Cisco

Exam 640-801

CCNA

Version: 4.1

[Total Questions: 215]

Question No : 1

Which router command can be used to verify the type of cable connected to interface serial 0/0?

A. show interfaces serial 0/0
B. show running-config
C. show ip interface serial 0/0
D. show controllers serial 0/0

Answer: D

Question No : 2

Which connections allow the use of full-duplex Ethernet?(Choose three.)

A. switch to hub
B. switch to host
C. hub to hub
D. switch to switch
E. host to host

Answer: B,D,E

Explanation:

Full-duplex Ethernet uses two pairs of wires, instead of one wire pair like half duplex. And full duplex uses a point-to-point connection between the transmitter of the transmitting device and the receiver of the receiving device. This means that with full-duplex data transfer, you get a faster data transfer compared to half duplex. And because the transmitted data is sent on a different set of wires than the received data, no collisions will occur.

Full-duplex Ethernet can be used in three situations:
    ✍ With a connection from a switch to a host
    ✍ With a connection from a switch to a switch
    ✍ With a connection from a host to a host using a crossover cable

Question No : 3

Refer to the exhibit. What is the meaning of the term dynamic as displayed in the output of the show frame-relay map command shown?

```
R1# show frame-relay map
Serial0/0 (up): ip 172.16.3.1 dlci 100 (0x64, 0x1840), dynamic
            broadcast,, status defined, active
```

A. The mapping between DLCI 100 and the end station IP address 172.16.3.1 was learned through Inverse ARP.
B. The DLCI 100 will be dynamically changed as required to adapt to changes in the Frame Relay cloud.
C. The DLCI 100 was dynamically allocated by the router.
D. The Serial0/0 interface acquired the IP address of 172.16.3.1 from a DHCP server.
E. The Serial0/0 interface is passing traffic.

Answer: A
Explanation:

Inverse Address Resolution Protocol (Inverse ARP) was developed to provide a mechanism for dynamic DLCI to Layer 3 address maps. Inverse ARP works much the same way Address Resolution Protocol (ARP) works on a LAN. However, with ARP, the device knows the Layer 3 IP address and needs to know the remote data link MAC address. With Inverse ARP, the router knows the Layer 2 address which is the DLCI, but needs to know the remote Layer 3 IP address.

When using dynamic address mapping, Inverse ARP requests a next-hop protocol address for each active PVC. Once the requesting router receives an Inverse ARP response, it updates its DLCI-to-Layer 3 address mapping table. Dynamic address mapping is enabled by default for all protocols enabled on a physical interface. If the Frame Relay environment supports LMI autosensing and Inverse ARP, dynamic address mapping takes place automatically. Therefore, no static address mapping is required.

Question No : 4

What can be done to secure the virtual terminal interfaces on a router? (Choose two.)

A. Physically secure the interface.
B. Enter an access list and apply it to the virtual terminal interfaces using the access-class

command.

C. Create an access list and apply it to the virtual terminal interfaces with the access-group command.

D. Configure a virtual terminal password and login process.

E. Administratively shut down the interface.

Answer: B,D

Explanation:

There are a total of 5 logical Virtual terminal interfaces in a Cisco router (lines 0-4) and they are used for remote access into the device via telnet. Configuring these interfaces correctly with a login and password information can be used for security, as each user will be prompted for a password in order to obtain access. A second method is to use the "access-class" command. Combined with an access list, this command can be used to specify the hosts or networks that will be allow access to the device.

Question No : 5

Refer to the exhibit. What could be possible causes for the "Serial0/0 is down" interface status? (Choose two.)

```
Router1#show interfaces serial 0/0

Serial0/0 is down,      line protocol is down
    Hardware is MK5025
    Serial Internet address is 10.1.1.2/24
    MTU 1500 bytes, BW 1544 Kbits, DLY 20000 usec, rely 255/255, load 9/255
    Encapsulation PPP, loopback not set, keepalive set (10 sec)
    <some output omitted>
```
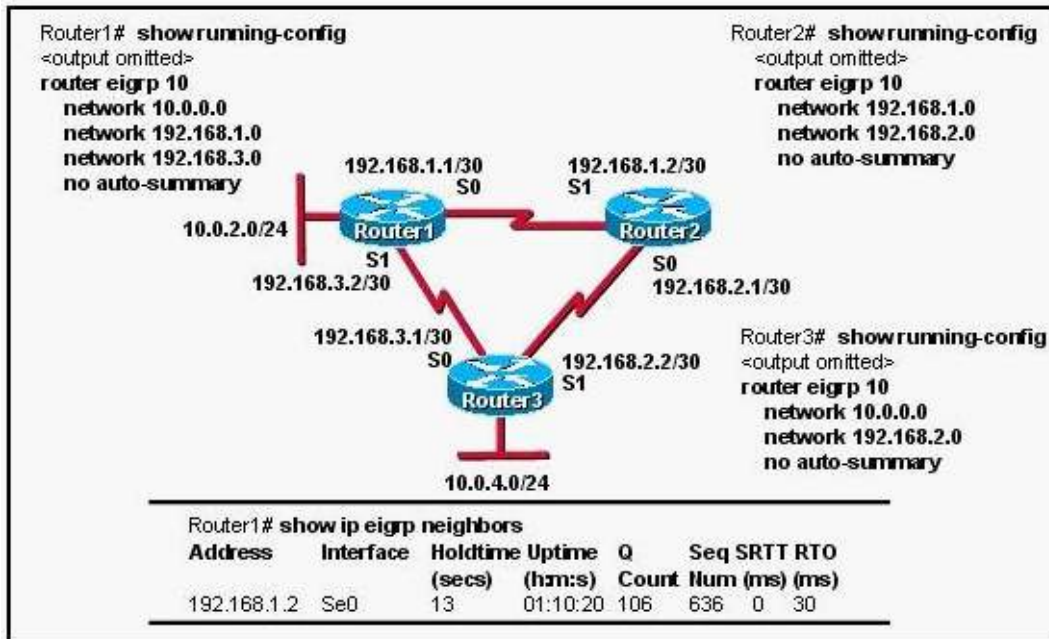
A. A Layer 1 problem exists.

B. The bandwidth is set too low.

C. There is an incorrect IP address on the Serial 0/0 interface.

D. An incorrect cable is being used.

E. A protocol mismatch exists.

Answer: A,D

Reference:http://www.cisco.com/univercd/cc/td/doc/cisintwk/itg_v1/tr1915.htm

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Question No : 6

IP addresses and routing for the network are configured as shown in the exhibit. The network administrator issues the show ip eigrp neighbors command from Router1 and receives the output shown below the topology. Which statement is true?

```
Router1#  show running-config                    Router2#  show running-config
<output omitted>                                     <output omitted>
router eigrp 10                                     router eigrp 10
   network 10.0.0.0                                    network 192.168.1.0
   network 192.168.1.0                                 network 192.168.2.0
   network 192.168.3.0                                 no auto-summary
   no auto-summary        192.168.1.1/30      192.168.1.2/30
                             S0                  S1
        10.0.2.0/24        Router1    ────    Router2
                          S1                      S0
             192.168.3.2/30                    192.168.2.1/30

         192.168.3.1/30
              S0                192.168.2.2/30      Router3#  show running-config
                   Router3        S1               <output omitted>
                                                    router eigrp 10
                                                       network 10.0.0.0
                                                       network 192.168.2.0
                                                       no auto-summary
                    10.0.4.0/24

Router1# show ip eigrp neighbors
Address       Interface   Holdtime  Uptime   Q      Seq  SRTT  RTO
                          (secs)    (h:m:s)  Count  Num  (ms)  (ms)
192.168.1.2   Se0         13        01:10:20 106    636  0     30
```

A. The IP addresses are not configured properly on the Router1 and Router3 interfaces.
B. The no auto-summary command configured on the routers prevents Router1 and Router2 from forming a neighbor relationship.
C. Routing is not completely configured on Router3.
D. It is normal for Router1 to show one active neighbor at a time to prevent routing loops.

Answer: C

Explanation:

The Router 3 is connected to three different networks: 192.168.3.1/30, 192.168.2.2/30, and 10.0.4.0/24 but only 10.0.4.0 and 192.168.2.0 are being advertised via EIGRP. InRouter3, the "network 192.168.3.0" command should be placed under the EIGRP 10 process.

Question No : 7

Which of the following commands will configure a default route to any destination network not found in the routing table?

A. Router(config)# ip route 0.0.0.0 255.255.255.255 s0
B. Router(config)# ip route 0.0.0.0 0.0.0.0 s0
C. Router(config)# ip route any any e0
D. Router(config)# ip default-route 0.0.0.0 255.255.255.255 s0
E. Router(config)# ip default-route 0.0.0.0 s0

Answer: B

Explanation:

Choice D is the correct syntax for configuring a gateway of last resort. Note that an alternative way is to specify the IP address of the next hop router, for example, "ip route 0.0.0.0 0.0.0.0 10.1.1.1."

Question No : 8

A Cisco router that was providing Frame Relay connectivity at a remote site was replaced with a different vendor's frame relay router. Connectivity is now down between the central and remote site. What is the most likely cause of the problem?

A. incorrect IP address mapping
B. incorrect DLCI
C. mismatched encapsulation types
D. mismatched LMI types

Answer: C

Explanation:

LMI does have to be the same on both "ends", but when you're talking about LMI, one end is your local router and the other end is the carrier's frame relay switch. The two routers can use different LMI types as long as the ports on the frame relay switch use the correct LMI type.Encapsulation also has to be the same between both ends, but now we're talking about the "ends" being the two routers. Cisco defaults to a proprietary frame relay encapsulation. To interoperate with other vendors, you must use "encapsulation frame-relay ietf". This is a common problem in a multi-vendor environment.

Question No : 9

All WAN links inside the ABC University network use PPP with CHAP for authentication security. Which command will display the CHAP authentication process as it occurs between two routers in the network?

A. show ppp authentication chap
B. show interface serial0
C. debug PPP authentication
D. show CHAP authentication
**E.** debug CHAP authentication

Answer: C

Explanation:

Whenever you're asked to display a process in real time, you must use a debug command as show commands do not display anything in real time. Debug PPP authentication will display the authentication process of a PPP line, including the CHAP process.
Reference: CCNA Self-Study CCNA ICND exam certification Guide (Cisco Press, ISBN 1-58720-083-X) Page 314.

Question No : 10

Refer to the exhibit. S0/0 on R1 is configured as a multipoint interface to communicate with R2 and R3 in this hub-and-spoke Frame Relay topology. While testing this configuration, a technician notes that pings are successful from hosts on the 172.16.1.0/24 network to hosts on both the 172.16.2.0/25 and 172.16.2.128/25 networks. However, pings between hosts on the 172.16.2.0/25 and 172.16.2.128/25 networks are not successful. What could explain this connectivity problem?
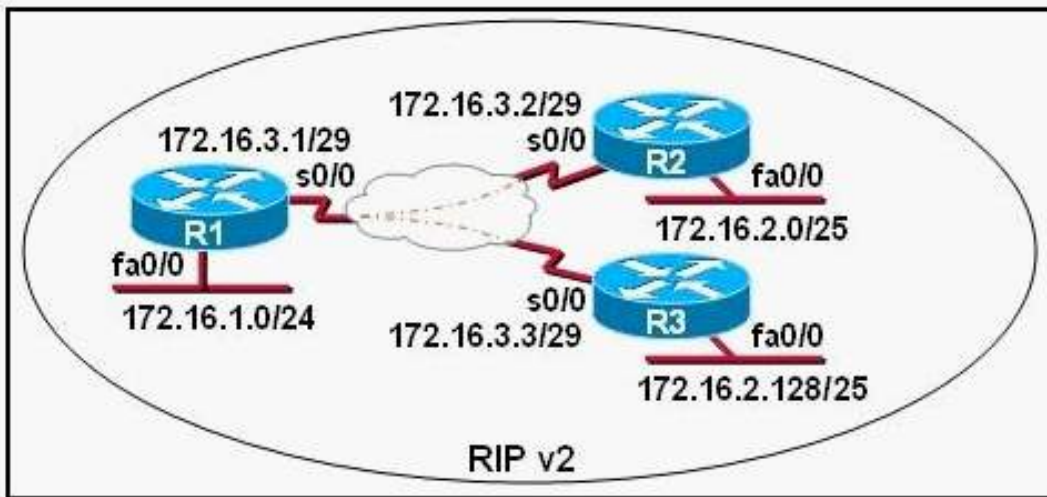
A. Split horizon is preventing R2 from learning about the R3 networks and R3 from learning about the R2 networks.
B. The 172.16.3.0/29 network used on the Frame Relay links is creating a discontiguous network between the R2 and R3 router subnetworks.
C. The RIP v2 dynamic routing protocol cannot be used across a Frame Relay network.
D. The ip subnet-zero command has been issued on the R1 router.
E. The 172.16.2.0/25 and 172.16.2.128/25 networks are overlapping networks that can be seen by R1, but not between R2 and R3.

Answer: A

Explanation:

The problem in this situation is related to *split horizon*, which reduces incorrect routing information and routing overhead in a distance-vector network by enforcing the rule that information cannot be sent back in the direction from which it was received. In other words, the routing protocol differentiates which interface a network route was learned on, and once it determines this, it won't advertise the route back out of that same interface.
in a spoke and hub Frame Relay topology, the Frame Relay interface for the hub router must have split-horizon processing disabled. Otherwise, the spoke routers never receive each other's routes.

Question No : 11 HOTSPOT

Hotspot

? This task requires you to use the CLI of Sw-AC3 to answer five
multiple-choice questions. This does not require any
configuration.
? The Console PC provides access to switch Sw-AC3. No login is
required.
? To answer the multiple-choice questions, click on the
numbered boxes in the right panel.
? There are five multiple-choice questions with this task. Be sure
to answer all five questions before leaving this item.

What address should be configured as the default-gateway for the host connected to interface Fa0/4 of Sw-AC3?

1
2
3 ○ 192.168.1.254
4 ○ 192.168.22.254
5 ○ 192.168.33.254
   ○ 192.168.44.254

eSim Professional v1.0.. 00:00:08

ISP
Fa0/0.1 - 192.168.1.254 /24 VLAN1
Fa0/0.22 -192.168.22.254 /24 VLAN22
Fa0/0.33 -192.168.33.254 /24 VLAN33
Fa0/0.44 -192.168.44.254 /24 VLAN44

192.168.33.253/24
BDR-R1
VLAN-R1
Sw-DS1

Server 1
192.168.22.1

Sw-AC1 Sw-AC2 Sw-AC3 Console

CiscoTerminal
Sw-Ac3 con0 is now available

Press RETURN to get started.

Sw-Ac3>_

Answer:

? This task requires you to use the CLI of Sw-AC3 to answer five
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   ◉ 192.168.44.254

eSim Professional v1.0.. 00:00:08

ISP
Fa0/0.1 - 192.168.1.254 /24 VLAN1
Fa0/0.22 -192.168.22.254 /24 VLAN22
Fa0/0.33 -192.168.33.254 /24 VLAN33
Fa0/0.44 -192.168.44.254 /24 VLAN44

192.168.33.253/24
BDR-R1
VLAN-R1
Sw-DS1

Server 1
192.168.22.1

Sw-AC1 Sw-AC2 Sw-AC3 Console

CiscoTerminal
Sw-Ac3 con0 is now available

Press RETURN to get started.

Sw-Ac3>_

Question No : 12 HOTSPOT

Hotspot

? This task requires you to use the CLI of Sw-AC3 to answer five multiple-choice questions. This does not require any configuration.
? The Console PC provides access to switch Sw-AC3. No login is required.
? To answer the multiple-choice questions, click on the numbered boxes in the right panel.
? There are five multiple-choice questions with this task. Be sure to answer all five questions before leaving this item.

1 2 3 4 5

Out of which port on Sw-Ac3 would a frame containing an IP packet with a destination address that is not on a local LAN be forwarded?

○ Fa 0/1
○ Fa 0/3
○ Fa 0/4
○ Fa 0/8
○ Fa 0/9
○ Fa 0/12

eSim Professional v1.0.. 00:00:04

ISP

BDR-R1 192.168.33.253/24

Fa0/0.1 - 192.168.1.254 /24 VLAN1
Fa0/0.22 -192.168.22.254 /24 VLAN22
Fa0/0.33 -192.168.33.254 /24 VLAN33
Fa0/0.44 -192.168.44.254 /24 VLAN44

VLAN-R1

Sw-DS1

Server 1
192.168.22.1

Sw-AC1 Sw-AC2 Sw-AC3 Console

1 2 3 4 1 2 3 4 1 2 3 4

CiscoTerminal

Sw-Ac3 con0 is now available

Press RETURN to get started.

Sw-Ac3>

Answer:

Question No : 13

Which of the following describe private IP addresses? (Choose two.)

A. addresses that can be routed through the public Internet
B. addresses chosen by a company to communicate with the Internet
C. addresses licensed to enterprises or ISPs by an Internet registry organization