1. Which of the following precautions should be taken before working on computer hardware?

Answer: b) Wear an anti-static wrist strap to prevent damage from electrostatic discharge.

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

Answer: 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)?

Answer: a) Multimeter

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

Answer: a) CMOS battery

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Section 2: True or False

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

Answer: True

6. A POST (Power-On Self-Test) error indicates a problem with the CPU.

Answer: False (POST errors may relate to various hardware components, not just CPU.)

7. It is safe to remove a USB flash drive from a computer without ejecting it first.

Answer: False (You should always eject to prevent data corruption.)

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Section 3: Short Answer

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

Answer:

• Turn off the PC and unplug the power supply.

• Open the case and locate the PCI-E slot.

• Remove the existing GPU (if any) or PCI slot cover.

• Insert the new graphics card firmly into the PCI-E slot.

• Screw the card bracket to secure it.

• Connect power cables if required.

• Close the case, plug in the power, and install drivers after booting up.

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

Answer:

RAID (Redundant Array of Independent Disks) is a data storage virtualization technology that combines multiple physical drives into one logical unit for redundancy or performance.

• RAID 0: Striping, improved performance, no redundancy

• RAID 1: Mirroring, high redundancy

• RAID 5: Striping with parity, balanced performance and fault tolerance

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Section 4: Practical Application

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

Answer:

• Turn off and unplug the PC.

• Open the case and disconnect the fan power cable.

• Unscrew and remove the old fan.

• Clean any old thermal paste off the CPU.

• Apply new thermal paste.

• Mount the new fan and connect it to the motherboard.

• Close the case and power on the PC.

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

Answer:

Regular maintenance extends the life of hardware, prevents overheating, and improves performance.

• Examples:

• Cleaning dust from fans and vents

• Checking for loose cables and components

• Running disk checks and software updates

• Replacing thermal paste periodically