**Assignment module 3**

**Understanding and Maintenance of**

**Section 1: Multiple Choice**

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

Ans-(c) Forwarding data packets between networks

1. **What is the purpose of DNS (Domain Name**

**System) in a computer network?**

Ans-(c) Converting domain names to IP addresses

1. **What type of network topology uses a centralized hub or switch to connect all devices?**

Ans-(a) Star

1. **Which network protocol is commonly used for securely accessing and transferring files over a network?**

Ans-(b) FTP

**Section 2: True or False**

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

Ans-True

1. DHCP (Dynamic Host Configuration Protocol) assigns static IP addresses to network devices automatically.

Ans-False

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

Ans-True

**Section 3: Short Answer**

1. Explain the difference between a hub and a switch in a computer network.

Ans- Function: A hub is a basic networking device that connects multiple computers in a network and sends data to all devices linked to it. Data Transmission, Efficiency, ntelligence,

Layer: It operates at Layer 1 (Physical Layer) of the OSI model.

1. Describe the process of troubleshooting network connectivity issues.

Ans- process of troubleshooting network connectivity 1st is Identify the Problem, Check Physical Connections, Test Local ,External Connectivity , Check Network Devices, Examine Firewall and Security Settings, Review Logs and System Messages ext, Escalate if Necessary

**Section 4: Practical Application**

1. Demonstrate how to configure a wireless router's security settings to enhance network security.
2. Ans- the security settings to enhance network security is 1st Access the Router’s Admin Interface, Change the Admin Username and Password, Set a Wi-Fi Password, Change the SSID, Disable WPS, Enable Network Firewall, Enable MAC Address Filtering, Disable Remote Management, Update Firmware Regularly, Create a Guest Network

**Section 5: Essay**

1. Discuss the importance of network documentation and provide examples of information that should be documented.
2. Ans- importance of network documentation and provide examples of information that should be documented is Efficient Troubleshooting, Simplifies Network Maintenance, Improves Security, Eases Onboarding and Training, Disaster Recovery, Supports Upgrades and Expansion and examples is Network Topology Diagrams ,IP Address Allocation, DeviceInventory, Configuration Files, Network Services Information, User Access and Permissions, Cabling and Port Maps, Security Policies, ISP and Vendor Details, Change Log ext