**Module 8 Network Access**

 Beginner Question

1. Switch are networking devices operating at layer 2 or a data link layer of the OSI model. A switch has many ports, to which computers are plugged in.
2. First the switch loads a power on self test program stored in ROM.

Next, the switch loads the boot loader software

The boot loader performs low-level CPU initialization.

The boot loader initializes the flash file system on the system board.

1. You can access the CLI through a console connection, through telnet, a SSH or by using browser.
2. Cisco IOS is a proprietary OS that runs on cisco systems routers and switches.
3. It is a smart network devices that function as a multiport network bridge.
4. Done in lab.
5. Done in lab.
6. Done in lab.
7. Done in lab.
8. Done in lab.
9. In a switch if we have created group then its called VLAN.
10. VTP is Cisco proprietary protocol used to maintain consistency throughout the network.
11. CDP is a network discovery tool, which assists network administrators and engineers in identifying neighbouring Cisco devices.
12. Each VLAN is identified by a single IP Subnetwork.
13. STP stops the loops which occurs when you have multiple links between switches.
14. IPv4 allows for a variation of the network and host segments of an IP address, known as subnetting.
15. A Subnet mask is defined as a 32 bit address that segregates an IP address into network bits that identify the network and host bits that identify the host device operating on the network.
16. Binary representation which is a base 2, and hexadecimal representation which is a base 16 representation.
17. Public IP can be seen by other devices on the Internet and Private IP can not.
18. Subnet mask prefixes identify the range of IP address that make up a subnet or group of IP address on the same network.
19. Router and Switch connect using a Ethernet Cable.
20. Enable – to enter enable mode, Configure terminal – to enter configure mode.
21. Done in lab.
22. Done in lab.
23. Done in lab.
24. EIGRP is a network protocol that enables routers to exchange information more efficiently than earlier network protocols.
25. OSPF broadcast interface is connected to a shared network.
26. A logical collections of OSPF networks, routers, links that have the same area identification.
27. OSPF use a DR and BDR on each multi access network.
28. OSPF is a link state routing protocol that sends information about directly connected links to all routers in the network.
29. IPv6 address is 128 bits in length.
30. Wireless technology refers to the seamless transmission of data without physical connections.
31. Mobile, Laptop, Radio, TV Remote.
32. Wireless Security is the protection of devices and network connected in a wireless environment.

 Intermediate Question

1. Done in lab.
2. Switch user mode – for switch user, enable mode – to enable the router, Configuration mode – to Configure router.
3. To connect multi devices in same network like PCs, printer.
4. SSH is a network communication protocol that enable two computers
5. Done in lab.
6. TELNET is a network protocol for enabling computers to connect to local computer.
7. Done in lab.
8. Done in lab.
9. Done in lab.
10. Done in lab.
11. VLAN use for create group in switch
12. Static VLAN is create manually like VLAN name, ID, port.
13. Dynamic VLAN is automatically assign VLAN
14. Done in lab.
15. Done in lab.
16. Done in lab.
17. Done in lab.
18. Port security is a network administrator can associate specific MAC addresses with the interface.
19. Class A – 255.0.0.0 Class B – 255.255.0.0 Class C – 255.255.255.0
20. CIDR address are represented using a slash notation, which specifies the number of bits in the network prefix.
21. Class A – 0-126, Class B – 128-191, Class C – 192-233.
22. Classful Addressing is uses fixed length subnet masks, Classless uses variable length subnet mask.
23. VLSM is IP network into subnet with different subnet masks.
24. Static routing does not have the ability to select the path on its own path.
25. Default routing is the method where the router is configured to send all packets towards a single router.
26. Done in lab.
27. Done in lab.
28. Done in lab.
29. Done in lab.
30. IPv6 is more secure.
31. IPv6 is use MNC Company for secure the network.
32. Done in lab.
33. Wireless Access Point is a networking device that allows wireless capable devices to connect to a wired network.

 Advance question

1. Done in lab.
2. Done in lab.
3. Done in lab.
4. Done in lab.
5. Done in lab.
6. Done in lab.
7. Done in lab.
8. Done in lab.
9. Layer 3 Switch after configured we can use, NV RAM
10. Done in lab.
11. 802.1q Protocol is the networking standards that supports virtual LANs on an Ethernet network.
12. Switch port mode command allows us to configure the trunking mode.
13. Removing command of VLAN use to remove all VLANs from the Switch ethernet port.
14. VLAN routing use for create group in Switch.
15. It requires routers to exchange information with other router to learn about paths.
16. Routing loop are formed when an error occurs in the operation of the routing algorithm.
17. Done in lab.
18. Done in lab.
19. Done in lab.
20. Done in lab.
21. Done in lab.
22. Done in lab.
23. Done in lab.
24. First IP Address is called the network address and last IP Address is called broadcast address.
25. Classful network is fixed length subnet mask.
26. Done in lab.
27. Done in lab.
28. Done in lab.
29. Two or more then devices connected in each other.
30. 192.168.55.1/30
31. A routed protocol can be used by all hosts on the internetwork.
32. IGP are the protocols used within a domain for the exchange of routing information.
33. Distance-vector routing protocols make routing decisions based on hop count, link-state routing protocols are able to consider multiple factors such as bandwidth and Hybrid routing protocols exhibits both types.
34. Done in lab.
35. A wildcard mask allows or denies all the traffic from a network IP address.
36. Physical Address and Logical address
37. Done in lab.
38. RIP is Open standard protocol, EIGRP is hybrid routing protocol, OSPF is Standard protocol.
39. Done in lab.
40. Wireless topology is simply the way network components are arranged.