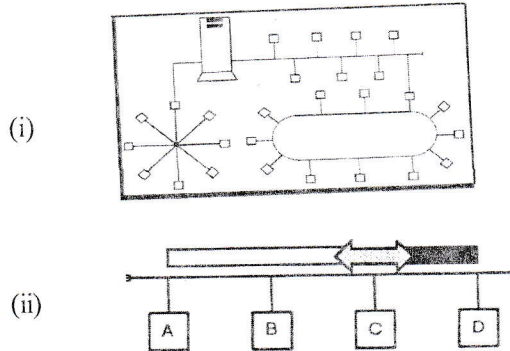


Answer **three** questions **only**. All questions carry equal marks.

1. (a) What is *physical topology* with respect to computer networking? [2 marks]

- (b) Identify the following network topologies:



[2 marks]

- (c) Explain the topologies identified in 1(b). [6 marks]

2. (a) Explain *e-business*. [4 marks]

- (b) State **three** benefits of e-business. [6 marks]

3. (a) What is:  
(i) relationship, as used in database;  
(ii) lookup field? [4 marks]

- (b) Explain the following database relationship types:  
(i) one-to-one;  
(ii) one-to-many;  
(iii) many-to-many. [6 marks]

4. (a) What is:  
(i) computer port;  
(ii) computer bus;  
(iii) clock speed of a central processing unit (CPU)? [6 marks]

- (b) State **one** difference between:  
(i) data bus and address bus;  
(ii) magnetic disk and optical disc. [4 marks]

5. (a) Explain *Internet chatting*. [3 marks]

- (b) What is a *cookie*? [3 marks]

- (c) List **four** examples of *browsers*. [4 marks]

**END OF ESSAY TEST**

Answer **all** the questions.

Each question is followed by four options lettered A to D. Find the **correct** option for **each** question and shade in **pencil** on your answer sheet, the answer space which bears the same letter as the option you have chosen.

Give only **one** answer to **each** question. An example is given below.

Which of the following is used to speed up data retrieval in database?

- A. Data file
- B. Key field
- C. Offline storage
- D. Program file

The correct answer is Key field, which is lettered B, and therefore answer space B would be shaded.

☐ A ☐

☒ B ☐

☐ C ☐

☐ D ☐

☐ E ☐

Think carefully before you shade the answer spaces; erase completely any answers you wish to change.

Do all rough work on this question paper.

Now answer the following questions.

1. A computer system is made up of:

- I. hardware;
- II. software;
- III. liveware;
- IV. electronic power.

Which of the following options are **correct**?

- A. I and II only
- B. I and III only
- C. I, II and III only
- D. I, II, III and IV

2. To integrate multimedia in education, one needs appropriate

- A. payments.
- B. registration.
- C. resources.
- D. tutorials.

3. Which of the following alignments generally gives a more formal appearance to a text in desktop publishing?


- A. Centred
- B. Fully Justified
- C. Left Aligned
- D. Ragged Right

4. Which of the following operators is used for concatenation in spreadsheet application?

- A. '
- B. !
- C. #
- D. &

5. Which of the following depicts that a CMOS battery is going down? The computer
- fails to boot properly.
  - gives a long beep sound.
  - starts losing information in memory.
  - starts showing incorrect date and time.
6. The set of micro-instructions and programs in the Read Only Memory is referred to as
- firmware.
  - liveware.
  - malware.
  - software.
7. Examples of object oriented programming languages include:
- COBOL;
  - JAVA;
  - BASIC;
  - C++.

Which of the following options are **correct**?

- I and III only
  - II and III only
  - II and IV only
  - III and IV only
8. The flowchart symbol  is known as
- Connector.
  - Decision.
  - Process.
  - Start.
9. A modem converts incoming analogue data to
- analogue signal.
  - digital signal.
  - parallel signal.
  - serial signal.
10. Which of the following fields in a database application can help speed up data retrieval?
- Data
  - Key
  - Program
  - Record
11. A single hexadecimal digit is represented by
- one bit.
  - two bits.
  - four bits.
  - eight bits.
12. Communications media such as copper wire, coaxial cables or wireless systems that are used to interconnect the other components of telecommunications network are referred to as
- channels.
  - modem.
  - processors.
  - servers.

Turn over

13. The following are examples of wireless technology **except**
- A. bluetooth.
  - B. infra-red.
  - C. fibre optics.
  - D. communication satellites.
14. The following are computer crimes **except**
- A. hacking.
  - B. kidnapping.
  - C. cyber terrorism.
  - D. child pornography.
15. In order to add a new row to an existing table, the SQL statement to use is
- A. CREATE.
  - B. INSERT.
  - C. UPDATE.
  - D. WHERE.
16. A grid of rows and columns is called
- A. cell.
  - B. column.
  - C. row.
  - D. table.
17. The following are means of disk organisation **except**
- A. cylinders.
  - B. heads.
  - C. sectors.
  - D. tracks.
18. The device that converts **AC** to **DC** to run the computer is called
- A. motherboard.
  - B. power converter.
  - C. power supply unit.
  - D. uninterruptible power supply.
19. Tasks undertaken by system software include:
- I. peripheral control
  - II. multiprogramming
  - III. input output control
  - IV. project management
  - V. memory management

Which of the following options is **correct**?

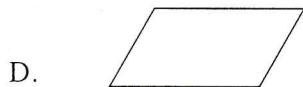
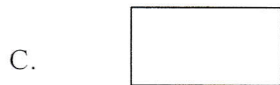
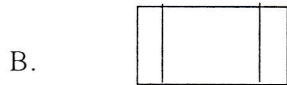
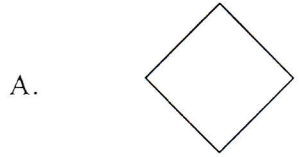
- A. I, II, III and IV only
- B. I, II, III and V only
- C. II, III, IV and V only
- D. III, IV and V only



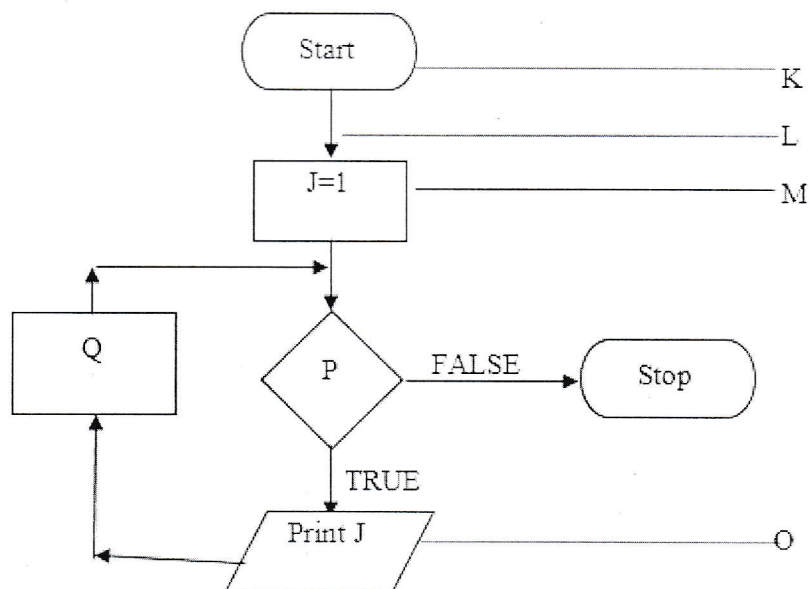


27. Which of the following computer keystrokes will take a user to the last line of a typed document?
- A. Ctrl + Home
  - B. Ctrl + End
  - C. Shift + Home
  - D. Shift + End
28. When a user creates **two** or **more** separate windows containing part of the spreadsheet that can be viewed, such a user has created
- A. panes.
  - B. sections.
  - C. subsets.
  - D. views.
29. The function key F12 in a spreadsheet application opens the
- A. Close dialogue box.
  - B. Font dialogue box.
  - C. Open dialogue box.
  - D. Save As dialogue box.
30. To view headers and footers information in a spreadsheet application, use the
- A. web layout button.
  - B. normal view button.
  - C. print preview button.
  - D. outline layout button.
31. The **first** step involved in installing a new device is
- A. installing software.
  - B. booting the computer.
  - C. reading the instructions manual.
  - D. disassembling the computer.
32. The **first** logical step required when installing a new hard disk is to
- A. copy the system files.
  - B. partition the new hard disk.
  - C. low-level format the new hard disk.
  - D. high-level format the new hard disk.
33. Which DOS configuration should a user check if a device is **not** loading properly?
- A. AUTOEXEM.BAT
  - B. BOOT.INI
  - C. CONFIG.SYS
  - D. SYSTEM.INI
34. The following information are stored on a computer's CMOS chip **except**
- A. date and time.
  - B. memory information.
  - C. printer configuration.
  - D. hard drive configuration.

35. Which of the following utility programs is used in freeing space on hard disk?
- Backup
  - Check disk
  - Disk cleanup
  - Encryption
36. Computation in a flowchart is effected using which of the following symbols?



The flowchart below shows an algorithm for printing the numbers 1 to 10 **inclusive**. Certain statements of the algorithm have been represented with the letters **P** and **Q**. Use the flowchart below to answer questions 37 to 40.



37. The name of the symbol labelled **K** is
- Data.
  - Decision.
  - Flow line.
  - Terminator.

38. The name of the symbol labelled **O** is
- A. Decision.
  - B. Flow line.
  - C. Input/Output.
  - D. Process.
39. Which condition should be placed in **P** in order for the algorithm to function **correctly**?
- A.  $J < 10$
  - B.  $J \leq 10$
  - C.  $J > 10$
  - D.  $J \geq 10$
40. The **correct** statement to be placed in **Q** in order to update the value of the variable **J** to enable the algorithm to function **correctly** is
- A.  $J = 1 - J$ .
  - B.  $J = 1 + J$ .
  - C.  $J = J - 2$ .
  - D.  $J = J + 2$ .
41. Which of the following reasons justifies the use of a layered approach to networking?
- A. Allows for large networking
  - B. Makes creation of networks easy
  - C. Allows many programmers to implement a network
  - D. Permits computers on different platforms to communicate
42. The internet service that allows users to connect to remote computers and run applications is referred to as
- A. gopher.
  - B. hypertext.
  - C. switching.
  - D. telnet.
43. The medium in a network that prepares data for transmission is the
- A. hard disk.
  - B. microprocessor.
  - C. twisted pair cable.
  - D. network interface card.
44. A system of connected computers, telephones or other communications devices that can communicate with one another is called a
- A. closed network.
  - B. circuit switching.
  - C. packet switching.
  - D. communications network.



45. One-to-many relationship between student and class tables means
- A. one class may have many students.
  - B. one student may have many classes.
  - C. many classes may have many students.
  - D. many students may have many classes.
46. A database language that informs database management system about the whole data structure is called
- A. data control language.
  - B. dynamic link library.
  - C. data definition language.
  - D. data manipulation language.
47. Presenting information in a particular order based on numeric or alphabetic value is called
- A. arranging.
  - B. ordering.
  - C. searching.
  - D. sorting.
48. Which of the following operators selects a record when only **one** condition is satisfied?
- A. AND
  - B. IF
  - C. NOT
  - D. OR
49. E-commerce is an integral part of
- A. e-business.
  - B. e-governance.
  - C. e-learning.
  - D. e-mail.
50. As a webpage developer, which of the following elements should be used to present an unordered list of items?
- I. ol
  - II. ul
  - III. li
  - IV. table
- A. IV only
  - B. I and II only
  - C. II and III only
  - D. I, II and III only

***END OF PAPER***