

# Assignment: module -5 Network Fundamentals and Building networks.

## Section 1: multiple choice.

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

**Answer:-** (c) forwarding data packets between networks.

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

**Answer:-**(d) dynamically assigning IP address 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

### **Section 3: short.**

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

**Answer:-**

#### **Set Up the Wireless Network:-**

**(a)Network Name (SSID):** Assign a unique and easily recognizable name to the wireless network.

#### **Security Settings:**

**(b)**Enable WPA3 or WPA2 encryption for secure connections.

Create a strong, unique password for the Wi-Fi network.

**(c)Access Router Settings:** Connect a computer or smartphone to the router using a wired or wireless connection. Open a web browser and enter the router's IP address (e.g., 192.168.1.1) to access the admin interface.

### **Section 4: Practical.**

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

**Answer:-** To be done lab

### **Section 5: Essay.**

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

**Answer:-**

(A). Facilitates Disaster Recovery:- In case of a network failure or disaster, documentation is critical for restoring operations. It includes configurations, IP addressing schemes, and backup procedures that can expedite recovery.

(B). Simplifies Troubleshooting:- A well-documented network provides a roadmap for diagnosing and fixing issues quickly. Administrators can identify problem areas, review past changes, and apply solutions without unnecessary guesswork.

(c). Enhances Collaboration:- the Multiple teams or administrators often manage networks. Documentation ensures everyone has access to the same information, reducing misunderstandings and improving team coordination.

(D). Improves Security:- Network documentation helps identify vulnerabilities, such as unused ports, outdated firmware, or misconfigured devices. It also ensures that security policies are consistently applied across the network.