



24900082

**Name:**.....

## First Semester

(2024 ADMISSION ONWARDS)

Maximum Marks: 50

*Students should attempt atleast one question from each course outcome to enhance their overall outcome attainability.*

[Learning Domain][CO No(s)]

## Multiple Choice Questions

Answer all questions. Each question carries 1 mark

- |   |   |                                |     |
|---|---|--------------------------------|-----|
| 1 | Identify the smallest unit of data in computing                       | [U]                            | [1] |
|   | a) Bit  | b) Byte                        |     |
|   | c) Kilobyte   | d) Megabyte                    |     |
| 2 | Identify the component of CPU responsible for executing instructions. | [U]                            | [1] |
|   | a) Control Unit   | b) Arithmetic Logic Unit (ALU) |     |
|   | c) Register   | d) Cache                       |     |
| 3 | Identify which one is not a primary function of an operating system.  | [U]                            | [1] |
|   | a) Memory management  | b) Process management          |     |
|   | c) Application development  | d) File management             |     |

- 4 Define data. [K] [1]
- a) Raw facts and figures
  - b) A type of software
  - c) A form of hardware
  - d) Processed information
- 5 Select the primary function of the Control Unit (CU) in a CPU [U] [2]
- a) To perform mathematical calculations
  - b) To manage the execution of instructions and coordinate activities of the CPU
  - c) To store data temporarily
  - d) To execute input/output operations
- 6 Identify a type of primary memory among the following [U] [2]
- a) Floppy Disk
  - b) Random Access Memory (RAM)
  - c) External USB Drive
  - d) Hard Disk Drive (HDD)
- 7 Select the correct purpose of the HDMI (High-Definition Multimedia Interface) port? [U] [2]
- a) To connect a keyboard
  - b) To connect a mouse
  - c) To connect a monitor or Projector for video output
  - d) To connect a power cord
- 8 Examine which practice best supports green computing principles: [An] [3]
- a) Disposing old computers
  - b) Virtualizing data storage
  - c) Frequent hardware upgrades
  - d) Using CRT monitors
- 9 Compare the following fields and determine which one benefits the most from neuromorphic chip technology [An] [3]
- a) Artificial intelligence
  - b) Digital photography
  - c) Quantum mechanics
  - d) Traditional software programming
- 10 Differentiate between L1 and L3 cache. [An] [3]
- a) L1 is faster and smaller than L3
  - b) L3 is faster and smaller than L1
  - c) Both are the same size
  - d) L1 is slower than L3

(10 × 1 = 10)

### **Part B**

#### **Short Answer Questions**

Answer 4 questions. Each question carries 5 marks

- |    |   |      |     |
|----|---|------|-----|
| 11 | Describe the step-by-step process of how a computer processes data, from input to output. | [U]  | [1] |
| 12 | Differentiate between primary memory and secondary memory. Give examples of each.         | [U]  | [1] |
| 13 | Explain the key features and functions of flash drives.                                   | [U]  | [2] |
| 14 | Classify various types of scanners? Provide a brief explanation of at least two types.    | [U]  | [2] |
| 15 | Show how latency play in memory technology, and how is it managed in DDR4 and DDR5?       | [An] | [3] |
| 16 | Distinguish AR from VR in terms of user experience.                                       | [An] | [3] |

(4 × 5 = 20)

### **Part C**

#### **Essay Questions**

Answer 2 questions. Each question carries 10 marks

- |    |  |      |     |
|----|--|------|-----|
| 17 | Explain the characteristics of fifth generation computers.   | [U]  | [1] |
| 18 | Define software. Differentiate between system software and application software, providing examples of each.     | [U]  | [1] |
| 19 | Compare and Contrast the functionality and limitation of PCI and PCIe expansion slots.                           | [U]  | [2] |
| 20 | Distinguish between the different levels of cache in a CPU and their impact on multi-core processor performance. | [An] | [3] |

(2 × 10 = 20)

**END OF THE QUESTION PAPER**

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