Assignment : 3

Module 3: Understanding And Maintenance Of 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 DNS (Domain Name System) in a computer network?
   Ans : c) Converting domain names to IP addresses.

3. What type of network topology uses a centralized hub or switch to connect all devices?
   Ans : a) Star.

4. Which network protocol is commonly used for securely accessing and transferring files over a network?
   Ans : b) FTP.

Section 2: True or False.

5. A firewall is a hardware or software-based security system that monitors and controls network traffic.
   Ans : True.

6. DHCP (Dynamic Host Configuration Protocol) assigns static IP addresses to network devices automatically.
   Ans : False.

7. VLANs (Virtual Local Area Networks) enable network segmentation by dividing a single physical network into multiple logical networks
   Ans : True

Section 3: Short Answer

8. Explain the difference between a hub and a switch in a computer network.
   Ans: A hub broadcasts data to all connected devices, causing network congestion. A switch sends data only to the intended device, improving efficiency and performance.

9. Describe the process of troubleshooting network connectivity issues.
   Ans: Check physical connections, verify IP settings, use ping/tracert to test connectivity, restart router/switch if needed, and update network drivers or settings.

Section 4: Practical Application

10. Demonstrate how to configure a wireless router's security settings to enhance network security.
    Ans: Access router settings via web interface, set strong admin password, enable WPA3/WPA2 encryption, hide SSID if desired, and disable WPS for extra security.

Section 5: Essay

11. Discuss the importance of network documentation and provide examples of information that should be documented.
    Ans : Network documentation helps in troubleshooting, maintenance, and scaling. It includes network diagrams, device IPs, configurations, user access levels, and backup procedures. Proper documentation ensures quick recovery and efficient management.