**LAKSHYJAIN**

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

**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

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

Ans: 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: multimeter.

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

Ans. CMOS Battery

1. **Section 2: True or**
2. True or False: When installing a new hard drive, it is essential to format it before use.

Ans. true

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

Ans. true

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

Ans. False

Note:-If you are absolutely sure you are not transferring any data from or to the USB drive, there's no harm on disconnecting it without ejecting first

**Section 3: Short Answer**

**a**

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

Ans: Here are some tips for installing a new graphics card:

Hold the card by the cooler and avoid touching the sensitive contacts on the bottom or the traces on the back.

The slot is keyed, so it's impossible to insert the card backwards.

Release the clip if you ever need to remove the card, otherwise you could damage the card and the board.

Lift the card a bit as you screw it in so it won't droop later on.

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

Ans: RAID (redundant array of independent disks) is a way of storing the same data in different places on multiple hard disks or solid-state drives (SSDs) to protect data in the case of a drive failure. There are different RAID levels, however, and not all have the goal of providing redundancy.

The most common types are RAID 0 (striping), RAID 1 (mirroring) and its variants, RAID

5 (distributed parity)

RAID 0

This configuration spreads data across multiple drives to improve performance, but it doesn't offer redundancy or protection against disk failure. It's best for non-critical data where speed is the priority.

RAID 1

This configuration creates an exact copy of data on two or more drives to provide data redundancy. It's ideal for critical data that needs a backup.

RAID 5

This configuration stripes data across multiple drives while also calculating parity data to provide a balance of performance and redundancy. It's good for businesses that need both speed and data protection.

**Section 4: Practical Application**

**Practical Application**

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**Application**

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

Ans: Here are the steps to replace a CPU fan in a desktop computer:

Turn off and unplug the computer

Open the case and locate the fan

Remove the fan

Clean the processor

Install the new fan

Apply thermal paste

close the case and test the fan

**Section 5: Essay**

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

Ans: Regular maintenance is important for computer hardware because it can:

Improve performance: Regular maintenance can help your computer run smoothly and efficiently.

Extend lifespan: Regular maintenance can help extend the lifespan of your computer by 5-8 years.

Protect against security threats: Regular maintenance can help protect your computer from security threats, such as viruses and malware.