Assignment 1

Module -1: Understanding of Hardware and Its Components

Section 1: Multiple Choice

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

    1. ALU

    2. RAM

    3. CU

    4. 1 and 3 both

    Ans : 2 Ram

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

    ➢ Ram store data temporarily and instructions that are currently being used by the cpu .

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

    1. HDD

    2. SSD

    3. SD card

    4. 1 and 2 both

    Ans : 4. 1 and 2 Both

4. What is the purpose of a GPU?

    ➢ The Gpu processes graphics and visual data .

Section 2: True or False

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

    Ans : 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.

    Ans : true

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

    Ans : true

Section 3: Short Answer

8. Explain the difference between HDD and SSD.

Ans :

HDD : it's uses rotating disk .

➢ It is slower and cheaper .

SDD : it have no moving parts .

➢ It is fast and costly.

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

Ans : BIOS starts the computer and loads the operating system.

➢ without BIOS the computer cannot start.

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

Ans :

☐ **Keyboard:** Used to enter text and commands.

☐ **Mouse:** Used to point, click, and select items on the screen.

☐ **Scanner:** Converts physical documents into digital format.

Section 4: Practical Application

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

● CPU socket :holds processor.

● RAM slots : holds RAM .

● SATA connectors : connects HDD/SSD.

● PCI-E slot :used for graphics card.

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

Ans :

1. Turn off the computer and unplug power.
2. Open the computer case.
3. Open the clips of the RAM slot.
4. Align the RAM notch with the slot.
5. Press firmly until it clicks.
6. Close the case and power on.

Section 5: Essay

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

Ans :

- Proper cooling prevents overheating, improves performance, and increases hardware lifespan.
  Common cooling methods include:

- Air cooling (fans & heat sinks): Affordable and effective for normal use.

- Liquid cooling: More efficient for high-performance systems.

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

Ans :

- Bus width refers to the amount of data that can be transferred at one time between computer components like the CPU, memory, and other devices.
- It is measured in bits, such as 8-bit, 16-bit, 32-bit, or 64-bit.
- The significance of bus width is that a wider bus can carry more data at the same time.
- This increases the speed and performance of the computer. A smaller bus width transfers less data and works more slowly.