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Assignment:

Installation and Maintenance of Hardware and Its Components

Section 1: Multiple Choice

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

a) Ensure the computer is plugged in to prevent electrostatic discharge.

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

c) Work on carpeted surfaces to prevent slipping.

d) Use magnetic tools to handle components more easily.

ANS – [A]

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

a) To insulate the CPU from heat.

b) To provide mechanical support for the CPU.

c) To improve thermal conductivity between the CPU and the heat sink.

d) To prevent the CPU from overheating.

ANS – [D]

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

a) Multimeter

b) Screwdriver

c) Pliers

d) Hex key

ANS – [A]

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

a) CMOS battery

b) CPU

c) RAM

d) Hard drive

ANS – [A]

Section 2: True or False

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

ANS - TRUE

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

ANS - TRUE

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

ANS – TRUE

Section 3: Short Answer

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

ANS – First of all we have to open the Cabinet and check whether the old graphic card is there or not if there is no graphical then, we have to check the ram of the computer and after that checking the ram we can install a new graphic card according to ram and processor according to the processing unit graphic helps us. To visualize the screen graphics better.

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

ANS - A RAID ( Redundant Array of Independent Disks) Is a controller device Used to manage hard disk drives storages. RAID Configurations are

Section 4: Practical Application

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

ANS – We will discuss in four easy steps that how to replace a CPU fan of a computer :

1. First of all we have to identify the CPU fan then after we have to check whether the CPU fan is working or not, if it is not working then we have to turn off and unplug the computer.
2. Then after we have to open the cabinet and locate where the fan is and then carefully remove the fan and clean the processor.
3. After doing that all thing we have to check the new CPU fan and replace with it and we will apply the thermal paste on the processor that it can keep the processor smooth working Then after we will Lock the four locks of the CPU fan and fix the fan properly.
4. Now it's very easy we'll close the Cabinet and test the fan.

Section 5: Essay

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

ANS - First of all we will understand what is Hardware maintenance ?

Hardware Maintenance is a continuous process that can boost a company's productivity and reduce business downtime.

1. First of all we will all try to cover up the hardware parts with the help of screens and Harshalcovers that will help to cover up the hardware components then after we would try to keep liquid items away from the hardware parts of the computer.
2. Then after we will Check our hardware connectors that they are connected properly or not if not then we will connect it properly and try to keep it clean as well as on every time basis we will change the connectors and organize it in a proper manner that it may not get harm.
3. Operating system that is the main part of a hardware if any kind of operating system is installed in that we will need to check the securities and updates on time to type if we do not do that we will make get difficulties in our work If we do time to time update In the os it will not get harm with our data.
4. Operating system that is the main part of a hardware if any kind of operating system is installed in that we will need to check the securities and updates on time to type if we do not do that we will make get difficulties in our work If we do time to time update In the os it will not get harm with our data.
5. And after that all work we'll take care of that in our computer if there is any antivirus software is installed then we will take care of it and try to do it on a regular measures due to that our computer scans any kind of virus then we can solve it that can help us to prevent from the virus attacks and our data is safe.
6. Whenever we would try to save our data in the computer we should try to save it in a proper manner that we can organize our data properly and in a proper format if it is required then we would make folders and organize it in a proper manner that it will not get Difficult to find out the data.
7. When we save our all data in the computer we would try to upload that data on a cloud or on a backup that in any case of our computer made does not work or does not operate properly In that case we can access our data anytime anywhere from the cloud or from another storage we have stored the data and that may also help us to store our data as a safe storage.