

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?

Ans – C. Forwarding data packets between networks

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

Ans – 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?

Ans – B. switch

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

Ans – B. bus

Section 2: True or False

5. 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.

Ans - True

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

Ans – True

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

Ans - True

Section 3: Short

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

Ans -

1. Determine Network Requirements
2. Select Network Equipment
3. Connect the Modem and Router
4. Configure the Router
5. Connect Devices to the Network

Section 4: Practical

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

Ans – done in lab.

Section 5: Essay

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

Ans - Network documentation is a technical record of the hardware, software, servers, directory structure, user profiles, data, and how it all works together. Network documents should include any information that helps administrators and IT professionals to keep the network up and running smoothly. Trying to solve network problems without written documentation is like making an aimless shot in the dark. Troubleshooting network issues is much easier when your IT team has a dedicated document with processes and instructions clearly explained. It guides them at every step so they can resolve issues quickly without missing out on the important details.