

Assignment Module 2

Section 1: Multiple choices

1. Which of the following precautions should be taken before working on computer hardware ?

Ans : b) Wear an anti-static wrist strap to prevent damage from **electrostatic discharge**.

2. What is the purpose of the thermal paste during CPU installation ?

Ans : c) to improve thermal conductivity between the CPU and heat sink.

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

Ans : a) **multimeter**

4. Which component is responsible for storing BIOS setting, such as date and time, even when the computer is powered off?

Ans : a) **CMOS battery**

Section 2 : true or false

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

Ans : **false**

6. A POST error indicates a problem with the CPU.

Ans : **false**

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

Ans : **false**

Section 3 : Short answers

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

Ans :

- Turn off PC, unplug power, and open the case.
- Locate the **PCIe x16 slot** on the motherboard.
- Remove the expansion slot covers.
- Insert the graphics card firmly into the PCIe slot.
- Secure it with screws and connect PCIe power cables (if needed).
- Close the case, reconnect power, and plug the monitor into the new card.
- Boot up and install the latest GPU drivers.

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

Ans :

RAID (Redundant Array of Independent Disks) is a storage method that combines multiple hard drives for performance, redundancy, or both.

Common Configurations:

- RAID 0: Data striping, faster speed, no redundancy.
- RAID 1: Data mirroring, high reliability, less storage space.
- RAID 5: Striping with parity, balance of speed and fault tolerance.
- RAID 10 (1+0): Combines mirroring and striping for speed + redundancy.

Section 4: Practical Application

10. Demonstrate how to replace a CPU fan in a desktop computer.

Ans :

- Turn off PC, unplug power.
- Open case, locate CPU fan.
- Unplug fan cable.
- Remove old fan/heatsink.

- Clean CPU, apply thermal paste.
- Install new fan/heatsink.
- Connect fan cable to CPU Fan.
- Close case, power on, test.

Section 5: Essay

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

Ans : Importance of Regular Maintenance for Computer Hardware

Regular maintenance keeps a computer running smoothly, extends its lifespan, prevents overheating, and reduces the risk of hardware failure or data loss. It also improves performance and reliability.

Examples of Maintenance Tasks

- Cleaning Dust – Remove dust from fans, vents, and components to prevent overheating.
- Checking Cables & Connections – Ensure all internal and external cables are secure.
- Updating Drivers & Firmware – Keep hardware drivers up to date for compatibility and performance.
- Hard Drive Maintenance – Run disk cleanup, defragmentation (for HDDs), or check for errors.
- Temperature Monitoring – Use software to check CPU/GPU temperatures.
- Replacing Worn Parts – Swap out failing fans, batteries, or storage drives when needed.