***Assignment module 2 : Installation and Maintenance of Hardware and Its Component***

**Section 1: Multiple Choice**

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

a) Ensure the computer is plugged in to prevent electrostatic discharge.

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

c) Work on carpeted surfaces to prevent slipping.

d) Use magnetic tools to handle components more easily.

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

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

a) To insulate the CPU from heat.

b) To provide mechanical support for the CPU.

c) To improve thermal conductivity between the CPU and the heat

sink.

d) To prevent the CPU from overheating.

ANS: 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) Multi meter

b) Screwdriver

c) Pliers

d) Hex key

ANS: a) Multi meter

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

a) CMOS battery

b) CPU

c) RAM

d) Hard drive

ANS: 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

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

ANS: False

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

ANS: False

**Section 3: Short Answer**

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

ANS: 1) Remove the side panel of the computer case using a screwdriver. 2) Locate the PCIe slot on the motherboard, usually the longest slot. 3) Align the new graphics card with the PCIe slot and push it down until it clicks and fit it with screws to keep it stable.

4) If required , plug in any power cables from the power supply to the graphics card. 5) Plug the computer and peripherals back in. 6) Power on your desktop.

Download and install the latest drivers for your new graphics card.

Run some games or software to ensure it works properly.

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

ANS: Use for create a chain in a multiple hard disk, also use for HDD/SSD merging.

**Section 4: Practical Application**

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

ANS: Done in Lab

**Section 5: Essay**

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

ANS: Improved Performance : Regular cleaning, updating and replacing parts lead to smoother operation, faster processing and reduced lag.

Increased Reliability : Maintenance helps prevent unexpected crashes, ensuring stability.

Improved Security: Keeping security software updated and running malware scans protects against viruses and threats.

Data Protection: Regular Backups safeguard data from loss or corruption due to hardware failures.

Extended Lifespan: Consistent maintenance helps prolong the life of the computer.

Cleaning and Dusting

Updating firmware and drivers

Replacing and upgrading components

Troubleshooting and repairing issues

Monitoring and testing performance

Removing unused programs

Defragmenting your hard drive