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Batch: CCNA (Vipul Mistry Sir) 10:00AM to 11:00AM

Assignment

Modul:8 Ccna - Routing And Switching

### **Beginner Question**

1. Explain Switch

**Ans: A Switch is a device used in computer networks to connect multiple devices (like computers, printers, servers) within the same Local Area Network (LAN). It helps them communicate with each other efficiently.**

2. Explain Switch Boot Sequence

<b>Ans: Step</b>	<b>What Happens</b>	<b>Simple Explanation</b>
1	Power-On Self Test (POST)	The switch checks its own hardware (like memory, ports). If there's a problem, it shows an error.
2	Load Boot Loader	A small program runs to start the main system — like a helper that gets the system ready.
3	Find and Load IOS (Operating System)	The switch loads its IOS (Internetwork Operating System) from flash memory — this is like Windows or Android for switches.
4	Run Startup Configuration	It looks for saved settings (hostname, VLANs, passwords) in NVRAM. If found, it applies them.
5	Ready to Use	The switch is now ready and starts working on the network.

3. Explain Three Methods to access Switch Command Line Interface.

4. **Ans: 1. Telnet 2. SSH 3. Console Access**

5. Explain and Configuring the Cisco Internet Operating System.

Ans:

Cisco IOS (Internetwork Operating System) is the software used in most Cisco systems devices. It serves as the brain of the product, much the same way Windows or macOS does for a computer. Cisco IOS offers network administrators the means to configure, manage, and monitor networking devices via a text-based interface known as the Command Line Interface (CLI). When you turn a Cisco switch or router on, it goes through the following This is the configuration register:

To start configuring the device, you must first get to privileged EXEC mode by typing the enable command, which allows you to run the most advanced administrative commands. Then, you go into global configuration mode with configure terminal, because the most important settings are made here. One of the first things you do is give a host or name to the device, e.g. hostname MySwitch.

Security is important and you'll want a password to prevent it being accessed by others. This consists of an enable password for privileged mode and a console password to console in with a console cable. The console password is defined by these lines: line console 0 password cisco login If you want to enable remote management then you would give the switch an IP address with command interface vlan 1 then ip address 192.168.1.10 255.255.255.0 and no shutdown to enable the interface.

And last but not least, don't forget to save the configuration to make sure it is persistent and survives a reboot. This is accomplished using the commands write memory or copy running-config startup-config. With these steps, we have finished the installation process in a Cisco IOS device, and is now ready to work in va network.

## 5.Explain Switch Port

Ans: A switch port is the plug on a network switch to which you attach a network cable (Ethernet cable). These ports enable computers, printers, servers or other devices to link together in the network through the switch.

Think of it as the charging port on your phone — instead of charging, the port facilitates devices speaking and sharing information on a local network.

### What Actually Occurs When a Device is Connected to a Switch Port?

The switch detects the device.

It records the MAC address of that device.

Then, when it needs to send or receive data, it routes data to the correct port.

This helps maintain the speed of the network (instead) of flooding the dat aout to all ports one that needs it.

### Type Of Ports

Access Port , Trunk Port , Ethernet Port

## **MCQ Question**

6. R1, R2, R3, and R4 have their Fast Ethernet 0/0 interfaces attached to the same VLAN. A network engineer has typed a configuration for each router by using a word processor. He will later copy and paste the configuration into the routers. Examine the following exhibit, which lists configuration for the four routers, as typed by the network engineer. Assuming that all four routers can ping each other's LAN IP addresses after the configuration has been applied, choose the routers that will be able to form a neighbor relationship with the other routers on the LAN. (You can assume that, if not shown in the exhibit, all other related parameters are still set to their defaults.) (Choose two)

**Ans: A.R1**

7. enable secret [password] is hashed using the algorithm.

**Ans: A.MD5**

8. 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?

**Ans: D. Router 2.2.2.2 is a backup designated router.**

9. - Which command is used to view the neighbour discovery table on a PC?

**Ans: C. netsh interface ipv6 show neighbour**

10. What type of variable is being shown? Routers = [R1,R2,R3]

**Ans: A. List**

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

**Ans: B. Time to Live**