its correct position. Few number of candidates carried out this task as expected.

Some candidates made one or more of the following mistakes when fixing the button:

- Wrong positioning of button
- Providing shank for a button with shank
- Stitching was loosely made
- Knots were made in-between fabric and button to secure button in place

Some candidates did not fix their buttons.

(h) **The making of worked loop**

The loop should be correctly positioned and the size should be big enough to allow the button to pass through easily. The loop should be made of adequate number of stands

and buttonhole stitches worked over strands until loop was taut. Loops of candidates were correctly made but only a few were taut.

Many worked loops had the following shortcomings:

- Size of loop was either too small or too big.
- None or inadequate number of blanket stitches worked over strands of thread forming the loop
- Using fabrics to make loops

Some candidates made buttonholes. A significant number of candidates did not make the loop.

(i) **Labelling and general neatness**

- Some candidates used neat dainty labels on their articles. Some labels were very untidy. Some also were too large for the article.
- There were situations in which candidates used pins to hold their labels in place or stitched labels through all layers of article. Such practices are unacceptable.

## FOODS AND NUTRITION 2

### 1. GENERAL COMMENTS

The questions were topics from the syllabus and these were within candidates' capabilities.

Candidates' performance as compared with that of previous year's standard was average.

### 2. SUMMARY OF CANDIDATES' STRENGTHS

Commendable features noted in the work of candidates include the following:

- Candidates followed the rubrics of the paper.
- There is improvement in handwriting
- There were fewer cancellations and these have been neatly done.

### 3. SUMMARY OF CANDIDATES' WEAKNESSES

The following weaknesses in the work of candidates were observed:

- Candidates' spellings were bad e.g. kinfe/kneif for **knife**, protain for **protein**, shell for **shelf**, beins/bens for **beans**, etc.
- Expressions were also poor e.g. 'weighing scale is used for scaling ingredients', etc.
- Candidates' knowledge in basic principles in preservation, purpose/aims in cooking vegetables and the use of terms were either shallow or nil.
- Knowledge and use of some food commodities is very shallow.
- Some candidates' knowledge in the uses of some basic utensils was poor.

### 4. SUGGESTED REMEDIES

- Teachers should make the effort and time to go through notes they dictate to students, explain the note, mark as class exercise and see to it that students do corrections.
- Teachers must endeavour to use real as well as diagrams of the various equipment to teach the proper names and uses of these equipment.
- Student should be encouraged to use the internet to seek for further information on topics they are taught.
- Teachers must learn to use the correct terms and pronunciation of terms, this will help the students.

## 5. DETAILED COMMENTS

### Question 1

- (a) **What are Legumes?**
- (b) **List the two classes of legumes and give one example for each class.**
- (c) **Give four advantages of legumes in the diet.**
- (d) **List four dishes made from legumes.**

- (a) It was unpopular question and was not well answered by most of the few candidates who selected it.

It seems teachers teach vegetables in general, but do not teach legumes as a major topic as it is in the syllabus.

Wrong answers given include:

- Legumes are seeds that give us protein e.g. first class legumes and second class legumes.
- Legumes are plants with board leaves, etc.

The expected answers are as follows:

- Legumes are plants whose seeds grow in pods.
- Legumes are seeds of plants/shrubs/fruits that grow in long pods or shells which are eaten as food.
- Legumes are seeds or fruits from vegetable plant in the form of pulses and nuts which are edible.

- (b) The two classes of legumes:

- Most candidates could not answer the question because they did not know what legumes are.

Some gave wrong answers such as:

- Above ground legumes
- Underground/below ground legumes
- Cereal legumes
- Grain legumes

Few candidates were able to list the classes of legumes as follows:

- Beans and oil seeds
- Pulses and nuts
- Beans and nuts
- Beans, oily seeds and nuts.

Examples of classes of legumes:

- With the pulses and beans most candidates knew only cowpeas, Bambara beans, lentils and soya beans.
- (c) Few candidates were able to answer this question well. They only knew about the nutritional aspect of legumes.

Some wrong answers given include:

- It is a source of vegetable
- They are a source of minerals
- It prevents constipation

Expected answers are:

- It provides protein – as a source of vitamins (A,B,E).
  - Provides the body with heat and/energy/carbohydrate
  - Provides/it is a source of dietary fibre, etc.
  - Can be made into snacks/drinks for refreshment
  - Serves as complements to carbohydrate
  - Serves as a good accompaniment to some dishes, etc.
- (d) Most candidates were able to give varied examples of dishes made from legumes e.g. groundnut soup/stew, neri soup/stew, palaver sauce, soya milk, agushie soup/stew, oleleh, etc.

Few candidates were not sure about the correct dish therefore included dishes from non-legume sources e.g. okro stew, rice porridge, garden egg stew, etc.

## **Question 2**

- (a) **State five reasons for preserving foods**
- (b) **List two methods of food preservation and give two examples of foods that can be preserved by each method.**
- (c) **State two principles of food preservation.**
- This was a very popular question which was well answered by most of the candidates, with the exception of the sub-question (c).**

(a) Some candidates gave the following wrong answers:

- To prolong shelf life
- To keep food for the following day
- To prevent money saving
- To make a new food, etc.

However, some gave correct answers as:

- To save money/to cut down on cost, to cut down on food budget.
- To reduce post harvest losses
- To prevent food spoilage for easy transportation
- To bring variety in meals, etc.

(b) The question was satisfactorily answered. Some were not sure of their answers, therefore gave answers like methods of cooking and method of food preservation.

- With the exception of 'fermentation', candidates gave different methods of preservation.

Correct answers given included:

- Drying/dehydration/solar drying/vacuum drying
- Freezing, bottling, canning
- Use of vinegar/sugar/use of safe chemicals and household preservatives, smoking, etc.

Some were specific about the type of fish to be dried e.g. salmon, herrings, etc. these types are not suitable fish for just ordinary drying. Fish to be dried are oven dried but are salted before drying.

Candidates who also gave milk as an example of food item to be canned also had it wrong, because milk is either pasteurized or sterilized as a method of preservation before canning.

(c) A very poorly answered question. Very few candidates had one principle correct.

They gave answers like:

- To save money
- To prevent food spoilage
- Keep food in a refrigerator
- Bottling and canning, etc.

A significant number of candidates provided the correct answers as follows:

- To kill/destroy/destruction of micro-organisms/ by heat.
- To arrest/stop action of micro-organisms/enzymes/by using low temperature/freezing.

Other expected principles:

- Removal of conditions favourable for growth of micro-organisms

- Prevention of chemical reaction
- Prevention of re-entry of micro-organisms into food.

### **Question 3**

- (a) **State three contributions of table appointments to meals**  
 (b) **List six table appointments**  
 (c) **In order of sequence, state four processes of washing up after clearing table**  
**The question was not a popular one with candidates.**

(a) Majority of candidates assumed the question is on table manners and provided answers like:

- Be on time for meals
- Chew with your mouth closed
- Do not make noise with cutlery

Some gave wrong answers such as:

- To make meals appetizing
- Improve appearance of meals
- To make meals attractive, etc.

The few who had the correct answers were limited.

The expected answers are as follows:

- It beautifies the table
- Makes the environment attractive
- Avoid stress/stressful situations
- Make the person eating/diner comfortable
- Informs the diner of the type of meal to be served
- Improves diner's mood
- A well laid table, stimulates the diner's appetite
- It acts as a silencer, etc.

### **Question 4**

**The diagram below are kitchen utensils. Study them and answer question 4.**

**Identify the utensils labelled (i – viii) in the diagram above.**

A very popular question which was well answered by majority of candidates who selected it.

Due to the closeness of the spacing between question 3 and the first part of question 4 and the diagrams, most candidates thought the question formed part of question 3. This affected rubrics, but candidates were not penalised.

Majority of candidates' were able to identify and state the uses of the various utensils, but the knowledge of the uses were limited.

- (i) measuring/graduated cup/jug – is used for measuring liquid/dry ingredients or to indicate the volume/weight of dry ingredients, but not just ingredients as stated by some candidates.

This gave the impression that it could be used to weigh fish, margarine, yam, etc.

(ii) **Chopping board**

Some candidates identified this utensil as a working/wooden board, griller, grater, shovel, dust pan.

- All boards used in the kitchen are working boards, but they have specific names.
- Some candidates wrote that it is used for chopping/cutting ingredients and this made the answer wrong.
- Food is placed on and cut/chopped/diced or cubed.
- Some food items like nuts are placed on and crushed or beaten.
- Fish is cleaned and dressed on a chopping board.
- Pastry dough is not rolled on a chopping board, but rather on a pastry board which is also plain and bigger than the chopping board.

(iii) **Cook's/kitchen/fillet/chef's knife**

Most candidates did not qualify the type of knife which made their answers wrong.

- Some candidates also identified them as paring/vegetable/cooking knife/peeler which were also wrong.
- Majority of candidates stated the use of this knife as for cutting/chopping ingredients.
- It can also be used for shredding, cubing, dicing and peeling of ingredients.
- It can be used for scaling fresh fish.

(iv) **Rolling pin**

- Some candidates identified this utensil as a roller/Rolla.
- Candidates were conversant with the rolling pin being used to roll pastry dough.
- It can also be used to crush nuts and breadcrumbs.
- It can be used in beating meat to make it tender.

(v) **Spatula/wooden spoon**

- Some candidates identified the diagram as a wooden spoon while others too saw it as a spatula. Both answers were correct:
- Candidates were conversant with the use of the utensil.
- It is used either for stirring soups, stews sauces, for mixing food as well as for creaming fat and sugar when preparing cakes or butter icing, and for beating batters.
- Some candidates wrote that it is used in the preparation of batters, stews, soups, cakes and banku which made their answers wrong.
- Others also wrote that the wooden is used.
- To drive ‘banku’ which is a wrong expression.
- It is rather used to stir and turn banku, ‘eba’, etc. Other uses of the spatula/wooden spoon is for spreading icing, meringues/candies on dishes.

(vi) **Balloon whisk**

Very few candidates’ knew this utensil as a balloon whisk.

Majority of candidates’ wrote that ‘it is a whisk’. Candidates should be made aware that since there are different types of whisks, just mentioning whisk makes the answer a bit vague.

- Some candidates identified the utensil as a ‘whisker’.
- Most of them knew the use of the utensil as ‘to incorporate air into foods e.g. battles.
- Whisking eggs for sponge mixtures and cakes ice creams and batters.

(vii) **Weighing scale**

Majority of candidates’ wrote that it is a ‘measuring scale’ and mentioned that ‘it is used for measuring dry and solid food/ingredients.

Candidates should be taught the difference between weights and measures. Few candidates’ stated that is a clock face used in the kitchen.

(viii) **Palette knife**

Some candidates described this utensils as a ‘parish’/’plate’ knife. Candidates knew the use of the utensils but could not express themselves, e.g. ‘It is for making icing/for decorating a cake’

- For cutting fat when making pastry.

Correct answers:

- Should be for spreading icings/meringues/candies on dishes e.g. cakes.
- For lifting and turning foods e.g pancake and omelettes.
- For trimming pastries
- For cutting fat into flour during pastry making.
- For scrapping mixture from sides of bowls e.g. during creaming of fat and sugar for cakes, etc.

### **Question 5**

**(a)(i) Define the term recipe**

**(ii) List the two components of a recipe**

**(b) Explain three points to consider when selecting a recipe**

**(c) List two chief ingredients in the preparation of ‘Akara/Koose’**

**A popular question which was not satisfactorily answered by most candidates.**

(a) The term recipe was partially defined by most candidates. For example:

- It is a book containing a list of dishes ingredients and how to prepare it
- It is a method of preparing food and the needed food items
- It is a list of ingredients, quantities and guidelines for preparing a dish or food
- It is a guide that helps in the preparation of food.
- It is a detailed instructions of what to use and how to prepare a particular dishes, etc.

With the (ii), most candidates could not list all the components of a recipe, they had only one answer correct:

- Ingredients and methods of cooking method preparation and dish.

(b) Most candidates were able to list the points to consider when selecting a recipe, but could not explain them. Examples are as follows:

- Money available/at hand
- Time available
- Skills of the cook
- Health status/age, etc.

Some candidates’ wrong answers included:

- Money available: It should be enough for the ingredients
- Time available: The time that you will use to buy the ingredients
- Family size: This will help you know what to buy and you will buy enough food for the family
- Food in season: This will determine what to cook and will save money, etc.

The correct answers are:

- Health status/age

The recipe chosen should suit the health/nutritional needs of the individuals or diners. The recipe should also suit the ages of the diners

- Skills of the cook

This should be considered in relation to the recipe chosen, so that the individual may be able to prepare a suitable dish or obtain good results

- Time available

The available time on hand will determine the recipe to be selected. Some recipes take a longer time to prepare, so if the individual has not time and such a recipe is chosen, good results may not be obtained.

- Money at hand

The amount of money on hand will determine the type of recipe to choose, whether elaborate or simple. The type of recipe chosen should be within the family budget.

- Source of recipe

This is where the recipe will be collected from; which could be from friends, magazines, internet, food packages, recipe books, etc.

- (c) Some candidates did not know the recipe for preparing 'akara/koose'. Some listed cassava dough, millet flour, flour, overripened plantain, pepper, onion, etc. Some also had their ingredients right. It seems candidates did not understand the term 'chief ingredients'. Some candidates listed either beans/flour with other wrong ingredients or the oil with other ingredients without the beans.

Chief ingredients for akara/koose is:

- Beans/bean flour
- Vegetable oil

### **Question 6**

- (a) **State three functions of vegetables in the diet.**  
(b) **State three purposes of cooking vegetables**  
(c)(i) **State three effects of cooking on vegetables**  
(ii) **List two conservative methods of cooking vegetables**

A popular question which was well answered by most candidates who selected it. Candidates were very conversant with the nutritive aspect of vegetables.

(a) Few candidates interchanged answers of questions A and B.

Some candidates' correct answers include:

- Gives bulk to the diet/makes the diet bulky
- Provides/gives water/to the body
- Provides/brings variety into the diet
- Provides carbohydrates/provides the body with heat/energy/heat and energy
- Provide valuable amount of mineral elements e.g. calcium, iron, phosphorous, potassium.
- Can be used in various forms as appetizers, main dishes for lunch supper and snack
- Can be taken raw in the form of salads/cooked form
- Improves texture, appearance and flavour of meals.

(b) Candidates correct answers to this question were limited. Candidates' answers were:

- To soften the fibre
- To make the starch digestible
- To make it appetizing/palatable.
- To prevent unnecessary absorption of water
- To minimize loss of vitamins
- To prevent loss of mineral salts
- To stop enzyme action, etc.

(c)(i) Few candidates had this part of the question correct. Answers were varied. Candidates were writing procedure for cooking vegetables e.g.

- Cook in just enough water
- Do not cook vegetables for long
- Use stock for cooking
- Softening of fibre/fibre become soft
- Loss of vitamins/reduction in nutrient
- Change in colour/texture, etc.

(c)(ii) Most candidates instead of stating the conservative methods of cooking, were writing about other methods of cooking and methods of food preservation e.g.

- Boiling
- Sautéing

- Grilling
- Drying
- Smoking
- Canning

Those who answered it correctly provided answers like:

- Poaching
- Steaming
- Stewing
- Baking, etc.

# **FOODS AND NUTRITION 3**

## **1. GENERAL COMMENTS**

The question was based on a topic from the syllabus and was within candidates' scope. The standard of the paper was good, it tested the candidates' ability to apply what they have been taught.

Candidates' performance compared with that of the previous year is average. With the exception of meat/fish, most candidates had just enough ingredients for either one or two people.

## **2. SUMMARY OF CANDIDATES' STRENGTHS**

Commendable features noted in the work of candidates include the following:

- Handwritings were legible and there were fewer cancellations neatly done.
- Majority followed rubrics.
- Even though most candidates did not state specifically the type of convalescent they were catering for, there was variety in the choice of dishes.
- Candidates' preparation before class has improved.
- In practice, most candidates exhibited good time management, therefore were able to finish within the stipulated time.

## **3. SUMMARY OF CANDIDATES' WEAKNESSES**

The following weaknesses were observed:

- Candidates' interpretation of choices for the question was poor.
- Time plans were also poorly done.
- In theory quantities of ingredients were too much.
- Fruits and vegetables were poorly handled by most candidates.
- Properly washing and clearing up is still a challenge to candidates.
- Tray setting was poorly done.

## **4. SUGGESTED REMEDIES**

- For effective teaching and learning, teachers must breakdown broad topics like invalids and convalesces, etc. into sub-topics for students to be aware that they need to know the types of sicknesses, etc. before they can effectively cater for them.
- Teachers should give several drills in interpretation of choices and writing of time plans; ordering of ingredients, for students to be conversant in these aspect of the work.

- During their teaching of food commodities, teachers must demonstrate to students the proper way of handling these commodities especially fruits and vegetables and fresh fish.
- Apart from setting ‘covers
- Students must be taught other forms/types of meals services.

## 5. DETAILED COMMENTS

### Question

**A convalescent has been left in your care for a day:**

- (a) **Prepare a mid-morning snack;**
- (b) **Prepare, cook and serve a two-course lunch on a tray.**

### **CHOICE:**

Most candidates chose ordinary snack and lunch meals for the convalescent, because they were not specific about the type of convalescent they were catering for.

Few candidates were specific about their choice of convalescent they were catering for e.g. an individual recovering from malaria, typhoid fever, cholera, a fracture, therefore the candidates chose specific dishes to meet the needs of their convalescents.

Very few candidates ignored the term ‘convalescent’ when answering the question.

Without being specific on the type of convalescent being catered for made most candidates’ choices correct.

Some candidates who were specific in their choice of candidates chose wrong dishes for them e.g. a convalescent recovering from cholera was served with” ‘Groundnut soup’ which is not a suitable choice due to the digestion problem and the diarrhoea.

Majority of candidates’ choose different types of soups e.g. light soup, palm soup, groundnut soup, bean soup, okro soup, etc.

Others also prepared palaver sauce, okro/garden egg stew, egg stew, fish/meat stew, mixed vegetable stew.

A wide variety of accompanies was chosen by candidates e.g. boiled/vegetable rice, rice balls, boiled yam slices/plantain, riced yam/plantain, konkonte, banku/akple fufu.

Aboloo, yakeyake, akyeke could have also been good choices.

## **Desserts**

Majority of candidates chose fruit dessert e.g. fruit salad, fruit boat/basket, cut fruits.

Some candidates' also chose pancake trifles, baked/steamed egg custards, moulds, and bread and butter pudding.

## **Snack dishes**

- Most candidates' selected dishes prepared from short crust pastries e.g. fish/meat turnovers, sausage rolls.
- Few selected pies which were wrong.
- Others also selected different types of biscuits sandwiches, small cakes e.g. queen cakes, rock buns and koose.
- Candidates should have chosen dishes like moimoi, grilled plantain, kakro, ofam with or without palm oil.
- Other dishes prepared from rich yeast mixtures could have been selected e.g. current buns, Chelsea buns, cinnamon ring.
- Sponge mixtures e.g. swiss roll, sponge cakes could have also been good choices.

## **Drinks**

- Most candidates chose fruit drinks.
- Few selected fruit juice which made their answers wrong.
- Few candidates selected cocoa based drinks, milk shakes, sobolo/sorrel drink.
- Candidates could have also selected lemonade, orangeade, samia drink, corn drink, iced lemon tea, millet drink, etc.

## **Interpretation of choice**

This aspect of the practical work poses a challenge for majority of candidates'.

- Some candidates gave their interpretation for choice 'Groundnut soup'. It is suitable/for lunch. It is a suitable dish for the convalescent' – why is it suitable?

It is because of its digestibility, nutrient content, consistency/texture, appearance, method of cooking – when will it be served. E.g chicken sandwich toast 'It is a suitable high protein snack dish for an individual recovering from malaria and it is easily digested.

- Groundnut soup/palaver sauce – It is a very nutritious dish, high in calcium, therefore it is a suitable main dish for lunch for someone recovering from a fracture/fractured leg.

### **Economy**

In theory most candidates' ordered large quantities of ingredients, but in practice their quantities were good, except for meat and fish.

- Candidates are still wasting matches and gas
- For light every burner a new match stick is used instead of using the used stick to get it lighted room the already lighted burner to use for the one to be lighted.
- Candidates most often left burners and ovens on either use. This can cause serious burns and fire outbreak.

### **Time Plan**

In theory, this aspect of work was poorly done by majority of candidates, but in practice they are able to work systematically to finish within the stipulated time.

### **Cleanliness and clearing up**

- Most candidates did not work neatly.
- Table tops were crowded with utensils, most of which were not needed for the work.
- Used match sticks were scattered on the floor.
- Some had the work area wet and did not bother to mop till they finished with the work.
- Even though washing up was done at intervals by most candidates, this chore was not thoroughly done.
- Most candidate washed their used kitchen cloths after work.
- Scrubbing of work area was very poorly done. Some candidates used dirty water to wash up. Candidates did not need to scrub, they could mop the floor after they had finished the work.

## **MANIPULATIVE SKILLS**

### **Snack dishes**

### **Pastry dishes**

Majority of candidates who prepared the pastry dishes had wrong proportions of fat to flour for the short crust dough.

- Most candidates' did not cut fat into flour before rubbing-in.
- Rubbing-in was poorly done and most candidates sprinkled water on top of the mixture and mixed with bare hand, instead of making a well in the mixture and using the palette knife to mix before using the hand to mould the dough.
- Most candidates relaxed their dough.
- Rolling was poorly done, but most had neat shapes and sizes.
- Majority of candidates did not prick their dishes neither did glaze them. Most of them did not scale the turnovers properly.

### **Sandwiches**

- Even though these were thinly buttered, preparation was poor.
- Sizes of bread slices ween to even, fillings bland, spreading of filling not even.
- Candidates could use either bread rolls or already sliced bread which are evenly sized in the preparation of sandwiches.

### **Biscuits**

- Even though most candidates prepared good biscuits and rolling was well done, these were not pricked.
- Most candidates left baked snack dishes to cool in either baking trays or in tins.
- Ovens were pre-heated by most candidates before baking started.

### **Drinks**

- Majority of candidates prepared fruit drinks.
- Most of the juices were extracted too early.
- Even though syrups were flavoured and cooled, before adding to juices, most of them were watery.
- Some candidates served fruit juice with their dishes and this was not correct.
- Most candidates who serve cocoa base drinks e.g. cocoa, chocolate prepared these well.
- Few candidates served smoothies with their dishes.

## **MAIN DISHES**

### **Soup**

- Most candidate's prepared soups using chicken.
- Few candidates either used meat and fish or fish alone.
- Soups were well prepared and thickened soups were of a suitable consistency for their various accompaniments.
- Most soups boiled gently.
- Protein content was too much.

### **Stews**

- Most candidates who used the various vegetables to prepare stews e.g. carrots, nkotomire, cabbage, etc. did not clean them properly.
- Vegetables were either shredded or cut up and left to stand.
- In preparing palaver sauce, some candidates' added the nkotomire before the egushie instead of adding the egushie and allowing it to get cooked before adding the nkotomire.
- Stews simmered, consistencies were good.
- Usage of oil for the preparation of stews was minimal.

### **Accompaniments**

- Vegetable rice: Rice was well cooked, but the vegetables were poorly handed. Carrots were not well scrapped. Sizes and shapes were not even.
- Rice balls: Most candidates used long grain rice for cooking instead of broken rice.
- Water added was not enough and the rice not stirred and turned long enough while on fire, therefore dish was hard and texture not smooth. Most candidates had big portions.
- Banku/akple/Tuo Zaafi, Konkonte.
- These dishes were well prepared and moulded.
- Candidates should be discouraged from putting moulded dishes in polythene sheets.
- Riced yam/plantain: these dishes were well prepared.
- Garnishing: Garnishing for accompaniments were not dainty. Sizes of garnishes were very thick and too big and were not artistically arranged.

### **Desserts**

- Fruit salad: fruits were over handled.
- Cutting up and arrangement of fruits were poorly done.
- Most candidates added well flavoured, cooled watery syrup to the dish.
- Fruits were arranged close to the edge of fruit bowls

### **Custards**

- Most candidates did not dilute the milk for preparing custards properly.
- They either added too much or too little water, therefore dishes did not turn out right.

### **Bread and butter pudding**

- Most candidates who prepared bread and butter pudding did not prepare enough custard mixture to soak the bread, therefore the dish was dry.

### **Tray setting**

- Most candidates used very beautiful plastic trays which did not need tray clothes and those trays are not for tray setting.
- Plates and dishes were hanging from the edge
- The few people who used wooden trays did not have proper tray cloths lining them.
- Flower vases on trays were beautiful and most floral arrangements were good.
- Candidates could also use a stalk of flower wrapped in wet cotton wool or foam on the stalk and wrap foil around it to prevent withering before placing it in the tray.

# **GENERAL KNOWLEDGE IN ART 2**

## **1. GENERAL COMMENTS**

The paper as a whole was within the scope of the examination syllabus. The standard of the paper and candidates' performance were comparable to those of the previous years in terms of content and clarity of rubrics.

However, few candidates could not understand some of the rubrics, especially in questions 2, 3 and 5. In addition, few candidates were inadequately prepared for the examination.

On the whole, the performance of candidates were above average.

## **2. SUMMARY OF CANDIDATES' STRENGTHS**

- Majority of candidates showed considerable improvement in their handwriting spelling of words and sentence structure.
- Candidates' responses to questions were direct and orderly presented. These are highly commendable, and should be encouraged.

## **3. SUMMARY OF CANDIDATES' WEAKNESSES**

- Few candidates disregarded the rubrics and answered more questions than required.
- There were few others who were inadequately prepared for the paper. Some candidates too, failed to write their index numbers on the answer booklet. Finally there were still, a few whose handwriting could not be deciphered.

## **4. SUGGESTED REMEDIES**

- As part of their teaching, teachers are to stress the need for understanding the rubrics well before answering questions.
- Teachers are again requested to cover the syllabus before candidates sit for the examination.
- In the examination room, invigilators are supposed to check on candidates' names and index numbers or remind them few minutes to the end of the paper to do that.

## **5. DETAILED COMMENTS**

### **Question 1**

- (a) **Explain the term mummification**

**(b) In four ways explain the practice and development of the arts in the ancient Egypt.**

- (a) Candidates who answered this question were able to explain the term as a funerary practice in the ancient Egypt in which the skin and flesh of a corpse was preserved for eternity. However, they failed to answer the (b) part well.
- (b) Candidates started the four points but failed to assign reasons and to relate them to the development of the arts in ancient Egypt. For example, in their quest to find a lasting place for the soul 'ka' of the dead Pharaoh in eternity, the ancient Egyptians developed an architectural edifice called the pyramid, built with imperishable materials to house the mummy and all the burial artifacts. More pyramids were developed and built because the mummification never ceased. More sarcophagi were carved and so were sphinxes, etc.

**Question 2**

**Discuss five roles of art in agriculture in African Societies**

Quite a number of candidates answered this question well. However, they explained the importance of agriculture to art instead of the demands of the question. They also did not relate these art forms to the role they play in agriculture. There were others who wrote mainly on the benefits of agriculture to the society. Candidates focused on artifacts in the form of utensils, tools, equipment, etc. Activities. Music, dance and drama, costume and other forms of art used in rituals and ceremonies in art, i.e. for planting and harvesting were also discussed.

**Question 3**

**Explain the function of printed materials in the following areas:**

- (a) Decoration
- (b) Education
- (c) Information
- (d) Politics
- (e) Religion

Majority of candidates answered this question but fumbled. They misunderstood "printed materials" to mean inks, printing tools, etc. Others stated the functions or defined the areas in question.

They failed to identify various artifacts that are referred to as printed materials, e.g. magazines, posters, banners, illustrations, books, news papers, T-shirts, cards, etc.

These are basically two dimensional art. A few of the candidates managed to identify the roles of these 'printed materials' in the areas concerned.

#### **Question 4**

- (a) What is body art?**
- (b) Discuss four social functions of body art**

Most candidates were able to answer the (a) part very well but failed to explain the (b) part well.

Few candidates could not identify the body art as consisting of body piercing, tattoos, scarification, cicatrices, body adornment, branding, scalpelling, shaping, etc. They failed to relate each of these body arts to its functions. Candidates rather gave the general functions of body arts.

Again candidates did not answer the question under coiffure, body painting, accessories/ornaments and body mutilation.

#### **Question 5**

**Examine the steps used to appreciate a work of art.**

Candidates answered this question but most of them interchanged the explanation of inventory with that of technical qualities.

A few candidates confused the steps in appreciation with the design process. On the whole the question was well answered.

# **GENERAL KNOWLEDGE IN ART 3A**

## **1. GENERAL COMMENTS**

The general standard of the paper as a whole compared favourably with those of the previous years and the items set up were within the context of the General Knowledge in Art 3A syllabus.

Candidates' performance were very encouraging in using pen, pencil, crayon, wash, chalk, pastel, charcoal and poster. Some candidates who used pointillism was satisfactory.

## **2. SUMMARY OF CANDIDATES' STRENGTHS**

- Some candidates demonstrated an in-depth knowledge in good drawing, painting and wash.
- Candidates showed good shading techniques, good rendering of forms in subtle and powerful lines, accurate representation of object and play of light and shade on the objects.
- Candidates drew from close observation of the set objects.
- Candidates gave proper attention and focus on the set up. They also showed that they were well taught by trained art teachers with speciality in Picture Making.
- Few number of candidates who showed fore-shortening did well.

## **3. SUMMARY OF CANDIDATES' WEAKNESSES**

- Lack of proper technique of shading to show source of light, reveal shapes and forms and solidity of objects.
- Some candidates' drawings were imagined rather than drawn from observation of the set-up i.e. the pear and seed and the position of the knife.
- There was difficulty in applying perspective to their drawings; in some cases all the objects on the same place, one object on top of the other.
- Failure on the part of the candidates to indicate foreground and background, using base line to show vertical and horizontal planes.
- Candidates spend time to indicate the table on which the items have been set, as well as the floor of the room/hall.
- Most of them failed to indicate shadows, reflections. Varying tones/shading to show colours of objects and textures was absent.

Space around objects was a problem for most candidates. Candidates' weaknesses may also be due to the lack of adequate preparation for the examination.

Most of them are still not conversant with the proper use of medium.

#### 4. **SUGGESTED REMEDIES**

- Candidates should be taught and well-trained by qualified art teachers who should know about picture-making.
- Soft drawing tools and materials such as soft pencils, i.e. 4b, bb, 8b, etc. crayons, charcoal, pastel give a greater range of tones than hard ones.
- Candidates need to note that tonal value has no meaning except when used in relation to the background/foreground.
- Candidate should note that using ruler (instrument) to aid in drawing is not very helpful as seen in the drawing of bread and the knife.
- Candidates should have regular and constant practice for the use of various media under proper supervision – during or after teaching.
- Teachers and students should have close study of the syllabus and adequate preparations made. Securing other relevant information should be the hall mark of teacher teaching in the classroom to remedy the student's weakness.

#### 5. **DETAILED COMMENTS**

##### **Question 1A**

##### **STILL LIFE DRAWING**

**Make a composition of the following:**

- (i) a loaf of bread**
- (ii) half-sliced pear (avocado)**
- (iii) a knife**

This question requires the candidate to show their knowledge in practical drawing from observation.

The question required the candidates to make a thorough and well-studied drawing of a composition of the following items above-on a low table, close to a wall and a source of light. The question required that the candidates should draw/paint from view, the objects composed for them as described above and record accurately what they observe from their own perspective.

A good number of candidates made good drawing of the composition in correct tonal gradation, powerful rendering of forms and in accurate proportion.

## **IMAGINATIVE COMPOSITION**

**QUESTION 1B: Cheating in examination hall:**

**(i) Not less than three figures**

**(ii) Not more than three colours**

Candidates' impression as well as expression exhibited in connection of this question was very commendable – the theme was captured well and treated in the mood of the question requirement. Their anatomical drawings (figures) were above average and few others showed mastery of figure drawing.

They showed perspective with zeal and structure of the examination hall/room was well drawn and colour applied.

Few candidates ventured or decided and employed the use of pen drawing which was effectively good.

# **GENERAL KNOWLEDGE IN ART 3B**

## **1. GENERAL COMMENTS**

Generally, the performance was above average especially in lettering. This time around almost all the candidates presented works in calligraphy as compared to previous years where candidates mixed up other lettering styles.

The question on the design was least answered. Few candidates who attempted this question could not impress.

However, there were pockets of candidates who exhibited excellence.

## **2. SUMMARY OF CANDIDATES' STRENGTHS**

- Candidates presented works that are of calligraphic in nature.
- Most works were legible and could be read from a reasonable distance.
- Almost all the candidates treated the background of work to enhance the beauty of works.
- Candidates made good use of the space.

## **3. SUMMARY OF CANDIDATES' WEAKNESSES**

- Poor arrangement of works and sentences. There were no specific arrangement of patterns.
- Candidates who resorted to stencils were not able to produce clear visible work.
- Most candidates were not able to produce sharp precise edges.

## **4. SUGGESTED REMEDIES**

- Candidates must develop skills in writing calligraphy, i.e. must learn to handle tools and materials properly.
- Candidates must not depend on the use of stencils.
- There is the need for candidates to prepare very well before sitting for the examination.

## **5. DETAILED COMMENTS**

### **Question 2**

### **LETTERING**

The question requires that candidates produce a work in calligraphy. There should be border design and other designs to enhance the work.

Most candidates produced border designs suitable for the work. The candidates also added additional designs to make the work attractive.

However, there were general problems of arrangement and consistency.

### **Question 3**

#### **DESIGN**

The candidates were expected to make or produce fabric to be worn as “Friday wear”. The design should include additional motif to enhance the work.

Although few candidates attempted it, their performance were low, compared to question 2 on lettering.

The shape of the crest was not constructed. In some cases names of the schools were not indicated, instead short forms (acronyms) e.g. APTECH, MPASS, NAUASCO, etc. were used. In some cases too, the motto were completely omitted.

The illustration too was not well executed. Most candidates lacked drawing skills and resorted to the use of stencils.

# **GRAPHIC DESIGN 2**

## **1. GENERAL COMMENTS**

The standard of the paper compares favourable with that of the previous years. Candidates' performance were below average.

## **2. SUMMARY OF CANDIDATES' STRENGTHS**

- Some candidates used illustrations to explain their answers.
- There were some candidates whose answers were done in an orderly manner and was commendable.
- Many candidates have good knowledge of the computer and they were able to talk much about the computer and its uses.

## **3. SUMMARY OF CANDIDATES' WEAKNESSES**

- Poor expression in the English Language.
- Poor handwriting that makes reading difficult.
- Poor presentation of materials.
- Inability to do simple illustrations.
- Candidates lacked the skills of tackling 'discuss' questions. They still resorted to telegraphic way of answering questions.

## **4. SUGGESTED REMEDIES**

- Teachers should engage students in more practical activities in order to increase their practical knowledge.
- There should be a lot of reading and writing activities to improve their ability to express themselves effectively in the English language.
- Teachers are to ensure that candidates read their notes and Textbooks.
- They should be able to use their laptops, phones and gadgets in the system profitable.

## **5. DETAILED COMMENTS**

### **Question 1**

#### **Discuss five ways of ensuring safety in a Graphic Design studio**

Most candidates attempted this question but did not give detailed explanations of the safety measures to put in place. Many candidates rather mentioned maintenance of the studio and tools instead of safety that the question demanded.

Some ways of ensuring safety in the Graphic Design studio:

- Avoid loose fitting clothing to prevent entanglement with things.

- Avoid running or fighting in the studio to hit chairs and tables.
- Wear rubber or plastic gloves when working with chemicals or solvents in order to avoid burns and contaminations.
- There should be fire extinguishers at vantage points to use in case of fire outbreaks.
- The floors should not be slippery to prevent fall.
- Spillage of solvents on the floors should be cleaned or be wiped immediately to avoid a fall.
- Chemicals/solvents should be placed in closed cabinets/boxes or out of reach.
- No eating or drinking in the studio to prevent invasions of insects and rodents.

## **Question 2**

- (a) State three types of illustration**  
**(b) With a simple sketch, depict the three types of illustration as stated in 2 (a) above.**  
**(c) Discuss one use each of the types of illustration mentioned in 2 (a) above.**

Question 2 was popular with the candidates. Many who answered this question could not differentiate shading techniques from types of illustration.

Many candidates therefore stated shading techniques like hatching, cross-hatching, stippling, etc. instead of:

- Line drawing/contour
- Pen and ink
- Pen and wash
- Lino/wood prints
- Silhouette
- Watercolour printing
- Cartoons
- Diagram/graphs/charts
- Engraving
- Photography

Some candidates also gave wrong answers like pictorial illustration, cartoon illustrations architectural illustrations.

The (b) part of question 2 was difficult for many. Candidates because they could not do simple sketch of types of illustration like, water colour painting, engraving, etc. and that was because they did not have the correct tools to use to illustrate them. Many candidates failed to answer the ‘c’ part of question 2. Many answered that part of the question wrongly. They were describing the illustration, instead of uses of those illustration and where to find them.

Uses of types of illustration

- For road and traffic signs
- Children books
- Bookcovers
- Posters
- Labels
- Newspaper and magazines
- Cartoons in books
- Graphic in textbooks, etc.

### **Question 3**

**With the aid of a simple illustration in each case, explain the following terms as used in Graphic Design:**

- (a) Ascender**
- (b) Layout**
- (c) Hieroglyphics**
- (d) Gothic lettering**
- (e) Serifs**

Many candidates that attempted this question failed to do proper illustration and labelling after defining the Graphic Design terms mentioned or stated as the question demanded. Their definition of some of the terms were wrong. Some also mixed up the terms with their illustration.

In their definition of 'ascender' many candidates failed to indicate that it is a lower case (small letters) and that its part of the stroke is the ascender. Some also did not label the part. Illustration for layout was poorly done. Hieroglyphics seemed strange to some candidates. Gothic lettering was confused with Block lettering. Many candidates could not tell the difference between block lettering from Gothic lettering. Their illustration of Gothic lettering was poorly done. Candidates could not label the part that is called serif. Some also illustration Block lettering.

- (a) Ascender**

It is that part of the lowercase letter that rises above the x-height/mealine, waistline as in b,d,h, etc.

- (b) Layout**

It refers to the general arrangement of design elements in a work.

- (c) Hieroglyphics**

Form of picture writing developed and used by the Ancient Egyptians around 3000 B.C This form of writing uses pictures or symbols of an object to represent a word, syllable, or sound, e.g. hard, leg, birds, eyes.

- (d) Gothic lettering

Gothic is a sans serif letter, i.e. without serifs. It has heavy plain typefaces with even thickness of strokes. The letters are based on the height of the 'O' or the full square. Gothic letters appear round in shape and are grouped into wide, round, medium or three-quarter and narrow sizes.

- (e) Serifs

Short ornamental projections at the top and bottom ends of strokes of some typefaces.

#### **Question 4**

- (a) **What is a Computer?**

- (b) **Discuss three advantages and three disadvantages in using the computer produce a work of art**

This question was popular with the candidates and many treated it fairly. They were able to give a general usage of the computer. Unfortunately many candidates failed to discuss advantages and disadvantages of computer to produce a work of art.

Many candidates resorted to disusing the abuse in the use of the computer. Some mentioned pornography films, playing games and music play or as some of the advantages and disadvantages. Some candidates mentioned the consumption of electricity and computer making one lazy in his or her work.

“Computer is a device that stores raw data in electronic form and can be used for processes such as designing, calculating and typing”.

#### **Advantages**

- It makes designing easy and faster, hence saves time
- It gives the designer the chance to execute different designs accurately and neatly.
- It facilitates research in design process
- It gives the designer the opportunity to explore different tools in the process of production.

#### **Disadvantages**

- The computer is expensive
- Design stored may be lost as a result of wide spread virus on the machine
- Computer may breakdown when you need it most and the design may be lost
- When light goes off while working, the design may be lost and will need to start all over again.
- Affects the eye after using it for a long time
- Retards drawing and lettering skills

- Waist pain may develop after a long use of the computer

### **Question 5**

**State in three points, how the Graphic Designer should care for and maintain each of the following tools**

- (a) brushes**
- (b) pallette**
- (c) lettering pens nibs**
- (d) cutting knife**
- (e) printing roller**

Question 5 was popular with the candidate's. It seemed almost all candidates answered this question. Many candidates scored high marks because they were able to answer the question satisfactorily. Unfortunately, there were other candidates that messed up in answering this question. There were also other candidates that gave an impression in tier answering the question that they have not seen or did not know about lettering pen nibs and printing roller.

Many candidates failed to indicate solvents that are used to wash and clan tools. They also failed to indicate tools are kept in their containers/boxes/bags as a way of caring for and maintaining of tools.

Some solvents used to wash or apply on some tools, water, soapy water, kerosene, turpentine, oil, etc.

### **Question 6**

- (a) Explain the term printmaking as used in Graphic design.**
- (b) Discuss four uses of printed Graphic Design products.**

Many candidates attempted this question. They were able to define printing making fairly. With some candidates they could have got high marks if the emphasis has been on 'transfer'.

Other candidates deviated completely because they attributed drawing for print making. Making impressions or marks on surfaces will not be turned print making.

The (b) part of the question was a little bit confusing. Many candidate did not understand the question well.

They were describing the making of graphic design products instated of what the products are used for. They laid emphasis on the graphic design products.

The term printmaking

*'It is a technique of transferring an impression/image from one surface onto another. This is done by inking the printing surface and pressing, or stamping it onto a support (paper, leatherette, etc.) to leave a print.'*

What some graphic design products are used for include:

- Advertisement
- Education
- Information
- Identification
- Announcement
- Encouragement
- Appreciation, etc.

# JEWELLERY 2

## 1. GENERAL COMMENTS

The standard of the paper as compared with previous year was the same and favourable to the candidates. In addition, the level of paper was not above the candidates.

However, the general performance of candidates were below average.

The question was within the level of candidates. It was clear, straightforward and there was no ambiguity.

## 2. SUMMARY OF CANDIDATES' STRENGTHS

Below are some of the strengths that were identified in the candidates' scripts:

- Few candidates were able to comprehend the questions and managed to recall facts accordingly.
- Some of the candidates' handwriting were nice and legible.
- Few candidates' showed clarity of expression.
- Also few candidates were able to spell some words properly. This is commendable.
- Some candidates' met the demand of the question, e.g. listing of tools, equipment materials before writing the process. Instance of this was question 5 which was a studio experience question and needed to list tools, equipment and materials needed before writing the process.

## 3. SUMMARY OF CANDIDATES' WEAKNESSES

- There were a lot of spelling mistakes e.g. much/march for **match**; malliabl for **malleable**, lusta for **lustre**, etc.
- A lot of grammatical errors were also observed, e.g. 'did covered with sawdust for 'did cover with sawdust.
- Most of the candidates lacked knowledge of what the question was about – thus the main topic from which the question was developed.
- There were wrong use of technical terms. e.g. buffing of clay beads instead of banishing of clay beads.
- Most of the candidates deviated from the demand of the question
- There were a lot of cancellations in their write-ups. This marred the readability of their answers.
- Disorderly number of questions were observed, probably out of mere haste, panicking and confusion. This made marking uninteresting and very difficult.
- Their vocabulary were also very poor. Most of the candidates' lacked the appropriate vocabularies to use. For example sandpapering for sanding, polishing for buffing, etc.

- Poor spacing were the bane of many candidates'. Most of them did not start new questions on fresh sheets as expected.

#### **4. SUGGESTED REMEDIES**

- School authorities and classroom teachers should encourage/motivate learners to use the school and public libraries in order to improve upon their poor spellings and grammatical expressions.
- Due to their inadequate knowledge of the subject matter, candidates' should be advised to read books which been approved by the Ministry of Education and avoid reading numerous unapproved pamphlets.
- Teachers should endeavour to teach learners new words and technical terms, since this would avert their poor use of terminologies
- In order to improve upon their understanding, qualified teachers should be employed to teach the subject. In the area of disorderly numbering of questions, final year students should be educated on how to number questions properly. Samples of these should be shown to them on screens and slides.
- Examination committees and teachers to teach the students to acquire the habit of leaving enough space in-between their write-ups.

#### **5. DETAILED COMMENTS**

##### **Question 1**

**(a) What is a design?**

**(b) State and explain sequentially four steps in the design process**

- (a) This was a very popular question and most of the candidates' attempted it. Candidates wrongly defined design as 'an impression done on a surface with a tool which is either created from the mind or is developed from an already exciting idea or design refers to the process of organizing problems and analysing in the form of drawing to solve problems'.

They were expected to define design as 'making a drawing, sketch, plan or layout of something to be fabricated or design is arranging and organizing elements of design according to certain principles or design an outcome obtained from the arrangement of element of design and principles of design.

However, few candidates' got the answer correct as 'a design is making a drawing, plan, layout of something to be fabricated or design is an arrangement of visual elements according to the principles of design

- (b) This was popular question to the candidates' and majority of the candidates' attempted it. Candidates were required to state that the artist should state the problem or need, that is the also the need to specify, explain or define the problem. One has to do investigations about the problem as regards safety, finish, cultural, social and design elements, etc.

Most of them gave wrong responses which include:

- To make a design you must make thumbnail sketches.
- You must make a rough sketch
- You must make a finish rough sketch
- The last step is the blue sketch or blueprint of the sketch.

Most of them mixed up the steps of design processes as indicated below:

- Step 1: Statement of the problem
- Step 2 Investigation of the problem
- Step 3: Definition/specification/explanation for the problem.
- Step 4: Suggestion of possible solution.

Furthermore, some of them could not make out the difference between steps I aesthetics, appreciation and creativity. They mixed the process together. This caused some to deviate.

They were expected to give answers such as:

Step 1: The artist had to state the problem or the need to fabricate an item. For example, the chief of Aburi and his elders lack strong and durable paraphernalia for chieftaincy activities.

Step: The artist should define/specify the problem, e.g. the traditional township of Aburi needs strong and durable paraphernalia for chieftaincy purposes. There is, therefore, the need to make body adornments for the chief using metals like gold and silver to fabricate such ornaments, etc.

However, some of the candidates' sequentially stated and explained the design process correctly.

## **Question 2**

**Discuss five ways of sustaining the history of jewellery in Ghana.**

The question was clear, straightforward and within the level of the candidates'. Also there was not ambiguity. This was a popular question and performance was average.

Expectation:

- Discussion of the sustenance of history of jewellery in Ghana.
- Discussion of five ways of sustaining the history of jewellery in Ghana.
- Preferably candidates should list the main block heading before explain or indicate the main points in the write-ups e.g. exhibition, museum archaeological findings, etc.

They were required to:

- Building and preserving artist portfolio:

This is done by keeping pictures in albums, keeping hard/soft copies of artist works by means of digital versatile disc (DVDs), compact discs (CDs); Video Compact Disc's (VCDs), etc.

- By oral tradition

This is evident whereby our elders who are well versed in the cultural heritage pass information regarding jewellery making to the youth, etc.

- By written records

Writers should be encourage to write books in jewellery. This will help the learners to trace the history of jewellery form books, etc.

Some gave wrong answers as:

- Is just by teaching them where to get beads or artificial raw materials.
- Also teaching them how to sustain the raw materials and how to extract them, etc.

Below were some expected answers:

- Provision of internet facilities  
There must be adequate provision of internet facilities for the public and learners to access them for information on jewellery.
- Grafting the subject jewellery on the school time table

There is the need to include the subject jewellery on the school time table so that learners will appreciate the subject to broaden their knowledge in the history of jewellery in Ghana, etc.

### **Question 3**

- (a) **List five properties of copper.**  
(b) **Explain each of the properties listed in 3 (a).**

The question was very popular and most candidates' attempted it. This question was within the level of candidates'.

Candidates' were required to:

- List the properties of metal copper
- List five properties of copper
- It implies that not all the properties of metals are applicable.

Important points required:

- Malleable or malleability
- Ductile or ductility
- Lustre or lustrous
- Tensile strength
- Fusible or fusibility
- Conductivity and electricity
- Expansion and contraction
- Colour, etc.

They gave wrong answers as:

- Colour: green colouration on the metal copper
- Ductility: Copper has the ability to be hammered or forged to shape
- Malleability: Copper has the ability to be drawn into the thin and organ wire, etc.

Expected answers

- Malleability: this is the property of metal permanently extending without cracking by pressure, hammering, rolling and bending.
- Ductility: copper is very ductile. This describes the property of copper which enables it to be stretched cold into wire without breaking, etc.
- Metallic lustre: this is the ability of the melt to reflect rays of light when polished

- Fusibility: This is the property of metal-copper which enables it to become liquid (molten) when heated to a high temperature – thus beyond its critical point, ranging between 1080c-1085c.
- Conductivity: this describes the ability of copper to transfer heat or electricity.

#### **Question 4**

**(a) Explain riveting in jewellery**

**(b) State three differences between riveting and soldering process in jewellery**

- (a) The question was clear and straightforward. Few candidates attempted it. However, performance was abysmal.

Important points required include:

- Mentioning of the suitable materials for riveting
- Types of rivets suitable for riveting in jewellery
- The main purpose for riveting

They gave wrong response:

- Riveting is the process of joining two metals together.
- This is the process of riveting metallic work, etc.

They were expected to define riveting as:

- Riveting is a process of joining permanently parts of items during fabrication by using special fastening e.g. rivets/pins/nails which are usually made from soft and malleable materials including aluminium, copper, brass, gold, silver, etc.

Some correctly wrote:

- Riveting is a process whereby special nails or fasteners or rivets are used to permanently hold parts of items together having aligned them. This is accomplished by perforating a hole and then hammer head of the rivets down to tighten the parts together.

- (b) It was a clear question. Few attempted this question but performance was below average. Candidates were expected to:

- Tabulate the answers or write the differences and use conjunctive words to join and show variation of riveting and soldering, e.g. but, whilst, however, on the contrary, etc.

- Stating of points or answers required the candidates to provide their response in a statement form but not listing. For example ‘Riveting is cold joined but soldering heat is applied’.

Points required

- Candidates also failed to show the contrast between riveting and soldering process, e.g. hammer is used to hit flat the head of rivets but blow torch is used in soldering.
- Riveting is used to join materials together.
- Soldering can break easily. Riveting cannot.
- In riveting hammer is used but soldering hammer is not used.

They were expected to write:

- In riveting, rivets/fastenings/pins/nails are used to effect permanent joint. But in soldering pieces of solder are used.
- Heat is applied I soldering but in riveting hammer is used to forge the head of the rivets tighten the components together.

However, some gave correct answers as:

- In riveting, holes are drilled through the aligned components but in soldering metal edges to be soldered are pickled or cleaned with a file or emery cloth before fusion is accomplished.
- In soldering any appropriate flux is used to aid solder flow to the joints of the metals to be joined. However, in riveting the forged rivets hold the components together.

### **Question 5**

**(a) What is a kiln?**

**(b) Describe the process of firing clay beads using sawdust**

- (a) The question was within the level of the candidates. It was a very popular question and most of the candidates attempted. However, some of them deviated.

They were required to state:

- This is a device/equipment for firing items into a matured and serviceable state or
- A kiln is an equipment which is used for providing intense but regulated heat for items to be bisque or glost fired.

Some gave wrong answers as:

- A kiln is a device for baking bread
- A kiln is a tool or equipment which is used by the jewellery in handling clay.

They were expected to write:

- Kiln is a device/equipment for firing items into a matured or serviceable state or
- A kiln is an equipment which is used for providing intense but regulated heat for items to be bisque or glaze fired.

(b) It was a clear, straight forward and there was no ambiguity.

- The demands were:
- Listing of appropriate tools and equipment for sawdust firing
- Listing of materials
- Showing the process involved in sawdust firing technique

They were expected to:

- List tools and equipment e.g. tong, sifter, pick axe, shovel, bricks, etc.
- List materials e.g. dried sawdust, matches, rag, bone dry clay beads, etc.
- Show the process of sawdust firing e.g. prepare the ground, fill it to form a sawdust base and put brads into container, etc.

Here, candidates performed poorly. They gave wrong responses as:

- Dig or prospect for clay
- Put it into the sun to age
- Add water to it and pound, etc.

Some did well by writing:

- First, make a shallow groove
- Secondly, cover ground with sawdust
- Thirdly, fill Milo tins with clay beads, etc.

### **Question 6**

**(a) Explain the term perception**

**(b) Explain how a jewellery applies any four of the sense organs in making a pendant from a thick sheet of copper.**

- (a) Few candidates attempted it. Candidates understood the question, however some deviated. They were confused with the subject matter of creativity and aesthetics. Performance was therefore poor.

Candidates were expected to:

- Explain the meaning of perception
- Give an example of a sense organ and its perceptual activity

They failed by mentioning:

- Perception is learning to respond to the environment by means of the human senses, e.g. eyes for viewing colour, shape, etc.

**Or**

- Thinking with the human senses, e.g. the skin for feeling texture, hot, cold sensation

They gave wrong answers including:

- Perception is the science of beauty. It can be done with the sense organs which are the eye, nose, tongue and skin.
- Perception is the act of thinking of a work and how you would go about it.

However, they were expected to write answers such as:

- Perception is learning to respond to the environment by means of the human senses. That is the ear hears sound from a pierced copper sheet

**Or**

- Perception is the immediate experience of organism or way of seeing with the human senses, in gathering information from the environment e.g. muscles for lifting the copper sheet, etc.

Despite their wrong answers, some gave correct ones as:

- Perception is the use of our various senses to perceive objects or sense. This involves the use of the five organs which enables one to produce an artifacts. Examples of the sense organs are the nose, eyes, ears, skin, etc.

**Or**

- The term perception can be best applied as the art of perceiving with the sense organs such as the nose, eyes, ears and other sense organs.
- (b) Few candidates attempted this question. Most of them understood the question but did not refer to the function of the sense organs in relation to the fabrication processes involved in producing a metal pendant.

Requirements include:

- Explaining how the six sense organs are applied to the fabrication of metal jewellery.
- Explain the function of each sense organs in relation to the use of these sense organs to fabricate a metal pendant.

Below were some of the points required which candidates failed to give:

- The eyes: It perceive (see) the thickness of the metal and decide to mill it to the required specification.
- The skin/hand: The skin/hand helps the artist to feel the rough or smooth texture of the metal. He therefore decides to choose the right finish for the work.

Most of the candidates who attempted the question performed poorly. Some of the wrong response are as follows:

- The brain: the artist uses is brain to come out with a pendant from a thick sheet of metal.
- The tongue: the producer uses his/her tongue to taste the metal.

Below were some of the answers expected from the candidates:

- The yes: the eyes perceive the colour and the texture of the metal
- The skin/hand: the hand feels the smooth, rough, soft, hard, etc. texture of the metal.
- The muscles: the muscles helps the artist to lift and mill the thick sheet of metal, etc.
- The nose: the nose helps the artist to perceive the pungent odour of the preparation of the killed-spirit to be used as flux for soft soldering.

# **LEATHERWORK 2**

## **1. GENERAL COMMENTS**

The standard of the paper was better than that of the previous year. The questions were within the reach of candidates. There were no ambiguities in the questions. The marking scheme was also clear and straight forward and had a wide scope of possible answers to apply to candidates answers.

Questions were distributed over the various topics as per the Ghana Education Service schools syllabus. Candidates' performance varied from school to school. However there seems to be an improvement over the previous year's performance.

It was observed that though some questions were popular with the candidates, none of the questions were conspicuously left unanswered. There was a fair distribution across the schools.

## **2. SUMMARY OF CANDIDATES' STRENGTHS**

- It was observed that most candidates had a fairly good knowledge about the topics the questions were based on.

## **3. SUMMARY OF CANDIDATES' WEAKNESSES**

The weaknesses and noticeable errors of candidates include:

- Many candidates had problems with spelling and proper sentence construction.
- Many candidates had very poor handwriting very difficult to read and discern.
- Most of the candidates do not know how to draw or sketch to be able to illustrate leatherwork tools.
- Most candidates did not number their answers. They did not write answered question numbers on top of the pages, and some numbered answered questions not accordingly at the front of the answer booklets. Majority of them numbered the answers to their questions haphazardly.
- A few candidates answered two question on the same page.
- Some also answered more questions than required.
- They lacked understanding of the rubrics as evidenced in question 5(b).
- Most candidates were not able to produce sharp precise edges.

## **4. SUGGESTED REMEDIES**

- Much concentration should be given to drawing when teachers are teaching on leatherwork tools, equipment and accessories and show examples in reality or pictures to students so that they can be acquainted with them to be able to identify them.

- Teachers study past questions and teach students to understand the rubrics of questions.
- Improvisation of tools can be introduced but the real tools should be made to study so that they do not assume that the improvised ones are the real tools/equipment.
- Since we are now technologically inclined, teachers can go to the internet to source information on all topics under leatherwork terminologies on leatherwork.
- Teachers who complain of lack of books in the system should also go on the internet for the needed information.
- Most candidates failed to read over their answers. They could have corrected some of the common mistakes they made if they had read over.
- The unavailability of leatherwork tools and equipment in most schools is the cause of students not being familiar with tools and their uses. Heads of schools should help in this area.
- Teachers should meet after every examination to discuss the questions so as to know their limitations and strengths and try to improve.

## 5. DETAILED COMMENTS

### Question 1

**Explain in five points the importance of exhibition to the leather worker.**

This question demanded the importance of exhibition to the leatherworker who seems to exhibit his wares either alone or in collaboration with other artists.

Most answers were on what happens during exhibitions generally without referring to the exhibitor and his gain as an exhibitor. It was observed that candidates just wrote their notes just as they been taught.

Most of them also referred to school exhibitions which are organized to show to parents, other students and the general public on what students have been taught. They wrote on students and not on a leatherworker organizing an exhibition. In most cases the students wrote on the general benefits.

### Question 2

**(a) Define flaying.**

**(b) Describe two flaying methods.**

- (a) Most candidates attempted this question satisfactorily, except that the meaning of flaying was not adequately explained. Flaying is done on a dead or slain animal, but the answers did not bring that distinction clearly.

Teachers should impress this on their candidates' because it caused them in the award of marks.

- (b) The methods used in flaying have specific technical names which include: Casing, ripping, lateral, pulling, saurian, etc.

Some operations go together with some of these, such as: Blowing. This should be taught to students and not the descriptive names such as dissecting, opening and the like.

The question demanded the description of the processes of flaying a carcass. Most candidates wrote on the techniques used to obtain the pelts but failed to describe the processes involved sequentially. Example “This is how skin of an animal is removed using a sharp object such as a knife. This in this case much attention and carefulness is required because the knife can cut through the skin and damage it. This method of flaying is mostly practiced by professionals. The full side of the skin can be obtained based on the experience of the leatherworker”.

This has not described the method of flaying or removing the pelt from the dead or slain animal. He has only written about how careful one should be when flaying is being done and not the process of flaying.

When it comes to the blowing method, some wrote that air is blown through the anus, but others said a small cut is made on one of the legs and tube inserted through that for the blowing of air.

As for how the bloated carcass was ‘undressed’. Some wrote on a knife being used to remove the pelt from the animal/carcass without showing or describing how that is achieved.

Students seem to have problems with the types of flaying as very few could get them right.

Casting/Pulling: In this case many small animals, such as rabbits and sheep, the belly is not ripped and the skin pulled by peeling it off the carcass, but the head is cut at the neck and the skin is pushed down and the carcass pulled out just like a sock from the foot.

### **Question 3**

#### **Give five points to explain the importance of pre-tanning.**

Pre-tanning refers to the various treatments given to pelts/skin/hides after they have been removed from the carcass of an animal, prior to tanning. These include curing, liming, defleshing, dehairing, deliming, bating, pickling, drenching, scouring, washing. Each treatment is done for a purpose. The question sought to test candidates’ on the importance or the effect of each operation on the pelt before tanning.

Most candidates answered this question but instead of using skins/hides or pelt they used leather. At this stage the pelt has not become leather because it has not been treated with the tanning liquours which would bring about the permanent change.

It is therefore erroneous for anyone to call the pelt leather at the pre-tanning stage. Candidates' weaknesses were evident in their inability to explain the importance of pre-tanning. A few mentioned the processes involved but wrongfully used the term "leather" instead of skin, hide or pelt in their explanation.

The agents used for curing, liming, de-liming, washing, defleshing, de-hairing, bating, pickling, drenching or scouring should be mentioned and their respective effects explained so that students will be able to express themselves should any such questions appear in future examinations.

For example, one candidate wrote "to prevent bad smell, the leather is pre-tanned because after the skin is de-haired and dried the irritating smell still hovers around the leather so in order to get rid of the smell the leather needs to be pre pre-tanned"

This should have been – to prevent bad smell in the pelt/skin not leather-the pelt should be treated with lime – sodium sulphite, sodium hydroxide/sodium hydro sulphite, calcium hydroxide/calcium hydrosulphite, etc. which are used to loosen the epidermis layer to allow for removal of fur/hair and pieces of flesh, which contribute to the pungent smell in the skins and hides.

Also common salt, brine and juice from pawpaw leaves, wood ash and carbide can be used to achieve a similar effect. In similar manner each of the processes should be explained and the chemicals/agents used mentioned. Teachers should take note and explain such to their students and future candidates.

#### **Question 4**

- (a) **Mention five different punches used in leatherwork.**  
(b) **Sketch the punches mentioned in 4 (a) above.**  
(c) **Give one use of each punch mentioned in 4 (a).**  
(a) Here candidates were to mention the names of punching tools, or tools used to create or punch holes in leather.

These include:

- Six-way/revolving/rotary punch
- Round hole punch
- Universal punch pleirs/drive punch
- Arch punch
- Strap and punch
- Oblong punch
- Oval drive punch
- Single punch pliers
- Spring punch
- Ventilator punch
- Grommet hole cutter

- Thonging, prong, pricking chisels

Though nails, fids, awls and bodkin can be used in creating holes they are not technically punch. They are classified as piercing tools together with needles and pointed shaft tools. A lot of candidates' could not identify punches. Some even mentioned mallet, hammer, knife, and some piercing tools as punches.

- (b) This part of question sought to test the candidates' ability to identify or match the tools with their names.

Many failed woefully to sketch the named tools and those who could draw not all the tools matched with the given names. Sketches were horribly done except a few who could actually draw.

- (c) The question sought to test on the practical experiences of the candidates. The question sought to find out if candidates could match the punches with the shape and size of holes they create.

Example:

- Six-way punch: creates round holes of different sizes.
- Universal punch plier: for punching various sized holes; for fixing fastener/for cutting slits, etc.
- Drive punch: for errating hole far from the edges of the leather.
- Strap end punch: For cutting rounded belt tips/making tapers on belt ends, etc.

Only a few candidates could adequately write what the punches are meant for.

### **Question 5**

- (a) **What is:**

- (i) **natural leather;**  
(ii) **leatherette?**

- (b) **In five points draw the differences between the two main types of leathers.**

- (a) This question sought to test candidates' knowledge on leathers used by leather work students.
- A few candidates were able to adequately define natural leather e.g. natural leather is the animal skin or hide or that has been converted into a permanent non-putrescible material by a chemical treatment known as tanning, to preserve its quality and natural beauty.

A few sizeable number of candidates’ wrote that natural leathers were made by God or nature; or obtained from animals, etc. Someone wrote “natural leather is a type of leather gotten naturally from animals”.

- **Leatherette:** This is a man-made leather fabric that has been made to resemble the natural leather. It has a leather-like surface and is dyed or coloured and treated to simulate and feel like natural leathers. It is also termed artificial or synthetic leather.

Most candidates’ were able to answer this part of the question well. But some wrote – leatherette is the bark of trees used to create leather. Leatherette is the type of leather obtained from man. Teachers are to make the distinction very clear to students so that they may be able to define them adequately in future examination.

- (b) Here the questions sought to test candidates on the physical properties of the leathers as well as their uses.

In the first place most candidates from some schools understood “draw” to mean sketch/illustration. It was observed that candidates from such school sketched natural and synthetic leathers which could not be adequately differentiated.

<b>Natural</b>	<b>Leatherette</b>
▪ It has high tear resistance	Tears easily
▪ Can be carved, tooled and embossed	Cannot be carved, tooled and embossed.
▪ Can be split into layers	Cannot be split into layers.
▪ Limited in size according to the size of animals.	Come in large, broad sheets.
▪ Heat resistant	Highly flammable.
▪ Prone to fungal attack	Resistant to fungal attack
▪ Has high puncture resistance	Can easily be punctured

▪ Expensive to buy	Relatively cheaper to buy
▪ Porous/can breathe	Non porous
▪ Very elastic	Not elastic
▪ Limited in colour and textures.	Has variety of colours, texture thicknesses
▪ Irregular shape	Regular shape

For this most candidates' wrote – comes from nature, God, etc. – made by man. Tanned with chemicals – made from chemicals. Can return to former state – cannot return to former state, etc.

Candidates should learn to answer questions based on what they have been taught and stop speculating.

### **Question 6**

- (a) Define outline tooling.**
- (b) What type of leather is suitable for outline tooling?**
- (c) State six processes in outline tooling.**

This is specific technique in leather decoration. This question was meant to test if candidates had been taught or understood the term “Outline tooling” and the process involved.

Outline tooling is a technique in leather work whereby designs are made/created with modeller/bonefolder/empty ball pen end/swivel knife or any blunt pointed tool that cannot cut through the leather, by moving along the outline of the design on caused/wetted leather, until the outline is sharp and deepened evenly.

This was the less attempted question and those who know outline tooling defined it well. Yet a few defined it like: “Outline tooling is designing the edges of leather articles: or “tracing outline of the design unto blunt tools to create sunken impression”. In most cases no mention of ‘casing’ of leather was mentioned.

The (b) part was testing the ability of candidates to identify the leather that lend itself to tooling and embossing. It is true that natural leather is more suitable for such processes but not all natural leathers lend themselves to this technique. Such a natural leather should be a vegetable tanned leather which has the physical qualities to retain moisture and ‘soft’ grain to be able to retain an image if a tool is used to press through the wetted material’s surface.

Some candidates wrote natural leather and yet others named leathers like Morocco.

On the (c) section, the question was specific on the processes involved in the actual technique. Some candidates started from buying or getting your leather, cutting the needed piece, getting tools ready and other irrelevant procedures.

These may spell out a better procedure:

- Create pattern or design on paper
- Case/moisten the leather
- Transfer the design onto the leather using template
- Clip template unto leather
- Place leather on glass plate
- Trace design
- Check corrections
- Remove template and re-trace
- Trace through outlines by pressing harder over and over to deepen the outlines
- Moisten leather from time to time
- Gently move tool round the design repeatedly to obtain sharp, deep outlines.
- Allow the dampened areas of leather to air dry
- Finish the work appropriately.

Any sequential arrangement was all that the question demanded.

# **MANAGEMENT-IN-LIVING 2**

## **1. GENERAL COMMENTS**

The standard of the paper compares favourably with the previous year. Questions were clear and within the scope of the syllabus. Performance of candidates were average.

## **2. SUMMARY OF CANDIDATES' STRENGTHS**

- Clear handwriting and readable in most cases.
- Candidates answered the number of questions required of them.

## **3. SUMMARY OF CANDIDATES' WEAKNESSES**

- Poor spellings and grammatical error.
- Presentation of answers to questions were not orderly done.
- Wrong numbering of answers.

## **4. SUGGESTED REMEDIES**

- Candidates are advised to present their answers in an orderly manner.
- Candidates are advised to read over their work.
- Candidates should be more serious with their spellings since wrong spelling can change the meaning of answers.

## **5. DETAILED COMMENTS**

### **Question 1**

**(a) Explain the term goals**

**(b) Explain the following types of goals and give two examples for each:**

- (i) long term goal**
- (ii) short term goal**
- (iii) intermediate goal**
- (iv) means-end goal**

**(c) State six guidelines for setting goals**

**(d) State five reasons for setting goals**

(a) Almost all candidates answered this question. Most candidates were able to explain the term goals.

(b)(i) Candidates were able to explain long term goals but could not give correct examples.

Expected examples include:

- Buying or building a house
- Buying a car
- Educating children

- (ii) Candidates were able to explain short term goals but could not give correct examples.

Expected examples include:

- Passing ones examination
- Getting a new hand bag
- Getting a new shoe

- (iii) This was poorly explained. Expected answer was:

Goals that usually serve as means of achieving long term goals. Examples

- Saving to buy a house.
- Getting a passport to travel
- Passing examination to further one's education

- (iv) A few candidates were able to explain means-end goals well. Some of the answers provided by candidates were: Target that are set to achieve long term goal.

Expected answer is:

Means-end goals: Are the simple and immediate goals set up as steps taken to achieve other goals/the day-to-day decisions and activities taken towards the achievement of goals.

Examples are:

- Studying to pass examination.
- Bathing twice a day to avoid body odour
- Drinking good water for good health.

- (c) Most candidates were able to state the guidelines for setting goals.
- (d) This question was poorly answered by most candidates.

The expected answers include:

- Goals provide direction for the use or resources
- To manage resources wisely.
- To help in prioritizing goals
- To help meet targets at the stipulated time
- To help identify the resources needed

## **Question 2**

- (a) **Explain three criteria for obtaining credit**
- (b) **Explain five reasons for using credit.**

- (c) **State five steps that can be taken when using credit to reduce the possibility of over indebtedness**
- (d) **State four disadvantages of credit.**

(a) Candidates who attempted this question performed poorly. Candidates could not explain criteria for obtaining credit.

Wrong answers given by candidates include:

- Instalment credit
- Revolving credit
- Hire purchase

The correct answers are:

- Capital: The borrower's financial resources given an indication/determine whether or not a debt can be paid.
- Available income: It is one's ability to repay with one's income.
- Capacity: One's ability to repay the debt.
- Character: The general behaviour/attitude and personality of the consumer can determine whether the debt is likely to be paid.
- Collateral: To help ensure repayment, creditors often require certain asset which a borrow pledges to back up the debt.

- (b) Candidates were able to explain the reasons for using credit well.
- (c) Some candidates were able to state steps that can be taken when using credit to reduce the possibility of over indebtedness.

Correct answers include:

- Consider whether there is genuine need for the item.
- Have a good purpose for which you are using the credit.
- Never use credit for luxuries one can afford to do without.
- Buy only on credit for very expensive and important items.

(d) Majority stated correct answers which include:

- It can lead to over-indebtedness.
- It encourages people to overspend.
- Goods brought on credit are expensive because of the added interest.

### **Question 3**

- (a) **Differentiate the term parenthood and parenting.**
- (b) **Explain four factors to consider before parenting.**
- (c) **Explain five physical care parents are expected to provide for their children.**
- (d) **State three benefits of parenting.**

- (a) Popular question. Most candidates were able to explain parenting than parenthood.

Expected correct answers include:

Parenthood: is the state of having or adopting children and caring for them while

Parenting: is the process of caring for children and helping them to grow and learn from birth to adulthood.

- (b) It was a poorly answered question. Wrong answers given by candidates include:

- Produce the need for the children.
- Give birth
- Provide discipline

Expected correct answers include:

- Financial readiness: Raising children is expensive as it includes cost for food, clothing, medical care, education and recreational activities.
- Age: Age usually come with physical and emotional maturity, experience, wisdom which are required to better deal with problems of parenting.
- Goals and expectations: Children can cause plans to change so parents must decide the best time to have them in order not to alter important goals.

- (c) Expected correct answers include:

- Good Nutrition: Parents are expected to provide nutritious meals for their children to enable them grow healthy.
- Clothing: Parents must ensure that children are appropriately clothed for the weather and for various activities and occasions.
- Exercise: Parents should provide children with a lot of opportunities for exercise for healthy growth.
- Medical Care: Parents must make sure children receive good medical and dental care through regular check-ups and vaccinations to protect them from certain diseases.
- Safe Environment: Parents should monitor their children and their activities and keep the home safe so that they would be protected from dangerous substances and situations.

- (d) Benefits of parenting were poorly stated. Wrong answers provided include:

- Helping them to meet their resources
- Help in child development
- Help to improve their education

Expected correct answers:

- Parents enjoy seeing their children grow
- It is perceived as long term investment
- There is a shared love and affection between parents and children.

#### **Question 4**

- (a) Explain four objectives of advertising.**
- (b) List ten media for advertising**
- (c) Explain the following types of advertising:**
  - (i) informative advertising**
  - (ii) persuasive advertising**
  - (iii) competitive advertising**
- (d) State six strategies advertisers use to influence consumers.**

- (a) Majority of candidates could not explain the objective of advertising.

Wrong answers include:

- Reduction of price
- Help create new customers
- 

Expected correct answers include:

- To reinforce customer's interest: It aims at reminding customers to buy again in order to sustain demand for a product.
- To communicate certain information about a product or service: It focuses on giving out facts such as name, special features and quality of a product or service which should attract potential buyers.
- Change the attitudes and habits of people to whom the advertisement is directed. Usually e.g. government advertisement, to reduce road accidents, burglaries, smoking, etc.

- (b) Almost all candidates were able to list the media for advertising. Correct answers given include:

- Radio
- Magazine
- Internet
- Poster
- Mobile phones
- Bill boards
- Television, etc.

- (c)(i) Most candidates were able to explain informative advertisement.

- (ii) Majority of candidates were unable to explain persuasive advertising.

Wrong explanations given were:

- Persuasive advertising. This is when individuals are force to buy the use of testimonies of others who use them before.

Expected correct answer for persuasive advertising is:

*“It is designed to convince or appeal to the emotions of people to buy a commodity by using any suitable means to make them believe that it has extraordinary qualities and must be bought by all means.”*

- (iii) Majority of candidates were unable to explain competitive advertising.

They gave wrong explanations as:

“This is when picture and others are posted to make advertisement”.

They were expected to give:

- ‘It is used to increase sales of a product at the expense of other competing brands by encouraging customers to believe that only one product or service will satisfy their needs.

- (d) Strategies advertisers use to influence consumers were poorly stated. They gave wrong answers such as:

- They make good look attractive
- Putting positive measures
- Quality of goods

Expected corrects answers include:

- Give information through advertisement
- Use significant people as testimonial advertisement
- Use truth to convey falsehood
- Offer free items or series to consumers who purchase their products.

### **Question 5**

- (a) **State five signs and symptoms of HIV/AIDS**
- (b) **Explain two ways through which people can be infected with HIV/AIDS**
- (c) **Explain three effects each of HIV/AIDS on the following:**
- (i) **the individual**
- (ii) **the family**
- (d) **Suggest four ways to prevent HIV/AIDS infection.**

Majority of candidates answered this question.

- (a) Almost all candidates who answered this question were able to state the signs and symptoms but have problems with spellings. For example appetite for **appetite**, vomiti for **vomiting**, diarria for **diarrhoea**, etc.
- (b) Most candidates were able to explain ways through which people can be infected with HIV/AIDS.
- (c) Most candidates were able to explain the effects of HIV/AIDS on the individual and the family.

Individual:

- Death: the disease has no cure and will in the end kill the person.
- High medical cost: the treatment of the disease and opportunistic infections are expensive
- Loss of respect: there is loss of respect for the person leading to lowered self-esteem and lack of confidence.

Family:

- Increased burden on the elderly people. The young and productive people are affected and die leaving the elderly people in the family to care for orphans.
- Stigmatization: the disease carries with it a social stigma, so a family's reputation get tarnished when a member contracts it.

- (d) Most candidates were able to suggest ways to prevent HIV/AIDS. Correct answers given include:

- Using safe sex practices
- Avoiding prostitution
- Avoiding sharing needles, syringes, blades, combs
- Staying free from drugs and alcohol.
- Sexual abstinence for unmarried

### **Question 6**

- (a) Explain five ways of acquiring a house**
- (b) State five factors to consider when choosing an already built house**
- (c) Describe five ways of improving the storage system in the kitchen.**

- (a) Almost all candidates answered this question. Majority of them were able to explain ways of acquiring a house. Correct answers given include:

- Renting a house: This involves living in a house owned by someone else and making payment for it.
  - Buying a house: A house may be purchased from an individual or an institution.
- (b) Majority of candidates were able to state five factors to consider when choosing already built house. Correct answers given include:
- The money available will determine the type of house.
  - The condition and state of the house.
  - The facilities in the house.
  - The house must legally belong to the person selling it to prevent future litigation.
  - The needs of the family.
  - The location of the house should be considered.
- (c) Almost all candidates were unable to describe ways of improving storage system in the kitchen. Wrong answers include:
- The ingredients must be stored differently.
  - It will help you to keep kitchen clean.
  - Tools and items must be properly arranged to correct space in the kitchen.
  - Separating sharp items or objects in the kitchen.

Expected answers are as follows:

- Taps can be fitted on water storage containers.
- Shelves made with wood can be fixed to the walls of the kitchen to store utensils
- A basket with a lid and string can be made to store food items.
- Packing cases and cartons can be used for making shelves for storage.

# **MANAGEMENT-IN-LIVING 3**

## **1. GENERAL COMMENTS**

The paper was good, up to standard and scope of the syllabus. The general performance was however poor, candidates did not do well at all. The performance was poorer than last year.

Answers to the questions vary from school to school. Some of the questions were answered well by candidates from some of the schools but poorly by candidates from others.

## **2. SUMMARY OF CANDIDATES' STRENGTHS**

- A few of the candidates did well. They answered the questions correctly and to the point, where they were expected to state answers they stated correctly and where they were expected to explain they did explain.
- Some of the students also followed the instructions given on the paper. They answered the correct number of questions and wrote the question numbers in the right order on the front page of the answer sheet.

## **3. SUMMARY OF CANDIDATES' WEAKNESSES**

- Poor spellings
- Poor understanding of questions
- Poor knowledge of the technical terms to use.
- Organisation of thoughts were also very poor
- Handwriting was nothing to write home about.
- Poor expression in the English Language.

## **4. SUGGESTED REMEDIES**

- Teachers are encouraged to always identify and write out relevant terms for every topic on the board and help students to learn them. Students should be tested on these key words.
- Teachers must give frequent quizzes to test students understanding of topics.
- Where lessons are dictated, teachers must explain the subject matter and mark students' work.
- More textbooks must be provided in the libraries and students encouraged to read them.
- Heads of schools should engage the services of qualified teachers so they can explain topics well to students.

- To improve upon their English vocabulary, students should be encouraged to read widely.

## 5. DETAILED COMMENTS

### Question 1

- (a) **State four characteristics of energy.**
- (b) **Mention four factors that affect the amount of energy expended during work in the home.**

- (a) This was poorly understood. They gave answers as if the question demanded the meaning of energy.

Correct answers include:

- It is limited/reduced when used
- Cannot be saved
- Can be developed
- It is scarce, etc.

Candidates however gave answers like:

- It helps us to grow well
- Energy is renewable
- Energy is the ability to do work, etc.

All these show a poor understanding of the question.

- (b) Candidates again displayed gross misunderstanding of the question by giving answers like:

- Cooking in the home
- Taking care of children
- Keeping the home clean, etc.

These are what we use energy for in the home.

Answers expected include:

- The work height being used.
- The posture of the worker.
- The part of the body involved in the work.
- The skill of the worker.
- The health of the worker.
- The type of work carried out.
- The work environment.
- The length of time spent on the work, etc.

Some candidates just wrote:

- Skill
- Health
- Time
- Tools, etc.

This made them lose marks.

## **Question 2**

- (a) **State the difference between natural gas and manufactured gas**  
(b) **State four guidelines for safe use of gas fuel in the home.**

- (a) This part of the question was poorly answered by most of the candidates. Most of them did not even bring the conjunction, so they lost some marks.

Some of the wrong answers given include:

- Natural gas is made by God and manufactured gas is made by man.
  - Natural gas is natural while manufactured gas is made from faeces.
- (b) Some candidate wrote the advantages of use of gas instead of the guidelines e.g.
- It does not make dust in the home
  - It is easy to use

Some candidates also understood it as suing a cooker or stove so they gave guidelines for using cookers in the home like: 'Clean it regularly'

Answers expected include:

- Make sure the gas cylinder and hose are not leaking.
- Strike match or put on the lighter before turning on the cooker knob.
- Keep gas cylinder out of reach of children.
- Use gas in a well ventilated place.
- Switch off gas after use.

Candidates wrote 'on' gas or 'off' gas, instead of switch on or off so they lost some marks. Spelling of matches was very bad. Spelling of leakage was also poor.

## **Question 3**

**Explain how to thoroughly clean the refrigerator.**

The key words in this question were 'Explain' and 'thoroughly clean'. These words were totally ignored by most of the candidates.

There were no explanations and statements were not sequential. Candidates therefore lost marks.

For example:

'They start cleaning the inside of the fridge before switching it off. Here again candidates wrote 'off' the fridge' and 'on the fridge'.

#### **Question 4**

- (a) **List six basic items that should be provided in a first aid box.**  
(b) **State five steps in first aid.**

(a) This question was fairly well answered, except for the spelling of the words. For example: **Gentian Violet** was spelt jention violet, injection violet, etc. **Plaster** for praster, palasta, **Bandage** for banage, bad neg, **cotton wool** for cotton, coton wood, cotton whool, **Blade** for brade, bread, bled, **Scissors** for secsiors, etc.

The mark for each item is  $\frac{1}{2}$ . They were therefore marked zero.

(b) Candidates did not understand the question. Instead of giving general steps in First Aid, they rather gave specific steps.

Some even mentioned the problem for which they were administering the first aid.

Candidates were expected to give general answers like:

- Do not move the injured unnecessarily.
- Make the patient warm and comfortable.
- Check for cuts, bleeding, broken bones, etc.
- Send for a qualified person.
- Send patient to hospital, etc.

#### **Question 5**

- (a) **List four types of furniture found in the kitchen.**  
(b) **Describe the steps in cleaning a modern kitchen.**

(a) Some candidates did not know what furniture means so they gave answers like:

- Chopping board
- Kitchen knife
- Wooden spoon
- Plastic chair, etc.

Expected answers include:

- Kitchen table
- Kitchen stool
- Cupboard
- Kitchen chair
- Cabinet
- Shelves
- Drawers, etc.

Many of the words were spelt wrongly, for example:

- Cupboard for cardboard, carboard, copboard, etc.
- Cabinet for cabnet, cardnet, etc.

- (b) Here the key words are – describe, steps and modern kitchen. Candidates did not pay attention to any of these words. Statements were not sequential for example:

- Window and doors were opened after sweeping the kitchen
- Sweeping was done before dusting.

Again the actions were not described e.g.:

- Sweep the room is a statement but
- ‘Sweep and mop kitchen thoroughly, paying attention to corners is a description.
- ‘Open windows and doors is a statement.
- ‘Open windows and doors wide to allow in fresh air’ is a description.

Spelling mistakes like mob for **mop**, coworms for **cobwebs**, etc. were also observed.

### **Question 6**

**(a) State four reasons for simplifying work in the home**

**(b) State four ways of ensuring effective organisation of household activities**

- (a) This question was fairly well answered by most candidates.

Favourite answers include:

- To make working easy
- To save time
- To save energy/reduce fatigue
- To cut down on the number of motions or movement on a specific task.

Some candidates wrote:

- To save time and energy as one point so they scored only one mark instead of two marks if they were to separate item.

(b) A lot of candidates did not understand this question so it was poorly answered. Some gave the steps of the management process like:

- Planning
- Evaluation, etc.

The correct answered are:

- Identify activities to be carried out.
- Make a plan for carrying out the activities.
- Identify the resources needed.
- Indicate time needed for each activity.
- Arrange activities in the order to be carried out, etc.

# **PICTURE MAKING 2**

## **1. GENERAL COMMENTS**

The standard of the paper compares favourably with those of the previous years. The questions were evenly spread between those which elicited candidates' response to knowledge and those which needed application of their practical work.

The overall performance of candidates', however, was below average.

## **2. SUMMARY OF CANDIDATES' STRENGTHS**

The following strengths were noted in candidates' answers:

- Most of the candidates presented clear and straightforward answers which accounted for the high marks scored by those candidates.
- Points raised were itemised, so each point stood distinct from another. This made the answers clear and understandable.
- A few candidates exhibited legible handwriting which enhanced the marking of the paper.
- Most candidates' answered the four questions required by the paper.
- Most candidates' performance in question six (6) was good. A lot of them who attempted the question scored the full marks.

## **3. SUMMARY OF CANDIDATES' WEAKNESSES**

- Some candidates found it difficult to express themselves in simple English. There were few examples where candidates wrote the questions rather than the answers required from them.
- Majority of the candidates' could not explain the picture making terms. Clear examples were observed in question one (1) and question two (2), where most of them woefully failed to explain the terms i.e. diffuser, palette, brayer, focal point and emphasis.
- Question four (4) was another difficult one for majority of them. Perhaps they were not aware of how watercolour paintings are executed, the characteristics and what makes it unique.
- Some candidates' performance in question 1, 2, 3 and four were disappointing. A sizeable number of them therefore scored zero.

## **4. SUGGESTED REMEDIES**

- Candidates' should be encouraged to acquire the habit of reading books to improve on their spellings and grammar.
- More written and practical exercises should be given to students to enable them improve on their performance in the paper.

- Teachers should explain the picture making terminologies to candidates as they come across them in their lessons.
- Topics in the syllabus should be covered to enable candidates' prepare adequately before they write the paper.
- Candidates' should desist from answering more than one question on the same page.

## 5. DETAILED COMMENTS

### Question 1

- (a) **Explain the following terms:**
- (i) **focal point**
  - (ii) **emphasis**
- (b) **State three methods of creating emphasis in an imaginative composition.**
- (c) **Identify one major difference between focal point and emphasis in a composition.**

This was one of the popular questions. Some of the candidates' performed well. However, majority of them failed to explain focal point and emphasis. Wrong answers such as focal point is the focused areas of a composition and emphasis is where much attention is given were typical examples.

The (b) part was disappointing, because most of them could not state three methods of creating emphasis in an imaginative composition.

Expected answers:

- (a) Focal point is a specific spot or area in a composition where the viewers attention is directed. Emphasis – various spots or areas in a composition that are highlighted for specific reasons.
- (b) Methods of creating emphasis in an imaginative composition are:
- ❖ Use of different colours – e.g. change in colour or brightness to attract attention.
  - ❖ Application of different techniques – e.g. use of images, sudden introduction of a distorted form will draw the eye to the odd form.
  - ❖ Separation of element from group – attention is directed to any item or element that is isolated from the group.
  - ❖ Application of size variation – when many elements are about the same size. Similar or smaller ones become visually important, thus creating a point of emphasis. By enlarging or reducing the sizes of items highlighted.
- (c) The difference between focal point and emphasis is that, in focal point the viewers attention is directed to a specific area but in emphasis more elements/areas re highlighted.

### Question 2

- (a) Describe the following tools and their uses:
- (i) diffuser
  - (ii) palette
  - (iii) brayer
- (b) State three differences between an easel and drawing board

This was another popular question for candidates'. But some of them could not describe the tools and their uses. Candidates' gave wrong answers such as: a diffuser is a container used for painting and a brayer is painting tool used to paint, etc.

Expected answers:

(a) They were expected to:

- ❖ Diffuser: Is a device consisting of two tubes, one bigger, hinged together at a right angle. It is used to spray, blow paint, varnish or apply glue from a container onto a surface.
- ❖ Palette: Is a shallow container or flat wooden or plastic board used to store or mix paint.
- ❖ Brayer: A device with a handle attached to a cylindrical roller. It is used to spread printing ink paste on plate before transferring the paste onto the printing block.

(b) The (b) part of the question was teared well except a few candidates' who got them wrong

Easel	Drawing board
➤ It is fixed to a stand	Does not have a stand
➤ Fixed with compartments for brushes, pencil, etc.	It has no compartments/appendages, but flat.
➤ Cumbersome to carry about	Easy to carry about
➤ Holds drawing board or canvas in place when working	Holds only paper
➤ Most suitable for out-of-doors painting/drawing.	Mostly used for indoor painting/drawing
➤ Does not require a table or work on, etc.	Mostly requires a table to work on, etc.

### **Question 3**

- (a) **Explain creativity.**
- (b) **Discuss six points to show the relevance of creativity to the artist.**

Majority of the candidates' explained creativity very well and scored the full marks. However, the discussion of six points in the (b) part to show the relevance of creativity to the artist was a problem for most of them.

Some of them said the relevance of creativity to the artist is to earn a living, for employment, etc. A few also said to promote culture which were not.

Expected answers:

The relevance of creativity is that:

- ❖ It makes the artist think and produce original works.
- ❖ It encourages the artist to be hardworking.
- ❖ He becomes curious and studies or observes the environment to arrive at ideas.
- ❖ He uses creativity to generate interest in his work and comes out with new techniques.
- ❖ His ability to observe ideas in three-dimension helps in the advancement of technology, i.e. architectural, landscaping, etc.
- ❖ His ability to explore makes him produce useful items from otherwise rejected objects; e.g. collage making and assemblage.
- ❖ He accepts challenges and completes tasks.
- ❖ Helps him to acquire interest and love in what he does.
- ❖ It makes him hopeful and well disciplined, etc.

### **Question 4**

- (a) **State four qualities that make a picture made in water colour unique.**
- (b) **Explain four of the qualities in 4 (a) above and show how they make water colour picture unique.**
- (c) **Explain alla prima in water colour printing**

This was not a popular question. Majority of the candidates' who attempted the question performed abysmally. Perhaps candidates have not been painting with watercolour or familiar with watercolour painting. Vague answers such as for beautification, identification, for painting, therapy, etc. were given.

(a) Expected answers include:

- It is transparent after application
- It blends easily

- Its application does not require or need white pigment for highlights.
  - It is colourful
  - It cannot be rendered in monochrome
  - It is fluid
  - It is permanent.
- (b) Transparent after application i.e. allows the superimposed colour to show through the surface colour.
- It blends easily, i.e. because of its fluid nature one colour blends easily not another.
  - Its application does not need white pigment for highlights because the colour of the paper is used to indicate highlights. This makes it unique as it demands special skills.
  - It is colourful i.e. it comes in all colours under the spectrum and allows artists to depict the nature of objects according to their taste etc.
- (c) Alla prima – A watercolour technique where the artist finishes or completes the painting at a sitting. The painting is done with wash while the paper is still wet to keep the fluidity. Any break or delay will render the sheet dry, in which case the technique causes to be an alla prima.

### **Question 5**

**Explain the following terms:**

- (a) **Triadic Scheme**
- (B) **Vanishing Point**
- (C) **Binder**
- (D) **Glazing**
- (E) **Wash.**

Though this question was attempted by most candidates', it was one of those questions that candidates' performance fell below average. A lot of them gave wrong answers and lost valuable marks.

Example of wrong answers include:

- Triadic scheme is any related colours on the colour wheel, any three colours, etc.
- Vanishing point is for polishing and spraying an art work (ii) where two lines cross in a composition (iii) where lines vanish in a composition, etc.
- Binder; It is used to bind objects like paper (ii) to mix colours, etc.
- Glazing: Adding glaze to objects to make it shinny (ii) application of liquid substance on wares, etc.
- Wash is for washing brushes, etc.

The expected answers are as follows:

- (a) Triadic Scheme: It is a composition made in three group of colours which are equidistant on the 12-point colour wheel, i.e. primary triad (red, blue and yellow), secondary triad (orange, green and violet) tertiary triad (red-violet, blue-green and yellow-orange).
- (b) Vanishing point: An imaginary spot on the horizon where parallel lines hurling into the distance appear to meet or converge. This is more evident in linear perspectives.
- (c) Binder: A substance used to bring together loose particles in pigment to produce paint e.g. wax is binder for crayon, gum Arabic is binder for watercolour, etc.
- (d) Glazing: the application of thin layer of paint over old painting to reveal and revive it.
- (e) Wash: Diluted paint applied on a surface as in watercolour painting.

### **Question 6**

#### **Discuss five factors that would influence the setting up of a picture making enterprise.**

This was the most popular question for the candidates'. Majority of them performed creditably. In some cases, candidates scored the full marks. Few candidates' however presented wrong factors and lost some marks. Candidates should take note that factors which influence the setting up of an enterprise do not include pricing of works, time, poor execution of work, culture and religion.

Required answers include:

- Capital: (start up and working capital) one cannot start business without funds. Either the person has enough funds himself or has a source from the family, friends or bankers.
- Site or location: The entrepreneur should acquire a land or accommodation that would be easily accessible to customers.
- Communication networks: Road networks should be developed so that bulky materials carted to and from the establishment.
- Labour: There should be both skilled and unskilled labour to help in all categories of work.
- Availability of raw materials: Regular supply of materials should be assured to avoid hold ups and delays, e.g. paper, canvas, inks paints and chemicals.
- Ready market: Adequate market survey should be conducted to examine the viability of the enterprise, ie. type of works to produce, etc.
- Utility services: Regular supply of water and electricity should be assured to create a convenient atmosphere for workers and clients.
- Registration of enterprise: This is done to fulfil the requirements of the business law.
- Accommodation: The physical structure of the building should be conclusive with space in the rooms.

# **SCULPTURE 2**

## **1. GENERAL COMMENTS**

The standard of the paper was at par with those of previous years. The performance of candidates however, was average.

## **2. A SUMMARY OF CANDIDATE'S STRENGTH**

- Majority of the candidates illustrated to support their answers especially with Question 6. This is highly commendable and should be encouraged.
- Some candidates wrote legibly which facilitated the marking of their scripts.

## **3. A SUMMARY OF CANDIDATE'S WEAKNESSES**

- The writings of some few candidates were not legible. This made reading and marking difficult.
- Some candidates drew materials instead of describing them, as demanded by question 4.
- Some of the candidates answered two questions on a page, without numbering them.
- Some of them answered more than the stipulated four questions.
- Some terminologies in sculpture were wrongly spelt by some candidates.

## **4. SUGGESTED REMEDIES**

- Candidates are advised to read the carefully and cautiously before they start answering the questions.
- Candidates should improve on their writing skills to ensure legibility.
- Materials and tools should be listed separately by teachers for candidates to distinguish between them.
- Candidates are advised not to rush in answering the questions. They should take their time to assess the demands of each question before they answer.

## **5. DETAILED COMMENTS**

### **Question 1**

**Describe the process involved in plaster casting with a temporal mould.**

- This question was attempted by majority of the candidates but they did not perform well. They wrote on how to **make a mould** and not how to use the temporary mould to cast in plaster.
- Some candidates mistook **plaster** for **mortar** so they wrote on how to use cement and sand to cast. Plaster is the same as POP.  
Some of the candidates wrote on **cold cast** using resin, fibre glass and accelerator.
- Some of them also wrote on **metal casting**.

In answering such a question, it is recommended that candidates should list **tools** and **materials** separately. They should also give a **systematic** description.

### *Expected Answer*

(a) Tools

(Rope/binding wire, mould, plastic bowl, pliers, mallet, chisel, spatula/finger, etc.)

(b) Materials

(Water, plaster, chicken wire/iron rod/jute sack, parting agent e.g. oil, clay slip, liquid soap).

(c) Process

- Soak the mould/sections of the mould to a saturation point to get rid of air trapped.
- Apply parting agent like liquid soap, oil, clay slip, etc. to the edges and their inside of the mould /sections.
- Sections of the mould are put together and tied with a rope or binding wire with pliers.
- Plaster is prepared by using clean water and a clean bowl. Water quantity of choice is poured into the bowl.
- Plaster is sifted into the bowl of water till an island of plaster is formed.
- It is stirred with a spatula or finger to an even consistency.
- The plaster mix is poured into the mould to the brim.
- Shake the mould to remove air bubbles.
- The plaster mix is allowed to set and harden.
- The mould is cautiously chipped out or destroyed with chisel and mallet to preserve the cast intact.
- The released cast is cleaned with a brush and damaged parts are mended with plaster mix where necessary.
- The cast is allowed to thoroughly dry and may be polished, sprayed, painted or strained with paint, lacquer, etc.

### **Question 2**

**Write on the life and works of Oku Ampofo in terms of the following**

- (a) **background;**
- (b) **training;**
- (c) **source of inspiration;**
- (d) **Style;**
- (e) **Works and achievement.**

Few candidates answered the question.

**Expected Answer**

➤ Background

Oku Ampofo was born in 1908 and died in 1998. He was a medical practitioner who took sculpture as his second vocation.

➤ Training

He studied sculpture under a British sculptor in Scotland.

➤ Source of inspiration

He was exposed to and inspired by African traditional sculpture.

➤ Style

His style of work reveals idealistic distortion and formal exaggerations borrowed from African sculptures.

➤ Works

His works are mainly in wood and cement combined with terrazzo. His carvings often show emphatic use of natural colour of wood.

His cement works are often tall and slim and full of distortion. The themes of his works cover many aspects of Ghanaian culture. He produced many national and international sculptures.

➤ Achievements

Arts Centre, Performing Arts, Ghana Art Council, Member Akwapim Six, exhibited in many countries including England, Brazil, Romania, Senegal, etc.

### Question 3

In five points, describe each of the following;

- (a) **Gold weights in Ghana;**
- (b) **Akuaba of Ghana;**
- (c) **Egyptian Bust of Nefertiti.**

- Few candidates answered the question well. They mistook **gold weight** for **gold items**. Some candidates mistakenly wrote on the **economic importance of gold**.
- In writing under Queen Nefertiti, candidates mistook it for **sphinx** and stated that it was a decorated piece mounted in front of tombs.

Expected *Answer*

(a) Gold weights in Ghana;

- They are miniature sculptures brass casting
- They are produced in Ashanti Region of Ghana
- They are produced by lost wax technique
- They depict human figurines, plants forms and geometric shapes.
- They depict proverbs and maxims
- They are used for weighing gold dust
- They are now collected for their aesthetic values.

(b) Akuaba of Ghana;

- It is a fertility figure
- It is a symbol of beauty
- It is produced and used by the Akan of Ghana
- It is carved out of wood
- It has a disk-like head with simplified facial features
- It has an elongated, cylindrical-ringed neck
- Painted black
- It has a conically shaped breast
- It has a simplified torso
- There are beads worn around neck and waist
- It has abstracted naval.

(c) **Egyptian Bust of Nefertiti.**

- A famous portrait bust of an Egyptian queen
- It is carved in limestone and painted life-like
- It reveals long and graceful neck
- It is 20 inch (55cm) high

- It is one of the naturalistic works of an ancient Egypt
- It wears a type of headdress
- It is an icon of feminine beauty
- It also means the beautiful one has come
- It is the image of the queen and wife of Akhenaten.

#### **Question 4**

**Describe the following materials in sculpture;**

- (i) **bee wax;**
- (ii) **plaster**
- (iii) **grog;**
- (iv) **plasticine;**
- (v) **vinamould.**

**(b) state how each of the materials described in 4 (a) is used in sculpture**

- On the uses of **bee wax**, it was stated as **used** in **sculpture** but some candidates wrote on the uses in **textiles** which is wrong.
- In describing grog some candidates wrote that it is **powdered clay** and **hard clay** that has been pounded.
- Plasticine: most candidates could not describe it. Some described it was **melted plastics**.
- Vinamould: some candidates mistook it for a **mother mould**.
- Plaster: some candidates mistook it for **mortar** (sand+cement+water)

#### ***a Expected Answer***

➤ **Bee wax**

It is produced by honey bees and extracted from honey comb. When exposed it hardens. It is made malleable by gentle heating or exposure to the sun.

➤ **Plaster**

It is a gypsum (parent material). It comes in white and cream colours. It is malleable when it is added to water or when mixed with water.

➤ **Grog**

It is previously fired clay that has been grounded into powder.

➤ **Plasticine**

A brand of modelling clay, putty-like modelling material made from salts, petroleum jelly, etc. it does not dry hard, shrink or crack. It is an appropriate material for beginners in modelling.

➤ **Vinamould**

It is a hot-melt compound for the manufacture of flexible mould based on vinyl resins. It is a PVC based mixed.

**(b) State how each of the materials described in 4 (a) is used in sculpture.**

**(i) Bee wax**

It is made into malleable form by gently heating it and used for modelling small scale sculptures as well as to form an outer shell over a core to be cast in metal.

**(ii) Plaster**

It is mixed with water into a paste and used for direct modelling and preparing mould. It is also made into liquid form and used for casting.

**(iii) Grog**

It is mixed with plastic clay to reduce the clays plasticity and excessive shrinkage. It also facilitates firing by reducing cracking.

**(iv) Plasticine**

It is used for modelling. It is very suitable for modelling because, unlike clay, does not dry hard and does not shrink or crack.

**(v) Vinamould**

It is used for making mould that is convenient for multiple casting. It is also ideal for making and casting works with undercuts.

**Question 5**

**(a) Explain the term Seasoning of wood;**

**(b) State three reasons for seasoning wood;**

**(c) With the aid of illustration, describe how wooden boards are seasoned by air drying technique.**

- Some students mistook **boards** for seasoning of **logs**. In the description, candidates left out raising of platforms, inserting battens in between the boards and putting load on top of the last board.
- Some candidates wrongly wrote that the boards are packed under trees.

**Expected Answer**

**(a) Explain the term Seasoning of wood;**

- It is the process of reducing the moisture content in wood by air, kiln, or solar drying

**(b) State three reasons for seasoning wood**

- To increase the physical strength in the wood
- To prevent undue cracking and warping
- To reduce the weight of the wood
- To enhance the weight of the wood
- To enhance polishing
- To prevent insects and weevils attack
- To prevent fungi attack

**(c) With the aid of illustration, describe how wooden boards are seasoned by air drying technique.**

- The boards are packed under a **shed; well ventilated.**
- The boards are raised above the ground on **blocks** or any suitable material of **equal thickness.**
- The boards are packed with **battens** of **equal thickness** placed at **even intervals** in-between the boards. This allows easy **circulation of air** around the boards to **facilitate even drying**
- Heavy loads are placed on top of the last board to prevent it from **warping.**

**Question 6**

**(a) Describe the following tools and state their uses:**

- (i) Wedge;**
- (ii) Hacksaw;**
- (iii) Rasp;**
- (iv) Gouge;**
- (v) Trowel.**

**(b) State five reasons why it is necessary to take care of tools.**

- i. Some students mistook the tool **wedge** for **wedging of clay.**
- ii. Some candidates described wedge as a cutting tool instead of a splitting tool
- iii. Some candidates mistook a **hacksaw** for a **hand saw** used for cutting wood instead of metal.
- iv. Some candidates described rasp as a **file.**
- v. Some candidates mistook a **gouge** for **gauge** so they wrote that it was used in taking temperature of a work.
- vi. Some candidates mistakenly wrote on **caring of tools;** for example, using the appropriate tool at the right time.

## *Expected Answer*

### **Description:**

➤ **Wedge**

A piece of metal or wood with a tapering edge used for splitting wood lengthwise along the grains.

➤ **Hacksaw**

A metal tool with a handle and thin, long saw edge blade. It is used for cutting metal rods, sheets, pipes, etc. It is also suitable for cutting plastics.

➤ **Rasp**

A coarse metal file with sharp triangular teeth used for shaping wood, plaster cast or stone.

➤ **Gouge**

A kind of chisel with a curve blade, like spoon used for carving wood.

➤ **Trowel**

A flat triangular or diamond shaped metal with a wooden handle attached. It is used for mixing, flattening during modelling and shaping.

(b) **Reasons why it is necessary to take care of tools.**

- Prolongs the life span of the tool
- Prevents injury to the user of the tool
- Contributes to improvements of quality and beauty of work
- Ensures working comfort
- Prevents lost or misplacement of tools
- It prevents the tool from damaging the work being produced

## **TEXTILES 2**

### **1. GENERAL COMMENTS**

The standard of the paper compared favourably with that of the previous year. It met the requirements of the syllabus and there was a good spread of the questions which cut across almost all the disciplines of textiles.

Candidates' general performance this year is better than that of the previous year.

### **2. SUMMARY OF CANDIDATES' STRENGTHS**

- There was better understanding of the questions this year, and this has culminated in candidates' overall performance.
- There was also an improvement in the use of the English Language.
- Handwriting has also seen a great improvement which should be maintained.

### **3. SUMMARY OF CANDIDATES' WEAKNESSES**

- Some candidates answered more than the required number of questions; instead of answering four questions out of six.
- Some candidates also answered more than one major question on the same page of the answer booklet, thus, making marking and scoring cumbersome.
- It was evident that question number 1, 2, and 4 witnessed some kind of deviations. Some candidates, for instance, used the importance and function of textiles goods to answer question number 1.

### **4. SUGGESTED REMEDIES**

- Candidates must be advised to spend enough time to read and understand the questions before answering them.
- They must also be told to read through the finished answers before leaving the examination hall.
- It is the duty of candidates to read through the rubrics and follow the instructions spelt out on the front page of the answer booklet.

### **5. DETAILED COMMENTS**

#### **Question 1**

**Identify and discuss three reasons for the establishment of textile industries in Ghana in the mid 1960's.**

This was a simple and straightforward question that was attempted by most candidates.

However, some few candidates failed to show thorough comprehension of the question. Some candidates used the rationale for studying textiles, uses of textiles goods and remedies for improving the downward trend of textile and industries in Ghana as the answers.

Expected answers include:

- To industrialize the country.
- To create job for designers, engineers, technicians, etc.
- To help train Ghanaians in skills of manufacturing.
- To encourage designers to improve upon their creative skills.

**Question 2**

**Explain in details how to produce a three coloured fabric, using the screen printing technique.**

It was a question that demanded a comprehensive description of screen printing from motif generation through to finishing of the printing task on fabric.

Expected answers

Candidates were to have stated the production process such as:

- Idea development to obtain a motif.
- Arrangement of a selected motif into a pattern.
- Colour application to the pattern
- Colour separation
- Preparation of screens for each colour
- Screen development using lacquer or the photographic techniques.
- Trial/test printing
- Actual printing for first colour (light), second and third colours
- Drying to fix colours/paste
- Ironing of printed fabric
- Packaging

Most candidates skipped the first six bullets and went ahead to print the fabric with an already developed screen in hand as the answer.

**Question 3**

**Explain five reactions of cotton fabrics under each of the following treatments:**

- (a) Scouring**
- (b) Bleaching**
- (c) Mercerization**

It was a question about the purification of grey cotton goods before dyeing, printing and finishing. However, some candidates failed to cover what was being demanded.

Instead, some candidates chose to define each of the three treatment processes. Expected answers for each treatment are as follows:

### **Scouring**

- Waxy impurities in grey cotton are removed
- Soluble dirt are removed
- Fats and oils are removed
- Sizing compounds are removed
- Partial absorbency is achieved
- Fabric shrinks and lastly, fabric loses weight.

### **Bleaching**

- Removal of grey/natural colouring matter
- Fabric becomes white
- Fabric becomes thick
- Fabric shrinks
- Absorbency of solutions is enhanced
- Dyeing and printing effects are better
- Fabric becomes attractive

### **Mercerization**

- Cotton fabric attains lustre/sheen
- There is increase in softness/feel
- There is increase in strength
- High absorption of dyes and chemicals
- Fabric becomes very light
- Fabric becomes very smooth and attractive

### **Question 4**

**State and explain three differences between hand and machine spun yarns.**

This was not a popular question to candidates and therefore posed a bit of misunderstanding to most of them.

Some of the expected answers include:

- Hand spun yarns are often coarser because of non-processing of fibres to remove impurities while machine spun yarns are relatively finer with the reason being that the fibres are industrially processed to align them before spinning.
- Hand spun yarns have loose and less twists because of the method used in spinning – the natural hand, thus not ensuring uniformity while machine spun yarns possess many twists which are tighter because they are industrially produced with machines.
- Hand spun yarns are not strong due to the inability of the hand to draw out and twist the fibres tightly while machine spun yarns are stronger because of the machinery involved in the pulling and twisting of the fibres tightly to give enough strength to the yarn, etc.

Most candidates, however, wrote on the differences in the production process. For example, the making of hand spun yarns is slower while machine spun yarn is faster, machine spun yarn is done on machine while hand spun yarns is done with the natural fingers. Some few candidates listed the correct points but they did not explain.

### **Question 5**

#### **List and explain the primary and secondary motions of the loom**

This was a very popular question and was well answered by candidates. Many of them therefore scored higher marks.

Some expected answers which most candidates provided included:

#### **Primary motions**

- **Shedding:** It is the process of separating the warp yarns into two: Upper and lower sheets to create a passage called shed for the shuttle to pass through for the purpose of weft insertion.
- **Picking:** It is the process of passing the weft yarn across the path of the shed depositing the weft yarn with the help of the shuttle.
- **Beating-up:** It is the process of pushing the newly inserted weft yarns to the fell of the cloth. This is achieved by the use of the reed which does the beating.

#### **Secondary motions**

- **Let-off:** It is a mechanism which makes it possible for a length of warp to be released by the warp beam after each beating motion to the weaving area.

- Take-up: It is a mechanism attached to the cloth beam which allows a length of fabric to be automatically drawn from the weaving area and wound on to the cloth beam after every beating-up.

### **Question 6**

#### **Explain five factors to be considered in determining the price of a tie-dye fabric.**

It was a question that attracted a lot of candidates but it was not well answered. Some candidates failed to understand the demand of the question and resorted to terms and terminologies in commerce and economics to answer the question.

Candidates did not understand that the cost of production encompasses labour, raw materials, wages, rent, electricity, etc. However, candidates listed the components under the cost of production as factors to be considered when determining the price of a tie-dye fabric.

Others also deviated completely by describing how a tie-dye fabric is made.

Expected answers include:

- Type of fabric used for dyeing, e.g. is it a cotton, wool, linen or silk fabric?
- Quality of design/colour
- Type of finishing treatment given to the dyed fabric.
- Type of dyestuff used and its durability
- Skills and craftsmanship exhibited
- Production cost: e.g. labour cost, raw materials, rent, etc.
- Location for the sale
- Demand for the fabric
- Profit margin

# **VISUAL ARTS 3**

## **1. GENERAL COMMENTS**

The standard of this year's papers compare favourably with that of previous years.

It must be noted that there is a slight improvement in candidates performance especially in Leatherwork and Basketry.

## **2. SUMMARY OF CANDIDATES' STRENGTHS**

- Choice of beads, preparation of gourds and tying of basic knot was done very well in Basketry.
- Ceramics: The candidates were able to do hand building and painting of pots effectively.
- Graphic Design: Most candidates used stencilling and painting in their work.
- Jewellery: Choice of beads and stitching in candidates work was commendable.
- Leatherwork: Preparation of leather, assembling and joining was good in candidates work.
- Picture Making: Painting landscape was commendable in candidates work.
- Sculpture: Modelling with paper pulp was effectively done by candidates.
- Textiles: Stamping with wax and dewaxing was good.

## **3. SUMMARY OF CANDIDATES' WEAKNESSES**

- Some candidates especially from the new schools were not able to appreciate the works they have produced.
- Most candidates could not handle ceramics question 1 satisfactorily. It appears they do not know what a tea set. They produced mugs and breakers instead of tea cups. Their sets did not include milk jug and sugar bowls.
- There tea sets were poorly packed and therefore most works arrived broken.
- Candidates were generally unable to design to suit a cultural troupe. The use of only traditional symbols do not say much about the cultural group.

## **4. SUGGESTED REMEDIES**

- Teachers should create an environment where candidates get enough practical experience before their final examination.
- Teachers need to understand the requirements of the examination, e.g. the correct format for writing the evidence of study. They also learn new skills to improve upon their teaching techniques.
- They should help to package candidates works well to avoid breakages.
- Teachers should find ways of improving the following skills in their candidates:

- Drawing skills
- Lettering skills

## 5. **DETAILED COMMENTS**

### **Question 1**

#### **Basketry**

### **Question 1**

**Using appropriate knotting techniques, design and produce a macramé pot hanger to be sued in a Foyer. Use only suitable natural materials. Dimension: full height (not less than 60 cm)**

#### **Expectations**

Candidates were expected to prepare their materials such as jute, raffia, cotton, linen, wool yarns, etc. and also dried seeds, shells cowries, etc. Yarns may be dyed in assorted colours. The pot hanger may be formed/fabricated by using only one or combination of the following knotting techniques square knots, Lark's head, half hitch, etc. The complementary materials should be effectively incorporated in the product. The dimension should be 60 cm or more and the final product should be suitable for use in a foyer.

#### **Performance**

The few candidates who attempted this question did well. They answered the question fully. Some candidates' did not used any complementary materials maybe because they question did not demand it.

### **Question 2**

**Design and produce a colourful rattle for sue in a competition. Use calabash or gourd as a base complementary material. Dimension: circumference (between 22 and 25 cm)**

Expected answer

A rattle made with beads seed, etc. In assorted colours around a gourd. The materials should be prepared by measuring, cutting and dyeing where necessary. There should be some planning to determine where the ring should be mounted around the neck of the gourd as well as the number and bright of cords.

The pattern should be well followed and knots well tied so that the beads will be well fitted around the gourd and provide the sounds when in use.

#### **Performance**

Candidates generally performed well. They produced colourful rattles. However some rattles did not meet the dimensions and the brad work did not fit well around the gourds.

## **Ceramics**

### **Question 1**

Design and produce a tea set for two. Use appropriate motifs for decoration. The finished work should not be fired.

Expected answer

A tea set for two people should comprise 2 cups, 2 saucers, a milk jug and a sugar bowl. The tea pot and cups should have similar shapes. The tea pot must be big enough to fill three cups. Motifs for decoration may be leaves, flowers, and fruits. All the necessary appendages must be attached to the items e.g. knobs on lids, spout and handle on tea pot and handle on tea cups.

The plastic clay must be well prepared for effective wheelwork and also hand building. The items in the set should be well thrown, turned and the right attachment fix to get the correct shapes.

Hand building should also be done by using coiling or slab method. The decorations should be effected by using incise, embossing, etc.

### **Performance**

Most candidates do not know what a tea set entails. They performed poorly. They produced mugs and breakers instead of tea cups. The knobs, spout and handles were poorly done. However few candidates produced good works.

### **Question 2**

**Design and produce a ceremonial vase for a chief's palace using the hump mould technique. Use appropriate decorative technique. Height: 30 cm. the finished work should not be fired.**

Expected answer

A ceremonial vase should be elaborate, highly decorated. It should attract attention. The product should be the result of a hump mould method which is the use of solid plaster mould of various shapes, bowls or any container or an object which can be used to form a ceramic ware or vase.

The vase should be appropriately decorated with symbols reflecting the chef's regalia e.g. sword, crown, stool proverbial traditional symbols.

The clay should be well prepared and the casting method well followed to create the form. Scoring and joining should be well done and also decoration should be effected by incising, embossing, painting. etc.

## **Performance**

Candidates performed better at this question. Some candidates' produced vases fit for a chief's palace. However some of them were too heavy.

## **GRAPHIC DESIGN**

### **Question 1**

**Design and produce a size-panel comic strip with the title "ROBBERY".**

**Use colour for the first panel which is the title page.**

**Each panel should measure 15 cm x 21 cm and mounted on a page.**

Expected answer

Compact strips (or comics) is a series of illustrations in a sequence, often but not necessarily depicting or showing something funny or political in nature. PANEL – is an individual frame of drawing in a comic.

The composition of a robbery scene depicts an attacker/attackers, a victim or victim and the items being stolen. The attacker may be wielding offensive weapons and the robbery may take place on a road, highway, in a house, shop, etc. An attacker may also be wearing face mask, firing a gun, stabbing a victim or running away from crime scene and a victim lying in a pool of blood.

Drawing, painting and shading should all combine to show figures in an action.

## **Performance**

Most candidates performed well. They produced interesting stories which can be well understood. The production processes were well followed. However some comics could not convey any message also drawing was very poor.

### **Question 2**

**Design and produce a school flag for a newly established technical school – NTAKRA Technical School. The design should include the following:**

- **Name of school**
- **School crest**
- **School motto**
- **Colour: not more than two colours**
- **Measurement: 90 cm x 50 cm**

Expected answer

A Flag is a piece of coloured cloth used as a sign or a signal or a symbol of a country, a ship. It is also used to identify companies, schools, institutions, etc.

The final product should be a printed or painted fabric showing the following: Name of school, School crest and School Motto. The flag should be executed by printing or painting using any of the following options.

- Photographic screen
- Blockout (lacquering)
- Paper stencil
- Transfer of design onto paper by tracing and painting with colour. Candidates are expected to demonstrate mastery in accurate registration and printing of two colours. Letter and word spacing. Drawing, painting, cutting out design and screen preparation and printing.

### **Performance**

Some candidates' performed well by producing a double face flat with elements in the school crest reflecting the courses offered I technical schools. Other candidates produced flags with only one face and therefore it can be read from only one side. Candidates who painted on fabric made a mess. Paper flags looked like poster.

## **JEWELLERY**

### **Question 1**

**Use a pair of readymade sandals and accessories to match a black outfit. Incorporate in the bead design, the word "KIND". Size of sandals: to fit a young adult.**

Expected answer

A pair of readymade sandals is used as the main support or material on which the assorted beads, sequins and other accessories like buttons cowries stones, shells, seeds, etc. are executed by threading, stitching; glueing, etc. The word 'kind' should be clearly seen in the bead work.

### **Performance**

The question demanded the use of sandals but some candidates' used shippers. Most candidates' used assorted beads and ignored the other items i.e. sequins and other accessories. Most candidates' were able to incorporate the word 'kind' clearly in the bead work. Most candidates' who used all the items demanded by the question produced colourful sandals.

### **Question 2**

**Design and produce a sample of monumental chain with a pendant to be worn by the new chief at its installation.**

**Incorporate the word ‘wisdom’ in the design. Use any suitable metal. Size of work: 40 cm when stretched**

Expected answer

A chain consists of metal rings connected together in a line monumental means extremely great, permanent, commemorative, imposing symbolic to a necklace, bracelet, etc.

Suitable materials are wire, metal sheet, borax flux, pickling solution, nichrome, water.

The materials should be prepared by any of the following:

Sanding, cutting, annealing, cleaning, drawing of wire, milling of wire and metal plate.

Chain and pendant should be fabricated by

- Forming and linking of jump rings to form chain
- Denting, drilling, piercing, pickling, soldering and fixing pendant to chain. It is the processes that will result in the best final product.

### **Performance**

Most candidates’ used a material which can be easily cut and perforated. They also used a type of soft wire to form jump rings. They managed to cut through the material to achieve the inscription ‘wisdom’. Those candidates ignored the processes like milling, annealing, soldering, etc.

## **LEATHERWORK**

### **Question 1**

**Re-dye a sheet of natural leather in two or three colours using the marbling technique. Use the marbled leather to make a ladies hand bag of a cylindrical shape with a lid.**

**Measurement: Height – 18 cm (including lid). Diameter – 20 cm**

- **Fit the bag with a handle, a woven leather cord as a strap**
- **Fit the bag with a suitable fastener**
- **Fix appropriate studs at the base**
- **Give a lacquer or varnish finish**

Expected answer

A cylindrical ladies hand bag executed with marbled natural leather

The natural leather should be marbled by crumpling it and applying dye in drops at vantage areas and repeating process to achieve two or three colours. The bag should be fabricated by:

- Measuring and cutting

- Preparing strap (weaving)
- Assembling and sewing parts
- Fixing accessories and finally lacquering the final product.

## **Performance**

Question one was not popular among candidate but candidates who attempted this question performed well. Most candidates' were innovative by using a variety of thonging and lacing styles as well as metal accessories.

## **Question 2**

**Design and produce using a natural leather a wallet to hold a memo pad, currency notes and coins, and personal cards.**

**The coins compartments should be zipped. Attach a Velcro to cover for closing and opening. Emboss floral designs on the flap and back. Measurement: 22cm x 12 cm when opened. 11 cm x 12 cm when closed.**

Expected answer

The leather should be prepared by sanding drying, burnishing and removing of unnecessary parts. The wallet should be fabricated according to the following steps:

- Measuring and cutting parts of wallet
- Preparation of pocket parts
- Embossing of floral design an appropriate parts
- Assembling and fixing of parts by thonging
- Fixing fasteners

All the compartments should be present and they must be functional.

Performance

Most candidates' attempted this question. They followed all the producing processes. Candidates could have been more innovative if only one dimension was given. Embossing was poorly done in some cases.

## **PICTURE MAKING**

### **Question 1**

**Select a structure within the school environment such as the administration block. Make a colourful picture of the building in any painting medium of your choice. Include such objects as trees and parts of other structures in the foreground.**

**The finished work must be mounted and framed without glass.**

**Measurement: 60 cm x 45 cm.**

Expected answer

The final work should be a colourful representation of a structure within the school environment e.g. the Admin Block. The picture must be executed in any painting medium e.g. poster colour, acrylic, pastel, crayon, etc. The techniques used may include impostor (thick application of paint), wash/watercolour (transparent application of paint), etc.

The structures in the foreground and background e.g. trees, vehicles, electric poles, flag poles, statues. The rules of perspective should be effectively applied and there should be an effective colour scheme to portray the mood.

### **Performance**

Most candidates attempted this question. They were able to draw and paint the important building and also show features in the environment. Some of the works are true representation of the building painted. Some candidates also chose to paint the buildings that are not well known by the general public.

### **Question 2**

**Using any medium of your choice, make a study of a reaching figure, dressed in wrapper and a sleeveless top. Draw to show different angles of the posture. Your detailed study should be executed using any wet medium. Two quick pencil sketches of the model should be submitted along with the finished work. The finished work should be framed without glass. Measurement: 60 cm x 45 cm.**

Expected answer

The final work should be a painting in poster colour, acrylic or watercolour, etc. of a figure that is lying down or leaning back. The figure should be a female dressed in wrapper and a sleeveless top. The rules of perspective should be applied and there should be correct proportion of the various parts. The support should be well prepared if it is plywood by priming. The two quick sketches should be executed in pencil. The colour scheme should be effective to bring out the mood.

### **Performance**

This question was not popular among candidates'. Perhaps figure drawing is not a favourite subject among candidates'. The few candidates who attempted it ignored all the possible surrounding features and they also had problems with perspective.

## **SCULPTURE**

### **Question 1**

**Design and cast in any suitable medium, a CREST. In LOW RELIEF for a society whose motto is “I believe in Ghana”. The symbol of the society is a FIST. Diameter: 30 cm. Give an appropriate finish to the work.**

#### **Demands**

The design on the crest should be a fist and the text I belie in Ghana. A suitable medium such as clay, wax, POP Cement or papier mache, etc. should be well prepared for use. The production processes should include the following steps:

- Transferring of design i.e. crest, the symbol – fist and text through drawing, tracing, etc. to show the outline on the clay slab.
- Modelling of the symbol – adding bit by bit, considering the positive and negative spaces. Carving to create the texts or modelling the tests onto the crest, arranging the tests to fix the characters onto the crest. Giving details to show body volume.
- Casting – By fencing of the crest with clay wall; pouring of cement or POP mixture onto crest: allowing to set/harden; removing the original clay model from the mould. Preparing the mould by laminating it; pouring the mixture into the mould; removing the cast from the mould: decorating and finishing by painting or lacquering, etc.

#### **Performance**

This question was not popular. Few candidates performed well. The following are faults found in some works: Fist was not clear. Text was not readable: The low relief was not very well achieved.

### **Question 2**

**Design and execute in-the-round a form depicting MELANCHOLY.**

**Height: 30 cm. Medium: Papier Machie**

Expected answer

The final product should be a free standing figure human, animal, real or abstract depicting a feeling of sadness, hopelessness, depression.

The following steps will lead to the final execution of the project:

- Selecting the final paper design.
- Preparing the paper pulp and building an armature.
- Building the figure by adding the pulp with modelling tools to form the bulk.
- Modelling to achieve the desired form

- Creating detailed features e.g. facial features, placement of the torso and the limbs, costume, etc. to depict the subject i.e. various distortions.
- Finishing by any appropriate means including painting, lacquering, etc.

### **Performance**

This question was more popular. Most candidates' were able to produce a free standing figure in a sad mood. Painting in some cases did not enhance the work.

### **TEXTILES**

**Design and produce a kente fabric for a wedding ceremony. Size 60 cm x 45 cm. Use three colours only.**

Expected answer

The fabric should be a woven kente in three colours. Suitable yarns for kente are mostly cotton and rayon. Metallic yarns like lurex may also be used to enhance the fabric. The colours should be bright because it is for a wedding ceremony.

The following processes may be followed to achieve the best results:

- Calculation of number and length of warp according to the warp pattern
- Winding of warp and weft yarns
- Stretching/laying of warp on the mill or frame.
- Beaming of warp if on a broad loom
- Preparation of shuttle and trial weaving
- Weaving according to pattern

### **Performance**

Only few candidates attempted this question. They worked on the traditional loom. They produced the usual narrow strips of kente and joined them to make up the dimension. Some had problems with the selvedge and broken ends were not well mended.

### **Question 2**

**Design and produce a batik fabric for the outdoor of a cultural troupe.**

**Size: 60 cm x 45 cm. Not less than two colours.**

Expected answer

A batik fabric with two or more colours resulting from two dyeing processes. The following steps may lead to the best result:

- Transferring paper design (showing elements relevant to a cultural troupe) onto foam or drawing motifs on fabric
- Cutting out design on foam

- Melting of wax
- Stamping of hot wax on fabric/drawing motifs on fabric using Tjanting or brush
- Mixing of dyes in plastic/enamel containers
- Preparation of dye bath
- Wetting and immersing waxed fabric in dye bath for the dyeing period e.g. 30 minutes or more
- Removal of fabric, oxidation, and drying
- Dewaxing and 2<sup>nd</sup> dyeing process
- Dewaxing, washing, drying and ironing

### **Performance**

This question was more popular than question 1. Most candidates performed well by following the necessary steps to produce their fabrics. The images in the fabrics truly reflect elements related to the activities of a cultural troupe. However, other candidates' just used Adinkra symbols with nothing about a cultural troupe.