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## **Assignment: 5**

### **Module -: Understanding of Hardware and Its Components**

#### **Section 1: Multiple Choices**

1. What is the primary function of a router in a computer network?

**Answer:** c) Forwarding packets between networks.

2. What is the purpose of DHCP (Dynamic Host Configuration Protocol) in a computer network?

**Answer:** d) Dynamically assigning IP addresses to devices.

3. Which network device operates at Layer 2 (Data Link Layer) of the OSI model and forwards data packets based on MAC addresses?

**Answer:** b) Switch.

4. Which network topology connects all devices in a linear fashion, with each device connected to a central cable or backbone?

**Answer:** b) Bus.

#### **Section 2: True or False**

5. True or False: A VLAN (Virtual Local Area Network) allows network administrators to logically segment a single physical network into multiple virtual networks, each with its own broadcast domain.

**Answer:** True.

6. True or False: TCP (Transmission Control Protocol) is a connectionless protocol that provides reliable, ordered, and error-checked delivery of data packets over a network.

**Answer:** False.

7. True or False: A firewall is a hardware or software-based security system that monitors and controls incoming and outgoing network traffic based on predetermined security rules.

**Answer:** True



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### **Section 3: Short**

8. Describe the steps involved in setting up a wireless network for a small office or home office (SOHO) environment.

**Answer:- Topic is remaining**

### **Section 4: Practical**

9. Demonstrate how to configure a router for Internet access using DHCP (Dynamic Host Configuration Protocol).

**Answer:- To be done in lab**

### **Section 5: Essay**

10. Discuss the importance of network documentation in the context of building and managing networks.

: - Network documentation is crucial for managing and maintaining a network effectively. It provides a clear overview of the network's structure, devices, and settings, which helps in several ways:

**Troubleshooting:** Well-documented networks make it easier to identify and fix issues quickly, reducing downtime.

**Network Growth:** Documentation helps plan expansions or upgrades and ensures new devices work with the existing network.

**Security and Compliance:** It ensures security measures are consistent and helps meet industry regulations.

**Consistency:** Standardized documentation reduces errors and ensures all team members follow the same setup.

**Disaster Recovery:** In case of problems, documentation allows for faster recovery by detailing how the network was originally configured

