

SECTION A
[24 Marks]
Answer Question 1 [Compulsory]

1. (a) A carpenter recorded the sides of a triangular object as 3cm, 4cm and 6cm.
(i) Write the algorithm to find the perimeter of the object. Print the perimeter. (6marks)

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- (ii) Draw the flowchart of the algorithm written in "1(a)" above. (6marks)

- (b) Mr. Osiadian hired an IT engineer to install a network in his newly constructed business center. In accordance with the purpose of the business, the engineer presented to Mr. Osiadian the architectural picture of the network as shown in the **figure 1 below**. Study it carefully and answer the questions that follow.

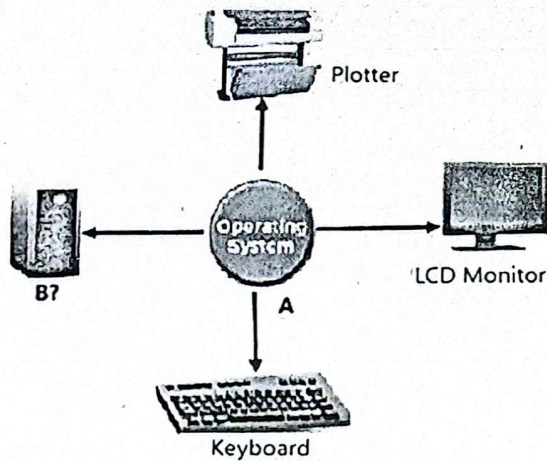


Fig. 1

- (i) How would you explain topology in relation to network? (2marks)
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- (ii) Identify the network topology illustrated in Fig. 1 above. (1mark)
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- (iii) Mention any other two network topologies you know. (2marks)
- (iv) Give two examples of operating system labelled as "A" in the Fig. 1 above. (2marks)
- (v) Write the name of the part labelled as "B" in the figure above and list two internal components of it. (3marks)
- (vi) List two documents that the plotter in the network can help Mr. Osisiadan print. (2marks)

SECTION B

[36 Marks]

Answer **three** questions **only** from this section.

2. (a) (i) Explain wireless technology network. (1mark)
- (ii) Give two examples of wireless technology network. (1mark)
- (iii) A building engineer uses a graphic tablet for his projects. Outline two applications of graphic tablet. (2marks)

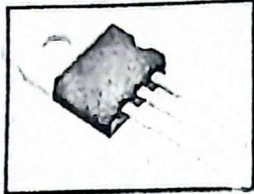
- (b) In a class lesson, the facilitator introduced a new feature of MS word to the class as shown in figure 1.1 below. Study it carefully and answer the questions that follow.

To launch the MS Publisher,
❖ Click the Start button
❖ Go to All programs
❖ Scroll and locate MS office suit
❖ Locate and click MS Publisher

Fig. 1.1

- (i) What is the name of the feature applied to the steps in the figure 1.1 above? (1mark)
- (ii) State the function of the feature used in the figure 1.1 above. (1 mark)
- (iii) Write any two other examples of the feature mentioned in "i" above. (2marks)

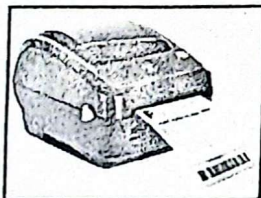
- (c) Below is a technological device used in a particular period of time in computer generations. Study it carefully and answer the questions that follow.



- (i) What is the name of the device above? (1mark)
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- (ii) Which generational period of computers used the device above? (1mark)
.....
- (iii) Highlight two common features of the aforementioned computer generation. (2marks)
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3. (a) (i) Explain the term wireless technology in computer networking. (1mark)
.....
- (ii) Mention two examples of wireless network technology. (2marks)
.....
- (iii) Which of the wireless network technologies is freely available in most of the communication devices? (1mark)
.....

- (b) An accountant in JB supermarket uses the device below for her work. Observe it carefully and answer the questions that follow.



- (i) Name the device above. (1mark)
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- (ii) What type of device does the one shown above belong to? (1mark)
.....
- (iii) Identify two benefits the accountant derives from the device above. (2marks)
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.....
- (c) (i) How will you explain a tree topology network to your classmate? (1mark)
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- (ii) Outline two advantages of using tree topology network. (2marks)

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- (iii) Highlight one disadvantage of using tree topology network. (1mark)

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4. (a) Read the extract below and answer the questions that follow.
"A group of six students in J.H.S two class were using a technology tool to learn about a topic taught in their class: At the initial stage, they enjoyed the lesson but getting to the latter part, they were discouraged due to some challenges they encountered."

- (i) Explain Educational technology. (1mark)

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- (ii) Mention two educational tools for enhancing teaching and learning. (2marks)

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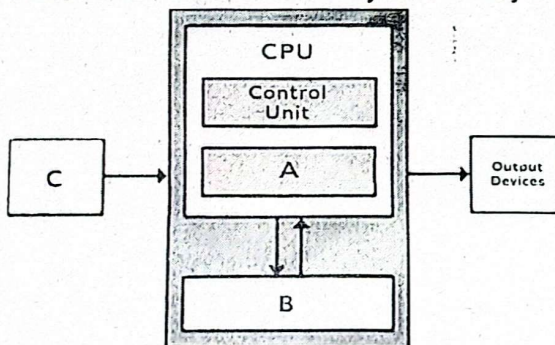
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- (iii) Outline one possible challenge the students encountered. (1mark)

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- (b) In a practical lesson, your Computing facilitator projected the architectural picture below onto a screen. Study it carefully and answer the questions that follow



- (i) Name the component of the computer system projected by the facilitator above. (1mark)

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- (ii) Identify the parts labelled as A, B and C. (2marks)

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- (iii) State one function of the part labelled A. (1mark)

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- (c) (i) Explain the term Information security. (1mark)

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- (ii) Highlight two principles used in information security. (2marks)

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- (iii) Outline one reason why password protection is useful. (1mark)

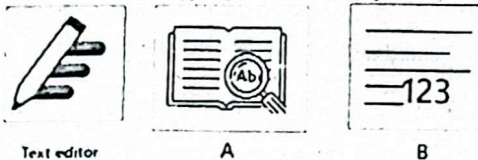
5. (a) Mr. Domfe of Lincoln Model School purchased the following four technological devices. **Desktop, Digital Camera, Laptop and Headphone.**

- (i) Explain the structure of ring topology network. (1mark)

- (ii) Using the devices listed above, draw the structure of ring topology network. (2marks)

- (iii) Identify one challenge of using ring topology network. (1mark)

(b) Below are three unique proofing tools under the review tab of word processing software. Study them carefully and answer the questions that follow.



- (i) Name the parts labelled as A and B. (2marks)

- (ii) Highlight the function of tool A. (1mark)

- (iii) Describe the primary purpose of the tool labelled as B. (1mark)

- (c) (i) How will you explain a sensor in robot to your classmate? (1mark)

- (ii) Outline two types of sensor as used in robotics. (1mark)

- (iii) Identify two applications of robots in society. (2marks)

COMPUTING OBJECTIVE TEST

1. Input devices come in different designs. Which of the following is a direct data entry device?
A. Printer C. Monitor
B. Scanner D. Speaker
2. The primary function of the mouse is to
A. print documents C. store files
B. control the pointer D. edit videos
3. The computer systems has passed through the series of developmental stages since manufacturing, each with unique features. The use of integrated circuit is a characteristics of the
A. second generation
B. first
C. third generati on
D. fourth generation
4. To effectively use technology tools in learning, students should
A. integrate multiple tools to suit different learning style
B. focus solely on one tool
C. av oid collaboration with peers
D. use technol ogy only for learning
5. The virtual assistant tool that uses Bing search engine to perform tasks in Microsoft windows is
A. Doodoo C. Bingo
B. Mongo D. Cortana
6. The devices that is mostly needed during booting of computer is the
A. Digital Versatile Disc
B. Floppy Disc
C. Hard Disc Drive
D. Co mpact Disc
7. The section in Microsoft window that allows users to adjust sound volume on the taskbar is the
A. quick section C. search box
B. system tray D. start button
8. The charm bar is a feature found in
A. Microsoft windows operating system
B. Microsoft office suit
C. Linu x operating system
D. Android o perating system
9. The correct steps involved in saving a document is
A. File/ Ok/ File name/ Save
B. Save As/ File/ File name/ Ok
C. File/ Save In/ File na me
D. File/Sav e As/Location/File name/ Ok
10. Computer Vision Syndrome is a possible health hazard associated with the prolong use of
A. computer C. monitor
B. mouse D. keyboard
11. One of the following is not a network topology
A. Star topology C. Bass topology
B. Mesh topology D. Tree topology
12. An example of programming language among the following is
A. Scribus C. HTML
B. Photoshop D. MS word
13. The component of the processor which performs the mathematical operations is the
A. Arithmetic unit C. Control
B. Logical unit D. Register
14. Kelix is at a mall and wants to make payment using her credit. She swipes her card through a device that reads the magnetic stripe on the back of the card. What is the name of the direct data entry device being used in the scenario above?
A. Graphic tablet
B. Optical Mark Reader
C. Mag netic Card Reader
D. QR code reader
15. The primary focus of the principle of **availability** in information security is to
A. protect information from unauthorized access
B. ensure that information is **accessible** when needed
C. ensure that infor mation is accurate and reliable
D. reduce the redu ndancy of information
16. A unit of measurement in quantum computing is
A. qubit C. quadbit
B. bit D. giga bite
17. Network topology is
A. the speed of an internet connection
B. the arrangement of devices in a computer network
C. the types of cables used in net working
D. the sof tware used to manage network
18. Shulamite receives a hurtful and demeaning message from a classmate on social media. What type of online behaviour is shown towards Shulamite?
A. Cyberstalking C. Cyber bullying
B. Digital footprint D. Digital shadow
19. The word **byte** in computing means,
A. a binary character of eight bits
B. a binary digit of eight bits
C. a binar y text of eight bits
D. a binar y word of eight bits
20. <https://www.examination.com> is an example of
A. HTML C. URL
B. AML D. LAN

21. The location of RAM in the computer system is
 A. on the circuit board, inside the monitor
 B. on the motherboard, inside keyboard
 C. on the circuit board, inside the mouse
 D. on the motherboard, inside the system unit
22. The long horizontal bar located at the bottom of the desktop is
 A. long bar
 B. title bar
 C. start bar
 D. taskbar
23. The main circuit board that connects all other components of the computer is called
 A. Disk board
 B. Motherboard
 C. Circuit board
 D. Central Processing Unit
24. The device below is used by who, and for what?

 A. Doctor, to check body weight
 B. Police, to check speed rate
 C. Librarian, to scan book codes
 D. Surveyor, to measure landscape
25. The feature of Radio Frequency Identification (RFID) unique from other direct data entry devices is
 A. it scans digital footprints only
 B. it scans multiple objects simultaneously
 C. it primarily reads QR codes on objects
 D. it works only with magnetic stripes
26. Describe the icon below.

 A. Mozilla Firefox, a web browser
 B. Google Chrome, a web browser
 C. Adobe Photoshop, a desktop publisher
 D. Scribus, a page designer
27. In quantum computing, the device that is likely to evolve for handling vast amounts of data is
 A. 3D printer for creating computer hardware
 B. Solid-state drive (SSD) for faster data access
 C. Thermal printer for creating high quality output
 D. Graphic tablet for manual data entry
28. The easiest steps to create new folder in window is to use these steps:
 A. Right-click on empty space, New, Folder.
 B. Open Task Manager, Create, Folder
 C. Press Ctrl + Alt + F on the desktop
 D. Use the Tile for New Folder on the start menu
29. How do portable computers, such as smartphones and tablets, impact everyday life?
 A. They limit access to information
 B. They only allow communication via email
 C. They enable on-the-go access to information and services
 D. They are restricted to entertainment purposes only
30. The file or document sent along with email message in communication is
 A. reply
 B. carbon copy
 C. compose
 D. attachment
31. What is the key characteristic of Wide Area Network (WAN)?
 A. It connects devices in a single room
 B. It connects devices in a large geographical area.
 C. It connects devices of limited group of nearby people
 D. It connects wireless devices
32. Adoma is tasked to format cells of data to display values with a \$ in excel. Which data type should she select?
 A. Text
 B. General
 C. Currency
 D. Date
33. A student has a robot in the house. Which component will help the robot to detect an obstacle in its path?
 A. The controller
 B. The mechanical system
 C. The sensor
 D. The power source
34. One example of network fabrication is
 A. creating fake logins to access a secure system
 B. deleting files without permission
 C. intercepting sensitive data during transmission
 D. blocking access to a website
35. The platform that is used for sharing videos among the options below is
 A. YouTube
 B. Snapchat
 C. Periscope
 D. Facebook live
36. The feature that allows users to insert texts in MS Publisher is known as
 A. Font style
 B. Text box
 C. Format painter
 D. Insertion mark
37. The action that is used to combine two or more cells together is called
 A. Merge cells
 B. Split cells
 C. Add borders
 D. Insert formula
38. The primary function of thermal printer is
 A. to print 3D materials
 B. to print braille texts
 C. to print quality photos
 D. to print receipts
39. One feature of fifth generation computer is
 A. the use of vacuum tube technology
 B. the use of transistor technology
 C. the use of quantum bit processing technology
 D. the use of punched cards for input
40. The function that helps to find positions of individual students for a test in excel is the
 A. MAXIMUM
 B. RANK
 C. COUNT
 D. AVERAGE

MARKING SCHEME: COMPUTING
SECTION A: OBJECTIVES (40MARKS)

1. B	11. C	21. D	31. B
2. B	12. C	22. D	32. C
3. C	13. A	23. B	33. C
4. A	14. C	24. C	34. A
5. D	15. B	25. B	35. A
6. C	16. A	26. A	36. B
7. B	17. B	27. B	37. A
8. A	18. C	28. A	38. D
9. D	19. A	29. C	39. C
10. C	20. C	30. D	40. B

SECTION B (60 MARKS)

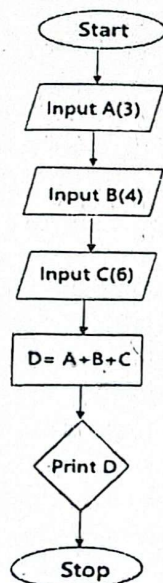
1. (a) (i)

Algorithm

Step 1: Start
 Step 2: Input side A(3cm)
 Step 3: Input side B(4cm)
 Step 4: Input side C(6cm)
 Step 5: $D = A + B + C$
 Step 6: Print D
 Step 7: Stop

(6marks)

(ii) **Flowchart**



(6 marks)

- (b) (i) **Topology** refers to the arrangement or layout of devices in a computer network, which determines how devices are interconnected and communicate. (2marks)
- (ii) **Star Topology** (1mark)
- (iii) **Two other network topologies:** Bus topology, Tree topology, Mesh topology, Hybrid topology (2marks)
- (iv) Windows, Linux, android, blackberry, etc. (2marks)
- (v) **Part labelled as "B":** System Unit (Server) (1mark)
Internal components of the server: CPU, RAM, ROM, Memory card, system fan, system battery, etc (3marks)

12

- (vi) **Plotter:** Banner, Sticker, Poster, Architectural drawings, Engineering blueprints, etc. (2marks)

PART II. (36 MARKS)

2. (a) (i) **Wireless technology network** refers to communication between devices without physical cables, using electromagnetic signals like radio waves. (1mark)
- (ii) **Examples:**
- Wi-Fi
 - Bluetooth
 - Cellular networks
 - Satellite communication. (1mark)
- (iii) **Applications of a graphic tablet:**
- Designing architectural plans.
 - Creating digital art. (2marks)
- (b) (i) **Bullets** (1mark)
- (ii) It helps users to list items or ideas. (1mark)
- (iii) **Examples:**
- Alphabets
 - Roman numerals
 - Symbolics, etc. (2marks)
- (c) (i) **Vacuum Tube.** (1mark)
- (ii) **Generational period:** First generation of computers. (1mark)
- (iii) **Common features:**
- Use of vacuum tube technology.
 - Large size and high energy consumption.
 - Generated a lot of heat
 - Used air-conditioner, etc. (2marks)
3. (a) (i) **Wireless technology** in computer networking allows devices to communicate over distances without physical connections, using radio, infrared, or satellite signals. (1mark)
- (ii) Examples: Wi-Fi, Bluetooth, Infrared, Hotspots, NF, etc. (2marks)
- (iii) **Freely available wireless technology:** Bluetooth, Infrared, Hotspots. (1mark)
- (b) (i) **Name:** Point-of-Sale (POS) System/ Thermal printer. (1mark)
- (ii) **Device type:** Input device. (1mark)
- (iii) **Benefits:**
- Processes payments efficiently.
 - Tracks inventory in real-time. (2marks)
- (c) (i) **Tree topology:** A hierarchical network arrangement where devices are connected in a tree-like structure. (1mark)
- (ii) **Advantages:**
- Easy to expand.
 - Centralized monitoring.
 - Less expenses on cable
 - Quick flow of data
 - Fault is easily troubleshooted, etc. (2marks)
- (iii) **Disadvantage:**

- Failure at the root node affects the entire network.
- Cost of cables
- Installation cost (1mark)

4. (a) (i) **Educational technology** refers to the use of technological tools to enhance teaching and learning experiences. (1mark)
- (ii) **Tools:** Interactive whiteboards, Educational apps (like Kahoot). (2marks)

(iii) **Possible challenge:**

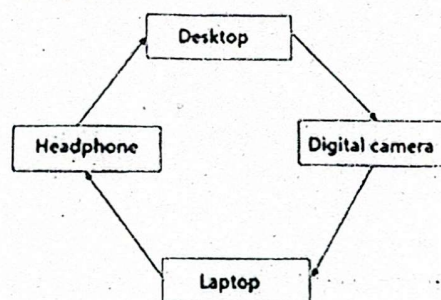
- Network issues
- Poor technology knowledge
- Technical difficulties
- Lack of familiarity with tools. (1mark)

- (b) (i) **Name:** Central Processing Unit (CPU). (1mark)
- (ii) **A** : Processor.
B : RAM.
C : Motherboard. (2marks)
- (iii) **Function of A:** Executes instructions and processes data. (1mark)

- (c) (i) Information security protects data from unauthorized access, ensuring confidentiality and integrity. (1mark)
- (ii) **Techniques:** Integrity, Availability, Confidentiality, etc. (2marks)
- (iii) **Reason for password protection:** Prevents unauthorized access to sensitive information. (1mark)

5. (a) (i) **Ring topology:** A circular arrangement of network devices where each device is connected to two others, forming a closed loop. (1mark)

(ii) **Structure:**



(2marks)

- (iii) **Challenge:** Failure of one device can disrupt the entire network. (1mark)

- (b) (i) **A** : Spell check
B : Word count (2marks)
- (ii) **Function of tool A:** Detects and corrects spelling errors. (1mark)
- (iii) **Purpose of tool B:** For counting total number of items or inputs in a particular page or document. (1mark)

- (c) (i) **Sensor in robotics:** A device that detects environmental changes, enabling the robot to interact with its surroundings. (1mark)
- (ii) **Types of sensors:** Proximity sensors, Temperature sensors, Heat sensor, etc (1mark)
- (iii) **Applications of robots:**
- Industrial automation (e.g., Assembly lines).
 - Medical procedures (e.g., Surgery) (2marks)