

**Assignment : - 7**

**NAME :- JANI SIDHDHARTH V.**

**Module -7: Network fundamental --**

**Section 1: Multiple Choice**

1. **Which of the following messages in the DHCP process are broadcasted? (Choose two)**
2. **Request B. Offer C. Discover D. Acknowledge**

* **Ans:-** C. Discover, D. Acknowledge

Explanation:

* The DHCP Discover message is broadcasted from the client to the server to locate a DHCP server.
* The DHCP Acknowledge message is broadcasted from the DHCP server to the client to confirm the lease of an IP address.

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

**A. permit any B. permit tcp any any eq 80**

**C. permit tcp any eq 80 D. permit any any eq tcp**

1. **Ans:-**
   * B. permit tcp any any eq 80

Explanation:

* + The command permit tcp any any eq 80 allows TCP traffic on port 80, which is used for HTTP (web traffic). This would ensure that web-based traffic is not blocked.

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**3-Explain Network Topologies**

**Ans:- .** Network Topologies

Network topology refers to the layout of network devices and cables. Common types include:

* Bus: Single central cable connecting devices.
* Star: Devices connected to a central hub/switch.
* Ring: Devices connected in a loop.
* Mesh: Devices interconnected in a web.
* Hybrid: Combination of different topologies**.**

**4-Explain TCP/IP Networking Model**

**Ans:-** The TCP/IP model consists of four layers:

1. Application: Network services (e.g., HTTP, FTP).
2. Transport: End-to-end communication (e.g., TCP, UDP).
3. Internet: Routing and addressing (e.g., IP).
4. Network Interface: Physical network transmission (e.g., Ethernet).

**5-Explain LAN and WAN Network**

**Ans:-** LAN (Local Area Network): Small area, like a home or office, using high-speed connections.

WAN (Wide Area Network): Large geographical area, connecting multiple LANs (e.g., internet).

**6-Explain Operation of Switch**

**Ans:-** A switch operates by forwarding data frames based on MAC addresses. It learns the MAC addresses of connected devices and forwards data only to the destination device, reducing traffic.

**7-Describe the purpose and functions of various network devices 7-Make list of the appropriate media, cables, ports, and connectors to**

**Ans:-** Router: Connects different networks, routes data between them.

Switch: Connects devices within a network, forwards data based on MAC addresses.

Hub: Basic device to connect devices in a network (less efficient than a switch).

Firewall: Monitors and filters incoming/outgoing traffic for security.

Modem: Converts digital data to analog for internet access (or vice versa).

**8-connect switches to other**

**Ans:-**

Cables: Cat5e, Cat6 Ethernet cables.

Ports: RJ45 ports for Ethernet.

Connectors: RJ45 connectors for wired connections.

**9-Define Network devices and hosts**

**Ans:-**

Network Devices: Devices that manage or facilitate network communication (e.g., routers, switches, firewalls).

Hosts: End devices that use the network (e.g., computers, printers, servers).