**Module 2:**  **Assignment: Installation and Maintenance of Hardware**

**Components Section 1: Multiple Choice**

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

**Ans: b.**

Wear an anti-static wrist strap to prevent damage from electrostatic discharge.

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

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

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

Ans: 3. a) Multimeter.

* 1. **Which component is responsible for storing BIOS settings,**

**Such as date and time, even when the computer is powered off**?

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

a) CMOS battery.

**Section 2: True or False**

**5.** **True or False: When installing a new hard drive, it is essential to format it before use.**

Ans: True.

Reason: but with important nuances depending on the specific situation. Formatting a new hard drive is almost always a necessary step, though you don’t always have to perform it yourself.

**6.** **True or False: A POST (Power-On Self-Test) error indicates a problem with the CPU.**

Ans: False.

Reason: a POST error does not automatically mean there is a problem with the CPU, though a CPU issue is one of the many possible causes.

**7.** **True or False: It is safe to remove a USB flash drive froma computer without ejecting it first.**

Ans: False .

Reason:  It is not safe to remove a USB flash drive without ejecting it first.

**Section 3: Short Answer**

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

Ans: first prepare the complate by shutting it down and up lugging it form power

After opening the computer case, remove the old graphics card, by unscrewing it from the case and reasing the PCI slot latch. Insert the new card into the correct PCI slot, and then screw it into place and connect any required power cables.

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

Ans: RAID 0 (speed), RAID 1 (mirroring), RAID 5 (balanced speed and protection), RAID 6 (double parity for high protection), and RAID 10 (a combination of RAID 0 and RAID 1 for both speed and redundancy.

**Section 4: Practical Application**

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

Ans: irst, turn off the computer, unplug it, and ground yourself. Next, disconnect the old fan's power cable from the motherboard, and then unscrew and remove the old fan assembly. To install the new fan, apply thermal paste to the CPU, position the new fan assembly, and secure it with screws. Finally, connect the new fan's power cable to the appropriate "CPU\_FAN" header on the motherboard and reinstall any removed parts.

**Section 5: Essay**

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

Ans: extending a computer's lifespan, improving performance, and preventing data loss and security threats. Key tasks include cleaning components to prevent overheating, updating software.