

1. Which of the following is NOT a component of the CPU?

RAM

2. What is the function of RAM in a computer?

RAM is a type of volatile memory that temporarily stores data and instructions that the CPU needs to process. its main function are

(1) FAST DATA ACCESS provides quick read and write access to data, much faster than hard drives or SSD

(2) temporary storage – holds data only while the computer is powered on it is erased when the system is shut down.

(3) multitasking support- allows multiple program to run simultaneously by storing their active data.

(4) improves performance- more RAM means smoother performance and faster program execution as the CPU can quickly access necessary data without relying on slower storage devices.

In short, RAM acts as a bridge between the CPU and storage, ensuring efficient operation and responsiveness.

3. Which of the following is a primary storage device?

1. HDD 2. SSD

4. What is the purpose of a GPU?

A GPU (graphic processing unit) is a specialized processor designed to handle graphics related tasks efficiently

-rendering graphics

-gaming

Video editing

-AI machine learning

5. True or False: The motherboard is the main circuit board of a computer where other components are attached.

TRUE

6. True or False: A UPS (Uninterruptible Power Supply) is a hardware device that provides emergency power to a load when the input power source fails.

TRUE

7. True or False: An expansion card is a circuit board that enhances the functionality of a component

TRUE

. 8. Explain the difference between HDD and SSD.

The main difference between SSD and HDD lies in their technology, speed, and durability power consumption, noise & heat, cost, storage capacity.

9. Describe the function of BIOS in a computer system.

BIOS is firmware stores on a small memory chip on the motherboard. It plays a crucial role in booting up the computer and managing hardware interaction.

10. List and briefly explain three input devices commonly used with computers.

THREE COMMON INPUT DEVICES USED WITH COMPUTER

(1) keyboard

- a keyboard is a primary input devices used to enter text, numbers, and commands.
- it includes keys for letters, numbers, and special keys, function keys.

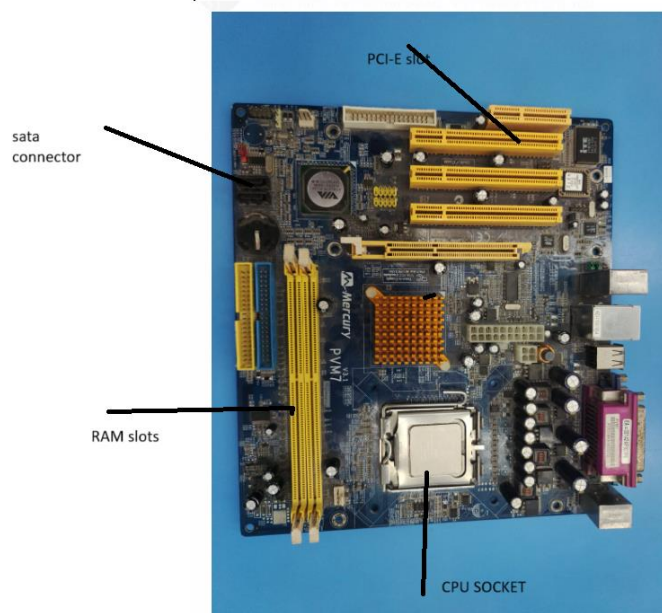
(2) mouse

- a mouse is a pointing device used to intrecte with the computers graphical user interface
- it allows users to move the cursor, click, drag and scroll through content.

(3) scanner

- a scanner converts physical documents or images into digital format for storage or editing.
- common types includes flatbed scanners, barcode scanners, and handheld scanners.

11. Identify and label the following components on a diagram of a motherboard: ● CPU ● RAM slots ● SATA connectors ● PCI-E slot



12. Demonstrate how to install a RAM module into a computer.

Installing a RAM module

Power down and open the computer. identify the RAM slots on the motherboard. align the RAM module with the slot. the notch in the RAM stick should match the notch in the slot. open the side clips on the both ends of the slots. firmly press down the RAM module until it clicks into place and the clips lock it in securely. check that the RAM is fully seated and both clips are locked.

Turn on the pc and check if the system recognizes the new RAM in BIOS or TASK MANAGER.

13. Discuss the importance of proper cooling mechanisms in a computer system. Include examples of cooling methods and their effectiveness.

Cooling is essential in a computer system to prevent overheating, which can cause performance issues, hardware damage, system crashes.

Types of cooling

- air cooling
- liquid cooling
- thermal paste
- passive cooling

14. Explain the concept of bus width and its significance in computer architecture.

In computer architecture, bus width refers to the number of bits that can be transmitted simultaneously over bus. a bus is a communication pathway that transfer data between different components of a computer, such as CPU, RAM .AND STORAGE DEVICES.

Types of buses and their width

- (1) data bus –transfer actual data between components.
- (2) address bus-carries memory addresses from the CPU to RAM or storage.
- (3) control bus – sends control signals to manage operations like read and interrupts.

Significance of bus width

- (1) affects data transfer speed
- (2) determines maximum addressable memory
- (3) impacts system performance
- (4) compatibility considerations.