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**Assignment:1**

**Understanding of Hardware and Its Components**

# Section 1: Multiple Choice

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

**🡪RAM**

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

**RAM is used to store data temporary for CPU.**

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

**🡪HDD**

**🡪SSD**

1. What is the purpose of a GPU?

🡪 **GPU stands for Graphics Processing Unit. It is a part of Hardware component. The main purpose of GPU is to handle graphics-related work like graphics, effects, and videos etc.**

# Section 2: True or False

1. The motherboard is the main circuit board of a computer where other components are attached. **True**
2. A UPS (Uninterruptible Power Supply) is a hardware device that provides emergency power to a load when the input power source fails. 🡪**True**
3. An expansion card is a circuit board that enhances the functionality of a component **True**

# Section 3: Short Answer

1. Explain the difference between HDD and SSD.
2. Describefunction of BIOS in a computer system.

🡪**BIOS helps in operating the computer to start and run it. When computer is powered on, firstly the BIOS gets run. It manages all parts of computer like processor, memory and storage.**

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

* **The 3 major input devices are 1)Mouse**

**2)Keyboard and 3)Scanner**

**1)Mouse- It is pointing device; which is used to point out on any application or to select any operation with help of cursor.**

**2)Keyboard- It is a device that help to write any text or any command.**

**3)Scanner- The scanner collects images from a source and converts them into a digital format that can be saved on a disc**

# Section 4: Practical Application

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

**DONE**

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

🡪 **Locate the RAM slot on your motherboard.**

**🡪Push down the locking tab(s) at the end of each slot.**

**🡪Line up the RAM stick with the slot, ensuring that the notch of the RAM stick matches that of the slots. Be sure that it’s centered between the latch locks.**

**🡪Once you hear the click, the RAM should be fully seated. Frequently, the latches will pop up, locking the RAM stick into place.**

# Section 5: Essay

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

🡪 **A computer's cooling system is important because it removes heat generated by computer components and keeps them within safe operating temperatures. Overheating can cause performance issues and make components less reliable. For example, the transistors and wiring in a CPU are packed tightly together, so they can get hot from the electricity flowing through them.**

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

🡪 **It is measured in bits (e.g., 8-bit) and indicates how many bits of data can be transferred at once.**

**Significance**:

**🡪 Data Transfer Rate**:

**🡪 Performance**:

**🡪Memory Access**:

**🡪 Compatibility and Scalability**:

**🡪 System Bandwidth**