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Assignment:

Understanding of Hardware and Its Components

1. Which of the following is NOT a component of the CPU ?

Ans­- RAM

1. What is the function of RAM in a computer ?

Ans- It helps us to store the internal memory of the CPU and its data. It is a temporary storing that helps to store data.

1. Which of the following is a primary storage device ?

Ans- 1& 2 both

1. What is the purpose of a GPU ?

Ans- GPU means graphic processing unit which helps graphic related function likes graphics,effects,videos etc.

1. The motherboard is the main circuit board of a computer where other components are attached.

Ans ­-true

1. A UPS (Uninterruptible Power Supply) is a hardware device that provides emergency power to a load when the input power source fails.

Ans- true

1. An expansion card is a circuit board that enhances the functionality of a component.

Ans-true

1. Explain the difference between HDD and SSD

|  |  |
| --- | --- |
| HDD | SSD |
| An HDD consist of a spinning disk (platter)  Coated with a magnetic material and a  Read/write head that reads and writes data  on the disk’s surface. | SSD are generally faster and more reliable than HDDs but are also more expensive. |
| HDD are physically larger and heavier than SSD making them less suitable for portable device. | SSD consume less power than HDD making them more energy efficient. |
| HDD are than SSD when it comes to data access and transfer speeds. | SSD does not produces noise. |
| HDD can produce noise due to mechanical movements. | SSD is costlier per unit storage. |
| HDD is cheaper per unit storage. | In SSD the data transfer is random access. |

1. Describe the function of BIOS in a computer system.

Ans- BIOS is the program a computer’s microprocessor uses to start the computer

System after it is powered on. It also manages data flow between the computer’s

Operating system and attached devices.

1. List and briefly explain three input devices commonly used with computers.

Ans- Keyboards pointing devices and data entry devices.

Keyboards they are primary input devices used to key in information and other command functions inform of text into computer. Keyboard button enable user to execute specific command to computer.

1. Identify and label the following components on a diagram of a motherboard.

Ans- Listed below are the components of the mother board.

CPU socket RAM slots PCI slots SATA connectors and CMOS battery.

1. Demonstrate how to install a RAM module into a computer.

Ans- If there are any existing RAM modules that you need to remove release the clips on either side of the module and gently pull it out. To install the new ram align the notch on the ram stick with the ridge in the slot and firmly press the ram in to the slot until the side clips snap into place securing the ram.

1. Discuss the importance of proper cooling mechanisms in a computer system. Include examples of cooling methods and their effectiveness.

Ans- if all the components are dispersing heat into a small area such as the inside of the pc case,the ambient temperature can quickly rise .if the case is not properly ventilated the hot air can result into system overheating and performance can suffer as a result;airflow comes in.

Listed are examples

**TYPES OF COOLING SYSTEMS IN YOUR PC**

**1) Fans**

Fans, unlike heat sinks, form an [**active cooling system**](https://www.coolerguys.com/collections/amd-cpu-coolers). They use energy to run, thus enabling the air to circulate. They work on pushing air out of your PCs and laptops through their casing. Fans are used with heat sinks in a computer system wherein a heat sink is first placed on top of it, after which the fan is piled on.

**2)HEAT SINKS**

Heat sinks can be applied with multiple components inside the system. Their function is to dissipate the heat from the element they have been fixed to. Commonly used with older CPUs, heat sinks work conventionally and are attached to those parts that do not generate immense heat.

**3)LIQUID COOLING**

Working on the same concept as the IC Engines(internal combustions engines), liquid cooling systems have recently been introduced with advanced technology. The most commonly used liquid for cooling purposes is distilled water. This form of [**computer cooling solution**](https://www.coolerguys.com/collections/computer-cooling) is the best out of all other types for efficient cooling.

1. Explain the concept of bus width and its significance in computer architecture.

Ans- all parallel connection of cpu with output devices.

Significance of bus width in computer architecture;

* By increasing the data bus from 32-bit to 64-bit the computer

Can transfer twice as much information at one tim