Assignment Module:7

Section 1: Multiple Choice

1. Which of the following messages in the DHCP process are broadcasted? (Choose two)

Answer: A.) Request & C.) Discover

1. Which command would you use to ensure that an ACL does not block web-based TCP traffic?

Answer: B.) permit tcp any any eq 80

Section 2: Short Answers

1. Explain Network Topologies

Answer: Network topology refers to the arrangement of devices and their connections within a network. It dictates how data flows between nodes and how the network is physically and logically structured. Understanding network topology is crucial for optimizing network performance, scalability, and reliability.

1. Explain TCP/IP Networking Model

Answer: The TCP/IP model, also known as the Internet Protocol Suite, is a framework for networking that standardizes how data is transmitted between devices. It simplifies communication compared to the OSI Model by consolidating layers and using four layers: Application, Transport, Internet, and Network Access (or Link). This model ensures reliable and efficient data transmission across networks, including the internet.

1. Explain LAN and WAN Network

Answer: LAN and WAN are two types of computer networks. LAN, or Local Area Network, connects devices within a limited geographical area like a home, office, or school. WAN, or Wide Area Network, connects devices over a much larger area, such as across cities, countries, or even the world.

1. Explain Operation of Switch

Answer: A network switch, often called an Ethernet switch, is a crucial networking device that connects multiple devices within a local area network (LAN). It intelligently forwards data packets based on their MAC addresses, ensuring efficient and targeted communication between devices. Switches operate at the Data Link Layer (Layer 2) of the OSI model, but some switches can also operate at the Network Layer (Layer 3).

1. Describe the purpose and functions of various network devices

Answer: Network devices are essential components that facilitate communication and data transmission within a network. They manage traffic, connect different networks, and enhance network performance and security. These devices, including routers, switches, hubs, bridges, gateways, and firewalls, each play a unique role in ensuring efficient and secure network operations.

1. Make list of the appropriate media, cables, ports, and connectors to connect switches to other

Answer: To connect network switches together, you can use various media, cables, ports, and connectors. Common options include Ethernet cables (like Cat5e, Cat6, or Cat6a) with RJ45 connectors, and fiber optic cables (with SFP, SFP+, or QSFP connectors) for higher speeds and longer distances.

1. Define Network devices and hosts

Answer: A network device is a piece of hardware or software integral to communication between a computer and an internet network. Common network devices are Routers. Switches. Hubs.