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. c) Work on carpeted surfaces to prevent slipping.

2. What is the purpose of thermal paste during CPU installation?
Ans. a) To insulate the CPU from heat.

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

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

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

Ans.
- Shutdown system
- Open system and motherboard
- Remove old graphic card
- Clean area
- Insert new graphic card
- Start the system
- Install latest driver

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

Ans. 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)

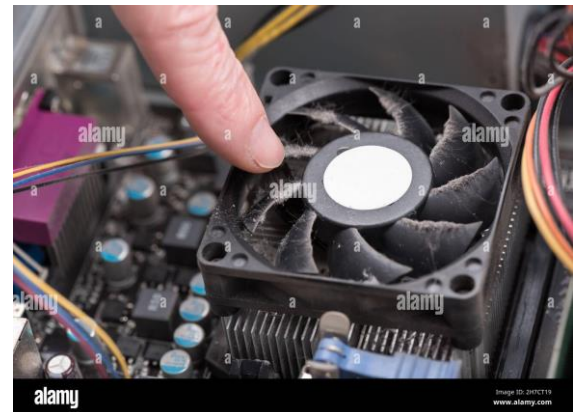4. RAID-3 (Byte-Level Stripping with Dedicated Parity)

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.
Ans.

➢ Identify the cpu fan.
➢ Turn off and unplug the computer
➢ Open the case and locate the fan
➢ Remove the fan and clean the processor.
➢ Install the new fan and apply thermal paste.
➢ Close the case and test the fan

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

Ans.

      Regular maintenance is crucial for the health and performance of computer hardware. Proper maintenance helps to prevent issues such as overheating, damage to components, and reduced lifespan.

Regular maintenance tasks include cleaning the case, monitoring temperatures, replacing thermal paste, cleaning fans, checking connections, upgrading hardware, updating drivers, and backing up dataeduced lifespan.

Dust and debris can accumulate on the computer case, reducing airflow and creating a breeding ground for dust mites and other pests. Regular cleaning of the case helps to improve airflow and prevent the accumulation of dust.

 examples of maintenance tasks:

1.   Clean the computer case
2.   Monitor the temperature
3.   Clean the fans
4.   Replace thermal paste
5.   Replace or upgrade hardware
6.   Update drivers