<u>MODULE - 2</u>

<u>Section 1: Multiple Choice</u>

1. Which of the following precautions should be taken before working on computer hardware?
→ b) Wear an anti-static wrist strap to prevent damage from electrostatic discharge.

2. What is the purpose of thermal paste during CPU installation?
→ c) To improve thermal conductivity between the CPU and the heat sink.

3. Which tool is used to measure the output voltage of a power supply unit (PSU)?
→ a) Multimeter

4. Which component is responsible for storing BIOS settings, such as date and time, even when the computer is powered off?
→ a) CMOS battery

<u>Section 2: True or False</u>

5. When installing a new hard drive, it is essential to format it before use.
→ True

 6. A POST (Power-On Self-Test) error indicates a problem with the CPU.
→ False

 7. It is safe to remove a USB flash drive from a computer without ejecting it first.
→ False

Section 3: Short Answer

8. Describe the steps involved in installing a new graphics card in a desktop computer.

→   Steps to Install a New Graphics Card:

1. Power Off & Unplug the computer.
2. Discharge Static (use an anti-static wrist strap).
3. Open the Case and locate the PCIe x16 slot.
4. Remove Old GPU (if applicable).
5. Insert New GPU into the PCIe slot.
6. Secure the GPU with a screw.
7. Connect Power Cables (if needed).
8. Close the Case and power on the PC.
9. Install Drivers from the GPU manufacturer's website.

9. What is RAID, and what are some common RAID configurations?

→ RAID & Common Configurations:

RAID (Redundant Array of Independent Disks) improves performance, redundancy, or both using multiple drives.

● RAID 0 (Striping): Fast but no redundancy.
● RAID 1 (Mirroring): Data is duplicated for backup.
● RAID 5 (Striping + Parity): Can survive one drive failure.
● RAID 10 (Mirroring + Striping): Combines speed and redundancy.

Section 4: Practical Application

10. Demonstrate how to replace a CPU fan in a desktop computer.
→ Practical complete in lab.

Section 5: Essay

11. Discuss the importance of regular maintenance for computer hardware and provide examples of maintenance tasks.

→ Importance of Regular Computer Hardware Maintenance

Regular maintenance helps ensure optimal performance, longevity, and reliability of computer hardware. It prevents overheating, data loss, and system failures while improving overall efficiency.

Examples of Maintenance Tasks:

1. Cleaning Dust & Debris – Use compressed air to clean fans, vents, and components to prevent overheating.
2. Checking & Replacing Thermal Paste – Ensures proper heat transfer between the CPU/GPU and heatsink.
3. Updating Drivers & Firmware – Keeps hardware components (GPU, motherboard, peripherals, etc.) optimized and secure.
4. Monitoring Storage Health – Use tools like CHKDSK, S.M.A.R.T., or third-party software to check for drive failures.
5. Managing Cables & Connections – Organize cables to improve airflow and reduce wear on power connectors.
6. Power Supply Inspection – Check PSU connections and voltages to prevent power failures.
7. Cleaning and Replacing Fans – Ensures proper cooling for critical components.
8. Running Antivirus & Security Scans – Protects the system from malware that can slow down hardware performance.