module-1

Assignment: Network Fundamentals and Building Networks

Section 1: Multiple Choice

1. What is the primary function of a router in a computer network?
a) Assigning IP addresses to devices
b) Providing wireless connectivity to devices
c) Forwarding data packets between networks
d) Managing user authentication and access control

2. What is the purpose of DHCP (Dynamic Host Configuration Protocol) in a computer network?
a) Assigning static IP addresses to devices
b) Resolving domain names to IP addresses
c) Managing network traffic and congestion
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?
a) Router
b) Switch
c) Hub
d) Repeater

4. Which network topology connects all devices in a linear fashion, with each device connected to a central cable or backbone?
a) Star
b) Bus
c) Ring
d) Mesh

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:false

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

8. Describe the steps involved in setting up a wireless network for a small office or home office (SOHO) environment.
Ans: Plan, configure, secure, test, documen

Section 4: Practical Application

9. Demonstrate how to configure a router for Internet access using DHCP (Dynamic Host Configuration Protocol).
Ans:access route settings,enable dhpc

Section 5: Essay

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

Ans:Critical for network integrity, troubleshooting, compliance, upgrades, andfuture planning.