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Assignment Module 1:

Understanding of Hardware and Its Components

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

   Ans→RAM

   →The CPU is made of the ALU (Arithmetic Logic Unit), CU (Control Unit), and registers. RAM is part of the main memory, not the CPU.
2. What is the main function of RAM in a computer system and why is it important?

   ANS→RAM stands for Random Access memory. It temporarily stores data, files, and programs that the CPU is currently using or processing. When you open any software, game, or file, it is loaded from the hard drive into RAM so the CPU can access it faster. Once the computer is turned off, the data in RAM is erased because it is a volatile memory.
   →RAM helps the computer work faster and handle multiple tasks smoothly.
3. Which of the following devices is considered as a primary storage device in a computer system?
   Options:1) HDD 2) SSD 3) SD Card 4) Both 1 and 2
   Ans: Both 1 and 2 (HDD and SSD)
   →Primary storage is the main storage of the computer used to store the operating system, software, and files permanently. Hard Disk Drives (HDD) and Solid State Drives (SSD) are both examples of this. SD cards are used as external or portable storage, not as the main one.
4. What is the purpose and main function of a GPU in a computer system?
   Ans→
   A GPU (Graphics Processing Unit) is a special electronic chip that helps the computer process graphics, images, videos, and visual effects faster. It works alongside the CPU to handle visual data like animations, games, or video editing tasks**.**

   Section 2:True or False

5. The motherboard is the main circuit board of a computer where all other components are connected and communicate with each other.
   Ans: True-

→The motherboard is the central backbone of a computer. It holds and connects all the main parts such as the CPU, RAM, hard drive, and expansion cards, allowing them to work together.

6. A UPS (Uninterruptible Power Supply) is a hardware device that provides backup power to the computer when there is a power cut or voltage drop.
Ans: True
A UPS ensures the computer keeps running for a short time when electricity goes off. It prevents data loss and protects the system from sudden power surges

7. An expansion card is a small circuit board added to a computer to increase its capabilities and features.
Answer: True
→*:* Expansion cards (like a sound card, network card, or graphic card) are plugged into the motherboard to give the computer additional functions, such as better sound, graphics, or internet connectivity.

Section 3:Short Answer

8. Explain in detail the difference between an HDD (Hard Disk Drive) and an SSD (Solid State Drive).

Ans→**HDD (Hard Disk Drive):**

Uses spinning magnetic disks to store data.

Has moving mechanical parts.

Slower performance.

Usually cheaper and available in large capacities.

SSD (Solid State Drive):

Uses flash memory chips (no moving parts).

Works faster and is more reliable.

More expensive but provides better speed and performance.
SSDs are faster and more efficient than HDDs.

9. Describe the main function of BIOS (Basic Input Output System) in a computer system.
Ans:
The BIOS is software stored on the motherboard that runs when you turn on the computer.

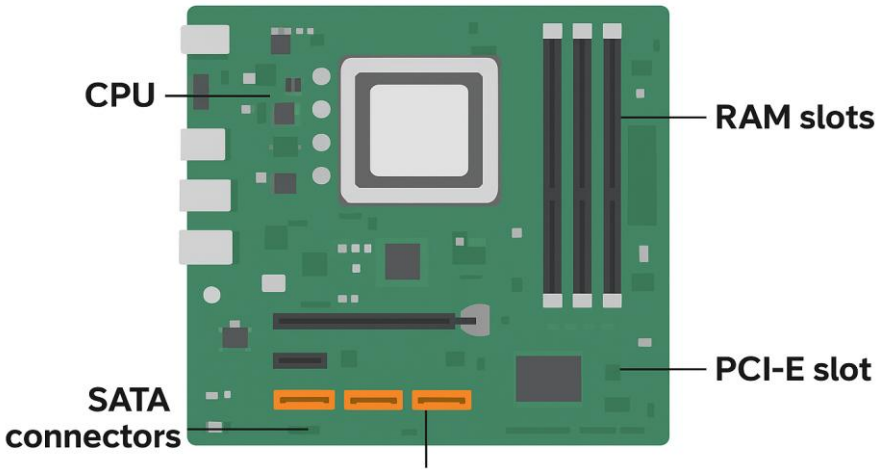
It checks whether all hardware components like CPU, memory, and drives are working properly. Then, it helps load the operating system from the hard drive into the computer's memory.
BIOS starts your computer and prepares it for use.

10. List and briefly explain any three input devices that are commonly used with computers.
Answer:

1. Keyboard: Used to enter text, numbers, and commands into the computer.
2. Mouse: Used to move the pointer, select, and open files or folders on the screen.
3. Scanner: Converts physical documents or images into digital format so they can be stored and edited on a computer.
   Input devices help users communicate and send information to the computer.

11. Identify and label the following components on a diagram of a motherboard:

- CPU (Central Processing Unit)
- RAM slots
- SATA connectors
- PCI-E slot



Describe step-by-step how to install a RAM module into a computer system.
Answer:

1. Turn off your computer and unplug all cables.
2. Open the side panel of the CPU cabinet carefully.
3. Locate the RAM slots on the motherboard.
4. Align the notch on the RAM stick with the notch in the slot.
5. Press the RAM gently but firmly until the side clips click into place.
6. Close the cabinet, reconnect power, and start the computer to check if the RAM is detected.

   Always handle RAM with care and avoid touching its gold contacts.