Module -8: Network access basic routing and advance routing concepts and switching concepts.

1.) Explain switch

- The Switch is a network device that is used to segment the networks into different subnetworks called subnets or LAN segments. It is responsible for filtering and forwarding the packets between LAN segments based on MAC address.

2.) Explain switch boot sequence

- the series of steps a network switch goes through when powered on, including a power-on self-test (POST), loading the boot loader software, and then initializing the operating system to become operational on the network

3.) Explain three method to access switch command line interface.

- To access a switch's command line interface (CLI), you can use three primary methods:
- console access (physical connection)
- Telnet (remote network access)
- Secure Shell (SSH) (secure remote network access)

4.) Explain and configured the cisco internet operating system

- The Cisco Internetwork Operating System (IOS) is a proprietary software that powers Cisco routers and switches, essentially acting as the "brain" of the network, managing and controlling complex internetworking functions like routing, switching, security, and network management across various devices within a network; it's configured through a command-line interface (CLI) with different access levels for user and privileged commands, allowing administrators to set up network parameters, manage interfaces, define routing protocols, and implement security policies.

5.) Explain switch port

- A switch port is a physical connection on a network switch that allows devices to communicate with each other. It's a way to connect devices to a network and access the internet.

3-enable secret [password] is hashed using the algorithm.

A. **MD5** B. AH C. PSK D. ESP E. WPA

4- An engineer connects to Router R1 and issues a show ip ospf neighbor command. The status of neighbor 2.2.2.2 lists FULL/BDR. What does the BDR mean?

A. R1 is an Area Border Router.

B. R1 is a backup designated router.

C. **Router 2.2.2.2 is an Area Border Router.**

D. Router 2.2.2.2 is a backup designated router

5-Which command is used to view the neighbor discovery table on a PC?

A. show ipv6 neighbor

B. **show ipv6 neighbors**

C. netsh interface ipv6 show neighbor

D. netsh interface ipv6 show neighbors

6-Identify the fields in an IPv4 header. (Choose three)

A. Host component

B. Time to Live

C. Source address

D. Destination address