

JdAssignment – M2

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 : Wear an anti-static wrist strap to prevent damage from electrostatic discharge .
2. What is the purpose of thermal paste during CPU installation?
ANS : 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 : Multimeter .
4. Which component is responsible for storing BIOS settings, such as date and time, even when the computer is powered off?
ANS : CMOS battery .

Section 2: True or False:-

5. When installing a new hard drive, it is essential to format it before use.
ANS : true.
6. A POST (Power-On Self-Test) 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 Answer:-

8. Describe the steps involved in installing a new graphics card in a desktop computer.
ANS : (1) Power down and unplug : turn off the computer and unplug it from the power source.
(2) Open the case: Remove the side panel of the computer case to access the internal components.

- (3) Remove the old card: unscrew and remove any existing graphic card.
- (4) Insert new card: align the new graphic card with the PCIe slot and firmly insert it into the slot.
- (5) Secure the card: Screw the bracket of the graphic card to the case to secure it.
- (6) Connect the power cables: If the card required additional power connect the appropriate power cables from the PSU.
- (7) Close the case: Replace the side panel of the computer case.
- (8) Connect monitor: Connect the monitor with the new graphic card.
- (9) Power up and install drivers: plug in the computer turn it on and install the necessary drivers for the new graphic card.

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

ANS :

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 : (1) Cleaning: dust and debris can accumulate inside the computer case obstructing airflow and causing component to overheat regularly cleaning the interior with compressed air and wiping down the exterior can prevent this issue.

(2) Updating software and drivers: keeping the operating system, driver and firmware up to date ensure compatibility and improve security and performance.

(3) Running Diagnostics: Using built-in or third party diagnostic tools to check the health of components like they RAM, Hard drive AND power supply, Can help identify potential problem before they cause system failure.

(4) Backup data: Regularly Backing up data to an external drive or cloud storage can prevent data lose in case of Hardware failure.

(5) Monitoring system performance: Using monitoring tools to keep an eye on temperature, fan speed and system loads can help detect problems early and ensure optimal performance.

- ❖ By performing this and other maintenance tasks, USER can prolong the life of their computer Hardware, avoid unexpected down time and ensure their system runs smoothly and efficiently.