Assignment

Understanding of hardware and its components

**section 1: Multiple choice**

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:** RAM is used to store our temporary needed data.

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

**Ans:** SSD

1. What is the purpose of the GPU ?

**Ans:** GPU stands for Graphics Processing Unit , it helps to handle graphics related works like effecting , videos etc.

**Section 2: True or False**

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

**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 enhance the functionality of a component.

**Ans:** True

**Section 3: Short Answer**

1. Explain the difference between HDD and SSD.

**Ans:** SSD stand for Solid State Drive and HDD stands for Hard Disk Drive, the main difference between SSD and HDD is SSD store data in flash memory and HDD store data in magnetic disk.

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

**Ans:** In the computer system there are main four functions of BIOS :

1. **POST:** The post function will test the computer hardware and check that no errors will be there before loading the operating system.
2. **BOOTSTRAP LOADER :** it locate the operating system in the computer and when the operating system will be found the BIOS will give all the control to it.
3. **BIOS DRIVER :** BIOS drivers gives the computer to basic operational control of the computer hardware.
4. **CMOS SETUP :** CMOS are handling programs about hardware , password , date , time etc.
5. . list and briefly explain three input devices commonly used with computers.

**Ans:**

1. **Keyboard :** with the use of keyboard we can write letters , numbers and also type a special characters as a input.
2. **Mouse:** with the use of mouse we can handle the movement of the cursor on the computer screen , if we want to select something we can easily do with the use of mouse.
3. **Microphone:** with the use of microphone we can generate the audio message in a computer , also it helps when we talking someone on a videocall on a computer.

**Section 5: Essay**

**13.** Discuss the importance of proper cooling mechanisms in computer system. Include example of cooling methods and their effectiveness.

**Ans:** when the computer system heats on high level the cooling mechanism is used to protect our computer system from the heat.

Example of cooling methods:

* Liquid cooling
* Heat sinks
* Heat pipes
* Thermal paste

Effectiveness:

* Liquid cooling is a highly effective method of removing excess heat.
* Position your computer in the correct place.
* Leaving two or three inches of space on all sides of your computer vents.

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

**Ans:** Bus is a set of parallel lines that used to connect two or more devices of a computer.

* It is the most important component of a computer architecture.
* All the data will transfer from one component to another components using the bus.

There are two types of bus:

1. System bus

* Control bus
* Address bus
* Data bus

1. Expansion bus
2. System bus: it is used to connect main components of the computer. Generally there are 70-100 parallel lines in system bus.

* Control bus: it is used to transfer control from one component to another.
* Address bus: it is used to carry address signals to read and write data in the memory.
* Data bus: it is used to transfer data from one component to another.

1. Expansion bus: The major components are connected to the system bus and the remaining components are connected to expansion bus. If all the components are connected with system bus than it will slow the computer.