**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?

- (c) Work on carpeted surfaces to prevent slipping.

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

- (a) To insulate the CPU from heat.

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

- (a) Multimeter

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. When installing a new hard drive, it is essential to format it before use.

Ans.False

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.

* Shutdown system
* Open system and motherboard
* Remove old graphic card
* Clean area
* Insert new graphic card
* Start the system
* Install driver

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

- . RAID Full form is [Redundant array of Independent disk].

RAID (Redundant Array of Independent Disks) is a data storage

virtualization technology that combines multiple physical disk drives into one or

more logical volumes. It provides fault tolerance, increased performance, and data

redundancy.

1. RAID-0 (Stripping)
2. RAID-1 (Mirroring)
3. RAID-2 (Bit-Level Stripping with Dedicated Parity)
4. RAID-3 (Byte-Level Stripping with Dedicated Parity)
5. RAID-4 (Block-Level Stripping with Dedicated Parity)
6. RAID-5 (Block-Level Stripping with Distributed Parity)
7. RAID-6 (Block-Level Stripping with two Parity Bits)

**Section 4. Practical Application**

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

Step 1: Remove the Computer Side Panel

Step 2: Remove the CPU Cooler.

Step 3: Clean the Cooler Contact Patch.

Step 4: Lift the Retention Arm of the CPU Socket.

Step 5: Remove the Old Processor.

Step 6: Insert the New Processor.

Step 7: Apply Thermal Paste.

Step 8: Reinstall the CPU Cooler

**Section 5: Essay**

11. Discuss the importance of network documentation and provide examples of information that should be documented.

- A Network documentation is important for the following reasons: Proper documentation can save you from time-consuming research to fix recurring problems. When everything is in place and everybody follows the same processes and procedures, consistency across the network helps to reduce problems and errors.

Network documentation is a technical record of the hardware, software, servers, directory structure, user profiles, data, and how it all works together. Network documents should include any information that helps administrators and IT professionals to keep the network up and running smoothly.

* Back up data.
* Clean your computer.
* Clean the fans.
* Clean the keyboard case.
* Antivirus scan.
* Replace thermal past.
* Replace hardware
* Update drives