1. Explain Switch

Ans: A switch is a network device that connects devices within a LAN and uses MAC addresses to forward data only to the device it’s intended for, enhancing network performance and reducing collisions.

1. Explain Three Methods to access Switch Command Line Interface

Ans:

1. **Console Access**:
   * 1. Connect a serial cable from your computer to the switch’s console port.
     2. Open a terminal emulator (e.g., PuTTY) on your computer.
     3. Set the correct serial settings.
     4. Access the CLI through the terminal window.
2. **Telnet Access**:
   * 1. Ensure the switch has an IP address and Telnet is enabled.
     2. Open a command prompt or terminal on your computer.
     3. Type telnet [switch IP address] and press Enter.
     4. Enter your credentials to access the CLI.
3. **SSH Access**:
   * 1. Ensure the switch has an IP address and SSH is enabled.
     2. Open a command prompt or terminal on your computer.
     3. Type ssh [username]@[switch IP address] and press Enter.
     4. Enter your password to access the CLI.
4. Explain and Configuring the Cisco Internet Operating System

Ans:

Access the Device

Console Access:

* Connect a console cable from your computer to the switch or router’s console port.
* Open a terminal emulation program (e.g., PuTTY) and configure the serial connection settings (baud rate, data bits, stop bits, and parity).
* Type enable and enter the enable password to enter privileged mode.

Switch> enable

Password: [your enable password]

Switch#

Switch# configure terminal

Switch(config)#

**Set Hostname:**

* Change the device’s hostname.

Switch(config)# hostname Pratiksha

Pratiksha (config)#

**Configure Interfaces:**

* Assign IP addresses to interfaces.

Pratiksha(config)# interface vlan 10

Pratiksha(config-if)# ip address 192.168.29.1 255.255.255.0

Pratiksha(config-if)# no shutdown

Pratiksha(config-if)# exit

**Set a Password for Console and VTY Lines:**

* Configure passwords for security.

Pratiksha(config)# line console 0

Pratiksha(config-line)# password [console\_password]

Pratiksha(config-line)# login

Pratiksha(config-line)# exit

Pratiksha(config)# line vty 0 4

Pratiksha(config-line)# password [vty\_password]

Pratiksha(config-line)# login

Pratiksha(config-line)# exit

**Set Up a Banner:**

* Create a login banner to display a message.

Pratiksha(config)# banner motd #Authorized Access Only#

1. 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 and B.R2

1. Enable secret [password] is hashed using the algorithm.

Ans: MD5

1. 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: Router 2.2.2.2 is a backup designated router

1. Which command is used to view the neighbor discovery table on a PC?

Ans: netsh interface ipv6 show neighbor

1. What type of variable is being shown?

Ans: List

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

Ans: B. Time to Live C. Source address D. Destination address