**Assignment module 2 : Installation and Maintenance of Hardware and Its Components**.

**Section 1: Multiple Choice**

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.

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

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)?

Ans:- (a) Multimeter

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

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. Reconnect power and start up:

Reconnect the power supply and start up the computer.

1. Connect the power cables:

Connect the power cables to the graphics card.

1. Secure the card:

Use the screws that were removed earlier to secure the new graphics cards to the slots.

1. Remove the old graphics card:

Locate the graphics card near the rear of the case and disconnect it.

1. Close the case and restart:

Close the computer case reconnect the power supply and start up the computer.

1. Install new drivers:

You can update your graphics card drivers by opening device manager selecting your graphics card and clicking update driver.

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

Ans :- Raid is use for create a chain in a multiple hard disk, also use for HDD/SSD merging.

There are four types of RAID: -

(I) RAID 0 :- In this RAID we get fast speed for processing. Data Backup process is

50%-50%.

(II) RAID 1:- In this RAID low speed for processing. Data Backup process is 100% in

multiple hard disk.

(III) RAID 5/6 :- In this RAID we get faster than RAID 0 for processing. Data Backup

process is stripe wise in all hard disk.

(IV) RAID 10 :- In this RAID, this is mix of RAID-0 & RAID-1.speed process is like a

RAID -0 & Data Backup process is like a RAID-1

**Section 4: Practical Application**

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

Ans:- To Be Done in LAB.

**Section 5: Essay**

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

Ans:-

1. Data Protection: Regular backups safeguard data from loss or corruption due to hardware Failures.
2. Increased Reliability: Maintenance helps prevent unexpected crashes, ensuring stability
3. Improved Performance: Regular cleaning, updating, and replacing parts lead to
4. smoother operation, faster processing, and reduced lag.
5. Improved Security: Keeping security software updated and running malware scans protects against viruses and threats.
6. Extended Lifespan: Consistent maintenance helps prolong the life of the computer.

➢ Defragmenting your hard drive.

➢ Updating firmware and drivers.

➢ Replacing and upgrading components.

➢ Troubleshooting and repairing issues.

➢ Removing unused programs.