

Chapter 1: Computer System Overview

MCQs QUESTIONS

1. Which of the following components is the main memory of a computer?

- (a) CD
- (b) DVD
- (c) Internal hard drive
- (d) RAM ✓**

2. Which component of a computer connects the processor to the other hardware?

- (a) System Bus ✓**
- (b) CPU
- (c) Memory
- (d) Input Unit

3. Which of the following is referred to as the brain of the computer?

- (a) Processor ✓**
- (b) RAM
- (c) ROM
- (d) Hard drive

4. What is the name of programs that control the computer system?

- (a) Hardware
- (b) Keyboard
- (c) Software ✓**
- (d) Mouse

5. The physical components of a computer are called:

- (a) Software
- (b) Hardware ✓**
- (c) ALU
- (d) CPU

6. Which of the following is the common measurement unit of computer memory?

- (a) IQ
- (b) Byte ✓**
- (c) Terabyte
- (d) Gigabyte

7. What is the name of the component that is used to both read and write data?

- (a) ROM
- (b) RAM ✓**
- (c) Hard Drive
- (d) Cache Memory

8. The CPU is also known as:

- (a) The Brain
- (b) The Processor
- (c) The Central Processing Unit
- (d) All of these ✓**

9. Which smaller unit of the CPU directs and coordinates all activities within it and determines the sequence in which instructions are executed?

- (a) CU ✓**
- (b) ALU
- (c) Processor
- (d) All of these

10. Which smaller unit of the CPU performs all arithmetic and logic functions in a computer?

- (a) CU
- (b) ALU ✓**
- (c) Processor
- (d) All of these

11. Component of CPU which is responsible for comparing the contents of two pieces of data is:

- (a) ALU ✓**
- (b) CU
- (c) Memory
- (d) Register

12. In a computer, CU stands for:

(a) Control Unit ✓

(c) Calculating Unit

(b) Cache Unit

(d) Communication Unit

13. Arithmetic Logic Unit along with Control Unit of a computer, combined into a single unit, is known as:

(a) Central Processing Unit ✓

(c) I/O Unit

(b) Memory Unit

(d) Operating Unit

14. Word Processor and Desktop Publishing programs are examples of:

(a) Hardware

(c) CPU

(b) Software ✓

(d) None of these

15. Operating System is an example of:

(a) Application Software

(c) Utility Program

(b) System Software ✓

(d) None of these

16. A disk defragmenter is an example of:

(a) Application Software

(c) Utility Program ✓

(b) System Software

(d) None of these

17. Flash memory and Blu-ray disk are examples of:

(a) Hardware ✓

(c) CPU

(b) Software

(d) None of these

18. Flash memory is a type of _____ memory.

(a) Primary

(c) Secondary ✓

(b) RAM

(d) All of these

19. Which of the following memory types will store the data or information permanently?

(a) RAM

(c) Flash Memory

(b) Cache

(d) Hard Disk ✓

20. Which of the following memory types cannot store the data or information permanently?

(a) RAM ✓

(c) Flash Memory

(b) Cache

(d) Hard Disk

1. What is a computer?

Answer: A computer is an electronic device that accepts data as input, processes it according to instructions, stores it, and produces information as output.

2. What is the function of the Input Unit?

Answer: The Input Unit accepts data and instructions from the user and sends them to the computer for processing.

3. What is the function of the Output Unit?

Answer: The Output Unit displays the processed information to the user in a readable form.

4. Why is the CPU called the brain of the computer?

Answer: The CPU is called the brain of the computer because it controls and performs all processing operations.

5. What are the three main components of the CPU?

Answer: Arithmetic Logic Unit (ALU), Control Unit (CU), and Registers.

6. What is RAM?

Answer: RAM (Random Access Memory) is a temporary memory that stores data and programs currently being used by the computer.

7. What is ROM?

Answer: ROM (Read Only Memory) is a permanent memory that stores important instructions required to start the computer.

8. What is Cache Memory?

Answer: Cache Memory is a high-speed memory located between the CPU and RAM that stores frequently used data and instructions.

9. What is System Software? Give one example.

Answer: System software manages computer hardware and provides a platform for application software. Example: Windows Operating System.

10. What is a System Bus?

Answer: A System Bus is a communication pathway that transfers data, addresses, and control signals between computer components.

11. What is Application Software?

Answer: Application software is designed to perform specific tasks for users, such as word processing and web browsing.

12. What is a Software Library?

Answer: A software library is a collection of pre-written programs and functions that programmers can reuse in their applications.

13. Explain the components of the CPU.

Answer:

The CPU consists of three main components:

1. **ALU (Arithmetic Logic Unit):** Performs arithmetic and logical operations.
2. **Control Unit (CU):** Controls and coordinates all computer operations.
3. **Registers:** Small high-speed memory locations used for temporary storage of data and instructions.

14. Differentiate between RAM and ROM.

Answer:

RAM	ROM
Volatile memory	Non-volatile memory

Data is lost when power is off	Data remains even when power is off
Read and write operations possible	Mostly read-only memory
Used for temporary storage	Used for permanent storage

15. What is Cache Memory? State its advantages.

Answer:

Cache Memory is a high-speed memory located between the CPU and RAM. It stores frequently used data and instructions.

Advantages:

1. Increases processing speed.
2. Reduces access time to data.
3. Improves overall computer performance.

16. Explain the three types of System Buses.

Answer:

1. **Data Bus:** Transfers data between CPU, memory, and devices.
2. **Address Bus:** Carries memory addresses from CPU to memory.
3. **Control Bus:** Carries control signals and commands between components.

17. What is System Software? Explain its types.

Answer:

System Software manages computer hardware and provides a platform for application software.

Types:

1. **Operating System:** Manages resources and hardware (e.g., Windows, Linux).
2. **Device Drivers:** Allow hardware devices to communicate with the computer.
3. **Language Translators:** Convert programs into machine language (Compiler, Interpreter, Assembler).

18. Explain Mobile System Organization.

Answer:

A mobile system is a portable computing device such as a smartphone or tablet.

Components of Mobile System

1. **Processor**
 - Executes instructions and controls device functions.
2. **Memory**
 - RAM for temporary storage.
 - Internal storage for permanent data.
3. **Sensors**
 - Accelerometer
 - Gyroscope
 - GPS

- Proximity Sensor
- 4. **Communication Modules**
 - Wi-Fi
 - Bluetooth
 - Cellular Network
- 5. **Battery**
 - Supplies power to the device.
- 6. **Operating System**
 - Android
 - iOS

19. Explain the different types of software.

Answer:

Software is a set of programs that instruct a computer to perform tasks.

Types of Software

1. System Software

System software manages hardware resources and provides a platform for applications.

Examples:

- Operating System
- Device Drivers
- Language Translators

2. Application Software

Application software performs specific tasks for users.

Examples:

- MS Word
- Excel
- Web Browser

3. Software Libraries

Software libraries are collections of pre-written functions and programs that can be reused by developers.

Advantages:

- Saves time.
- Reduces coding effort.
- Improves software quality.

20. Explain Secondary Storage and its types.

Answer:

Secondary Storage is used to store data permanently. It has larger capacity than primary memory.

Types of Secondary Storage

1. Magnetic Storage

- Hard Disk Drive (HDD)
- Magnetic Tape

2. Optical Storage

- CD
- DVD
- Blu-ray Disc

3. Solid-State Storage

- SSD
- Pen Drive
- Memory Card

Advantages

- Permanent storage.
- Large capacity.
- Cost-effective.

Disadvantages

- Slower than primary memory.
- Not directly accessed by the CPU.

21. Explain the basic organization of a computer system with its main components.

Answer:

A computer system consists of several components that work together to process data and produce information.

Main Components:

1. Input Unit

- Accepts data and instructions from the user.
- Examples: Keyboard, Mouse, Scanner.

2. CPU (Central Processing Unit)

- Processes data and controls all operations.
- Consists of ALU, Control Unit, and Registers.

3. Memory Unit

- Stores data and instructions temporarily.
- Includes RAM and ROM.

4. Storage Unit

- Stores data permanently.

- Examples: HDD, SSD, Pen Drive.

5. **Output Unit**

- Displays processed information.
- Examples: Monitor, Printer.