

Cisco.Selftestengine.642-802.v2014-11-10.by.Wyatt.648q

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Exam Code: 640-802

Exam Name: Cisco Cisco Certified Network Associate



The logo features the word "Self" in a red, stylized font on the left, followed by a circular icon with blue and red curved lines, and the word "test" in a red, stylized font on the right. Below "test" is the word "ENGINE" in a grey, all-caps, sans-serif font. A grey horizontal bar is positioned behind the "ENGINE" text.

Exam A

QUESTION 1

It has become necessary to configure an existing serial interface to accept a second Frame Relay virtual circuit. Which of the following procedures are required to accomplish this task? (Choose three.)

- A. configure static frame relay map entries for each subinterface network.
- B. remove the ip address from the physical interface
- C. create the virtual interfaces with the interface command
- D. configure each subinterface with its own IP address
- E. disable split horizon to prevent routing loops between the subinterface networks
- F. encapsulate the physical interface with multipoint PPP

Correct Answer: BCD

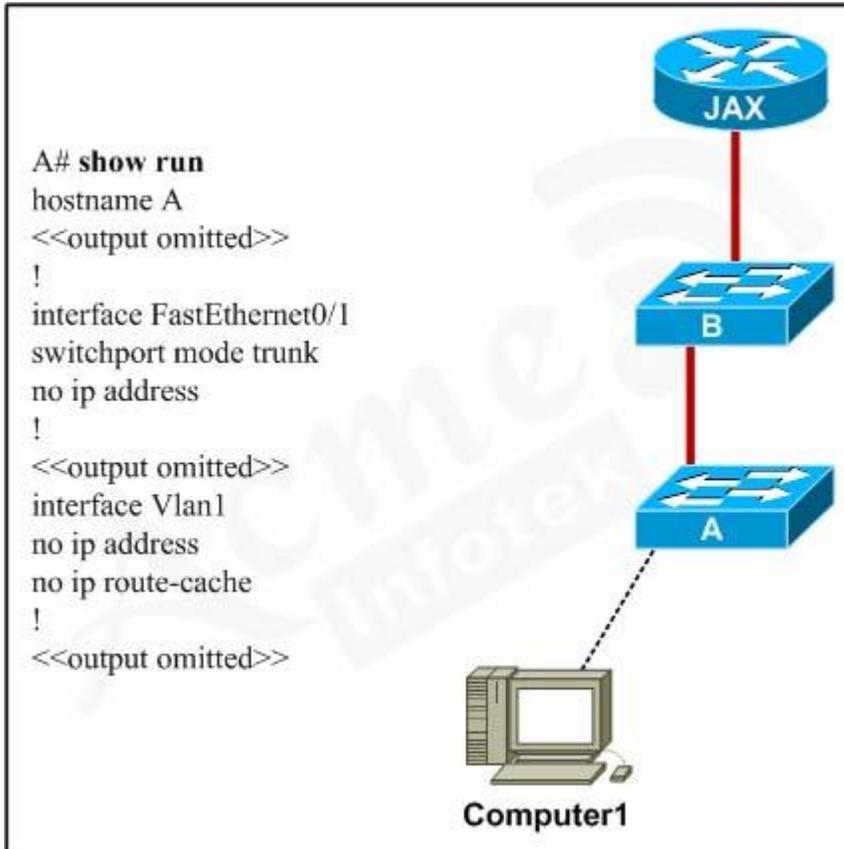
Section: (none)

Explanation

Explanation/Reference:

QUESTION 2

Refer to the graphic. Computer 1 is consoles into switch A. Telnet connections and pings run from the command prompt on switch A fail. Which of the following could cause this problem?



- A. switch A does not have a cdp entry for switch B or router JAX
- B. Switch A does not have an IP address.
- C. port 1 on switch A should be an access port rather than a trunk port
- D. switch A is not directly connected to router JAX
- E. switch A does not have a default gateway assigned

Correct Answer: B

Section: (none)

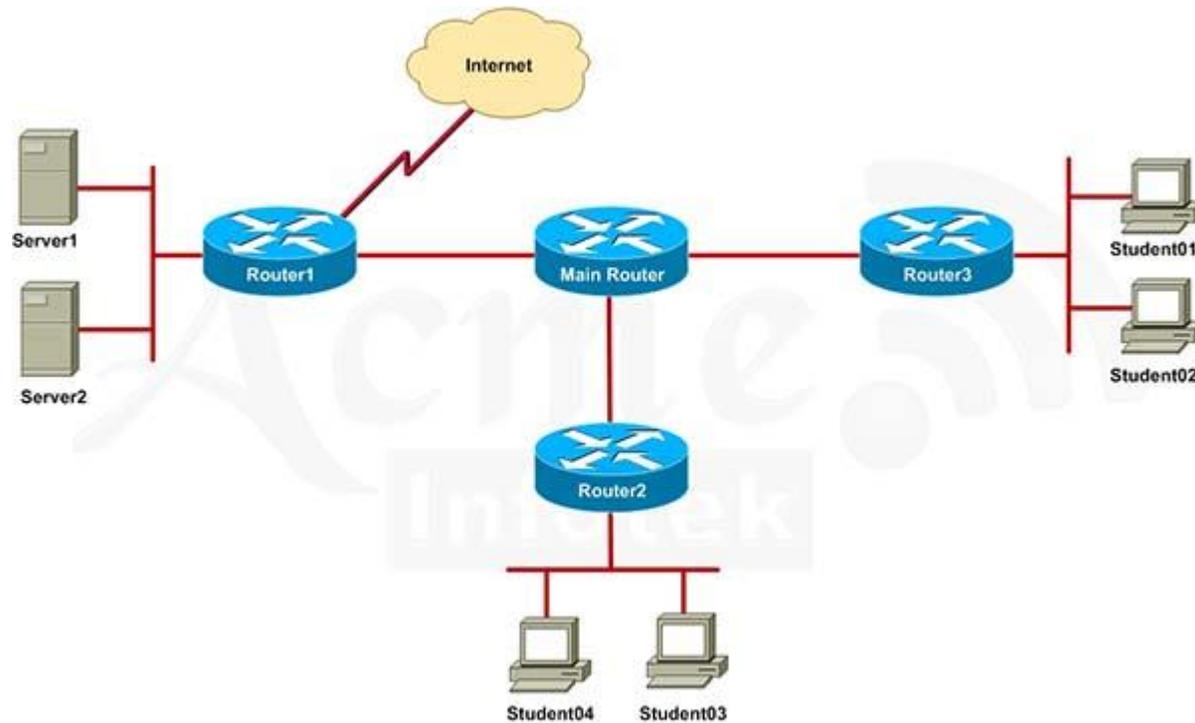
Explanation

Explanation/Reference:

QUESTION 3

Refer to the exhibit.

Which three variables (router, protocol port, and router ACL direction) apply to an extended ACL that will prevent student 01 from securely browsing the internet?



- A. OUT
- B. Router 3
- C. HTTP
- D. IN
- E. Router 1

Correct Answer: BCD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 4

Which command can you use to determine the cisco ios feature set on a cisco router?

- A. show version
- B. dir flash:|include ios
- C. show environment
- D. show diag
- E. show inventory

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 5

What are three benefits of implementing vlans?(choose three)

- A. A more efficient use of bandwidth can be achieved allowing many physical groups to use the same network infrastructure
- B. Broadcast storms can be mitigated by decreasing the number of broadcast domains,thus increasing their size.
- C. A higher level of network security can be reached by separating sensitive data traffic from other network traffic.
- D. Port-based vlans increase switch-port use efficient,thanks to 802.1Q trunks
- E. A more efficient use of bandwidth can be achieved allowing many logical networks to use the same network infrastructure.
- F. Broadcast storms can be mitigated by increasing the number of broadcast domains,thus reducing their size.
- G. VLANs make it easier for IT staff to configure new logical groups,because the vlans all belong to the same broadcast domain.

Correct Answer: CEF

Section: (none)

Explanation

Explanation/Reference:

QUESTION 6

In the implementation of VLSM techniques on a network using a single Class C IP address, which subnet mask is the most efficient for point-to-point serial links?

- A. 255.255.255.240
- B. 255.255.255.254
- C. 255.255.255.252
- D. 255.255.255.0
- E. 255.255.255.248

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 7

A switch has been configured with two vlans and is connected to a router with a trunk for inter-vlan routing. OSPF has been configured on the router, as the routing protocol for the network. Which statement about this network is true?

- A. For the two vlans to communicate, a network statement for the trunk interface needs to be added to the OSPF configuration.
- B. For the two vlans to communicate, a network statement for each subinterface needs to be added to the OSPF configuration.
- C. Direct inter-vlan communication does not require OSPF.
- D. OSPF cannot be used if router-on-a-stick is configured on the router.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 8

Which command enables IPv6 forwarding on a Cisco router?

- A. ipv6 host
- B. ipv6 unicast-routing
- C. ipv6 local
- D. ipv6 neighbor

Correct Answer: B

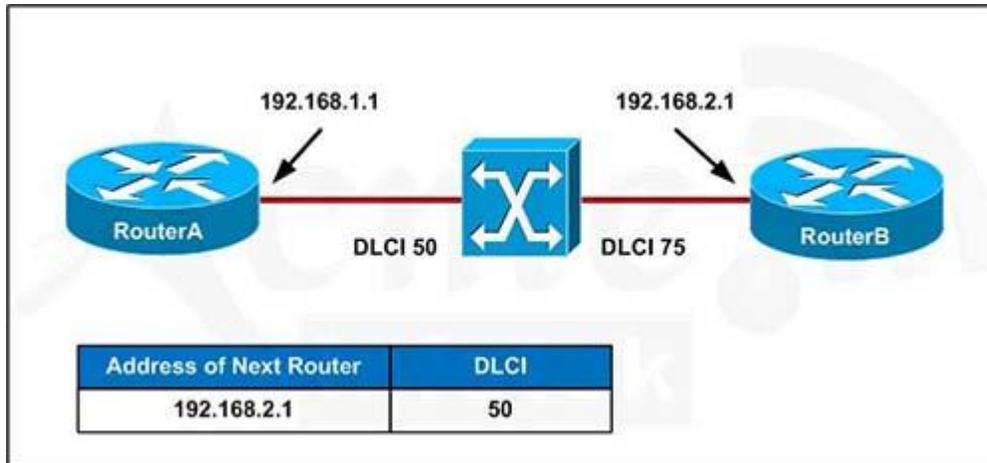
Section: (none)

Explanation

Explanation/Reference:

QUESTION 9

RouterA is unable to reach RouterB. Both routers are running IOS version 12.0. After reviewing the command output and graphic, what is the most likely cause of the problem?



- A. incorrect bandwidth configuration
- B. incorrect LMI configuration
- C. incorrect map statement
- D. incorrect IP address

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 10

A Cisco router is booting and has just completed the POST process. It is now ready to find and load an IOS image. What function does the router perform next?

- A. It checks the configuration register

- B. It attempts to boot from a TFTP server
- C. It loads the first image file in flash memory
- D. It inspects the configuration file in NVRAM for boot instructions

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 11

Which three approaches can be used while migrating from an ipv4 addressing scheme to an ipv6 scheme? (choose three)

- A. statically map IPV4 address to IPV6 addresses
- B. configure IPv4 tunnels between IPv6 islands
- C. use DHCPv6 to map IPV4 addresses to IPV6 addresses
- D. use proxying and translation to translate IPV6 packets into IPV4 packets
- E. configure IPV6 directly
- F. enable dual-stack routing

Correct Answer: BDF

Section: (none)

Explanation

Explanation/Reference:

QUESTION 12

Which protocol provides a method of sharing VLAN configuration information between two Cisco switches?

- A. VTP
- B. 802.1Q
- C. RSTP
- D. STP

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 13

DNS servers provide what service?

- A. They run a spell check on host names to ensure accurate routing
- B. They convert domain names into IP addresses.
- C. Given an IP address, they determine the name of the host that is sought
- D. They map individual hosts to their specific IP addresses

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 14

```
line vty 0 4
password 7 030752180500
login
transport input ssh
```

Refer to the exhibit. What is the effect of the configuration that is shown?

- A. It tells the router or switch to try establish an SSH connection first and if that fail to use telnet.
- B. It configures a Cisco network device to use the SSH protocol on incoming communications via the virtual terminal ports.
- C. It allows seven failed login attempts before the VTY lines are temporarily shutdown.
- D. It configures the virtual terminal lines with the password 030752180500.
- E. It configures SSH globally for all logins.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 15

Which IPV6 routing protocol uses multicast group FFO2::8 to send updates?

- A. RIPng
- B. OSPFv3
- C. IS-IS for IPv6
- D. static

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 16

Which of the following are true regarding the debug output shown in the graphic? (Choose two)

RtrA# debug ip rip

RIP protocol debugging is on

RtrA#

1d05h: RIP: sending v1 update to 255.255.255.255 via FastEthernet0/1(172.16.1.1)

1d05h: RIP: build update entries

1d05h: network 10.0.0.0 metric 1

1d05h: network 192.168.1.0 metric 2

1d05h: RIP: sending v1 update to 255.255.255.255 via Serial0/0(10.0.8.1)

1d05h: RIP: build update entries

1d05h: network 172.16.0.0 metric 1

RtrA#

1d05h: RIP: received v1 update from 10.0.15.2 on Serial0/0

1d05h: 192.168.1.0 in 1 hops

1d05h: 192.168.168.0 in 16 hops (inaccessible)

- A. This router was configured with the commands:
RtrA(config)#router rip
RtrA(config-router)#version 2
RtrA(config-router)#network 172.16.0.0
RtrA(config-router)#network 10.0.0.0
- B. This router was configured with the commands:
RtrA(config)#router rip
RtrA(config-router)#network 172.16.0.0
RtrA(config-router)#network 10.0.0.0
- C. Network 10.0.0.0 will be displayed in the routing table.
- D. Network 192.168.168.0 will be displayed in the routing table.
- E. This router was configured with the commands:
RtrA(config)#router rip
RtrA(config-router)#network 192.168.1.0
RtrA(config-router)#network 10.0.0.0
RtrA(config-router)#network 192.168.168.0
- F. split-horizon was disabled on this router.

Correct Answer: BC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 17

The network administrator is asked to configure 113 point-to-point links. Which IP addressing scheme best defines the address range and subnet mask that meet the requirement and waste the fewest subnet and host addresses?

- A. 10.10.0.0/18 subnetted with mask 255.255.255.252
- B. 10.10.0.0/25 subnetted with mask 255.255.255.252
- C. 10.10.0.0/24 subnetted with mask 255.255.255.252
- D. 10.10.0.0/23 subnetted with mask 255.255.255.252
- E. 10.10.0.0/16 subnetted with mask 255.255.255.252

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 18

In which integration method is an IPv6 packet encapsulated within an IPv4 protocol?

- A. dual-stack
- B. tunneling
- C. proxy
- D. dot1q

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 19

A network administrator is configuring ACLs on a Cisco router, to allow IP access from the 192.168.146.0/24, 192.168.147.0/24, 192.168.148.0/24, and 192.168.149.0/24 networks only. Which two ACLs, when combined, should be used?

- A. access-list 10 permit ip 192.168.146.0 0.0.0.255
- B. access-list 10 permit ip 192.168.146.0 255 255.255.0
- C. access-list 10 permit ip 192.168.147.0 0.0.255 255
- D. access-list 10 permit ip 192.168.149.0 0.0.255.255.0
- E. access-list 10 permit ip 192.168.148.0 0.0.1.255
- F. access-list 10 permit ip 192.168.146.0 0.0.1.255

Correct Answer: EF

Section: (none)

Explanation

Explanation/Reference:

QUESTION 20

Which two commands correctly verify whether port security has been configured on port FastEthernet 0/12 on a switch? (Choose two)?

- A. sw1#show switchport port-secure interface FastEthernet 0/12
- B. sw1#show switchport port-security interface FastEthernet 0/12
- C. sw1#show port-secure interface FastEthernet 0/12

- D. sw1#show running-config
- E. sw1#show port-security interface FastEthernet 0/12

Correct Answer: DE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 21

Which two are advantages of static routing when compared to dynamic routing? (Choose two)

- A. Route summarization is computed automatically by the router
- B. Routing traffic load is reduced when used in stub network links
- C. Routing updates are automatically sent to neighbors
- D. Security increases because only the network administrator may change the routing table
- E. Configuration complexity decreases as network size increases
- F. An efficient algorithm is used to build routing tables, using automatic updates
- G. Routing tables adapt automatically to topology changes.

Correct Answer: BD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 22

Which two statements about using the CHAP authentication mechanism in a PPP link are true? (Choose two)

- A. CHAP users a two-way handshake
- B. CHAP authentication periodically occurs after link establishment.
- C. CHAP uses a three-way handshake
- D. CHAP authentication is performed only upon link establishment.
- E. CHAP authentication passwords are sent in plaintext.
- F. CHAP has no protection from playback attacks.

Correct Answer: BC

Section: (none)
Explanation

Explanation/Reference:

QUESTION 23

Which three are characteristics of an IPv6 anycast address? (Choose three)

- A. one-to-many communication model
- B. delivery of packets to the group interface that is closest to the sending device
- C. any-to-many communication model
- D. a unique IPv6 address for each device in the group
- E. the same address for multiple devices in the group
- F. one-to-nearest communication model

Correct Answer: BEF

Section: (none)
Explanation

Explanation/Reference:

QUESTION 24

Which router IOS commands can be used to troubleshoot LAN connectivity problems? (Choose three.)

- A. winipcfg
- B. tracert
- C. ping
- D. ip config
- E. show ip route
- F. show interfaces

Correct Answer: CEF

Section: (none)
Explanation

Explanation/Reference:

QUESTION 25

Which PPP subprotocol negotiates authentication options?

- A. SLIP
- B. NCP
- C. ISDN
- D. LCP
- E. DLCI

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 26

The network administrator has been asked to give reasons for moving from ipv4 to ipv6. What are two valid reasons for adopting ipv6 over ipv4?
(Choose two)

- A. telnet access does not require a password
- B. nat
- C. no broadcast
- D. change of destination address in the ipv6 header
- E. change of source address in the ipv6 header
- F. autoconfiguration

Correct Answer: CF

Section: (none)

Explanation

Explanation/Reference:

QUESTION 27

When you are troubleshooting an ACL issue on a router, which command can help you to verify which interfaces are affected by the ACL?

- A. show access-lists
- B. show interface
- C. show ip interface

- D. show ip access-lists
- E. list ip interface

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 28

Three switches are connected to one another via trunk ports.

Assuming the default switch configuration, which switch is elected as the root bridge for the spanning-tree instance of VLAN 1?

- A. the switch with the highest MAC address.
- B. the switch with the lowest IP address.
- C. the switch with the lowest MAC address
- D. the switch with the highest IP address.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 29

Which three statements about VTP features are true? (Choose Three)

- A. When properly configured, VTP minimizes VLAN misconfigurations and configuration inconsistencies.
- B. To configure a switch to be part of two VTP domains, each domain must have its own Password.
- C. Client, server, and transparent are valid VTP modes.
- D. When properly configured, VTP maintains VLAN configuration consistency and accelerates trunk link negotiation.
- E. VTP works at Layer 3 of the OSI model and requires that a management VLAN IP address be configured.
- F. VTP pruning is used to increase available bandwidth in trunk links.
- G. Each broadcast domain on a switch can have its own Unique VTP Domain.

Correct Answer: ACF

Section: (none)

Explanation

Explanation/Reference:

QUESTION 30

At which layer of the OSI model does PPP perform?

- A. Layer 2
- B. Layer 4
- C. Layer 5
- D. Layer 3

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 31

Which ip address would a network technician ping on the local host, to test the ip stack?

- A. 224.0.0.9
- B. 224.0.0.5
- C. 127.0.0.1
- D. 255.255.255.255

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 32

Which command allows you to verify the encapsulation type (CISCO or IETF) for a frame Relay link?

- A. show frame-relay map
- B. show frame-relay pvc
- C. show frame-relay lmi

D. show interfaces serial

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 33

When you are troubleshooting an ACL issue on a router, which command can help you to verify which interfaces are affected by the ACL?

- A. show ip interface
- B. show interface
- C. list ip interface
- D. show ip access-list
- E. show access-list

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 34

Which two data integrity algorithms are commonly used in VPN solutions? (Choose two)

- A. RSA
- B. HMAC-SHA-1
- C. DH2
- D. HMAC-MD5
- E. DH1

Correct Answer: BD

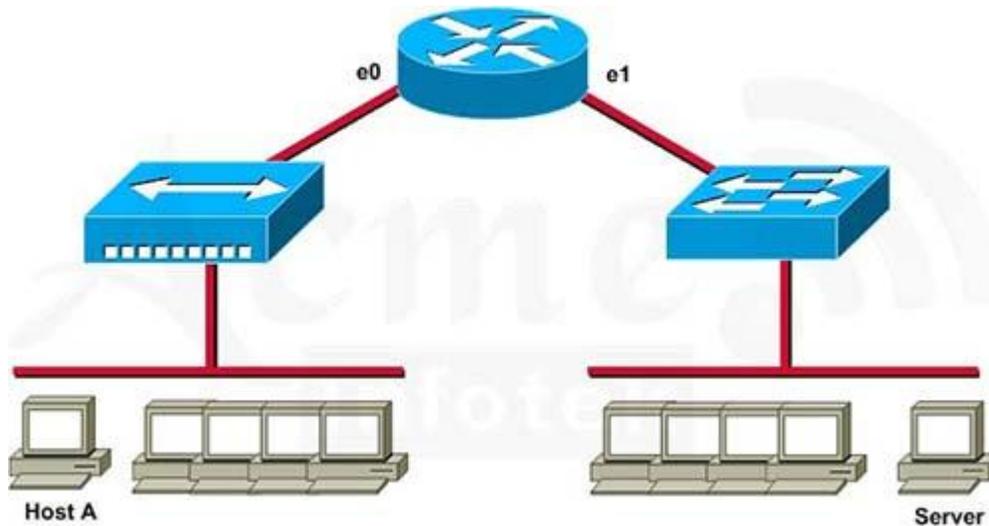
Section: (none)

Explanation

Explanation/Reference:

QUESTION 35

Refer to the graphic.



Host A is communicating with the server. What will be the source MAC address of the frames received by Host A from the server?

- A. the MAC address of the server network interface
- B. the MAC address of host A
- C. the MAC address of router interface e1
- D. the MAC address of router interface e0

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 36

Which encapsulation type is a Frame Relay encapsulation type that is supported by Cisco routers?

- A. Q9333-AAAnnexA
- B. ANSI Annex D

- C. HDLC
- D. IETF

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 37

Which Cisco IOS diagnostics command can disrupt the operation of a router under high-load conditions?

- A. debug all
- B. show running-config
- C. show processes cpu
- D. logging host ip address

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 38

Which Cisco IOS command can help to determine the timing of various debug events, relative to each other, when you are debugging a complicated router issue?

- A. service timestamps log datetime msec
- B. clock calendar-valid
- C. show clock detail
- D. service timestamps debug datetime msec

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 39

What are the possible trunking modes for a switch port? (Choose three.)

- A. transparent
- B. auto
- C. on
- D. desirable
- E. client
- F. forwarding

Correct Answer: BCD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 40

Refer to the exhibit.

```
Router# show interface s0/0/0
Serial 0/0/0 is administratively down, line protocol is down
```

What is the reason that the interface status is "administratively down, line protocol down"?

- A. There is no encapsulation type configured.
- B. There is a mismatch in encapsulation types.
- C. The interface is not receiving any keepalives.
- D. The interface has been configured with the shutdown command.
- E. The interface needs to be configured as a DTE device.
- F. The wrong type of cable is connected to the interface.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 41

What are two security appliances that can be installed in a network? (Choose two.)

- A. ATM
- B. IDS
- C. IOS
- D. IOX
- E. IPS
- F. SDM

Correct Answer: BE

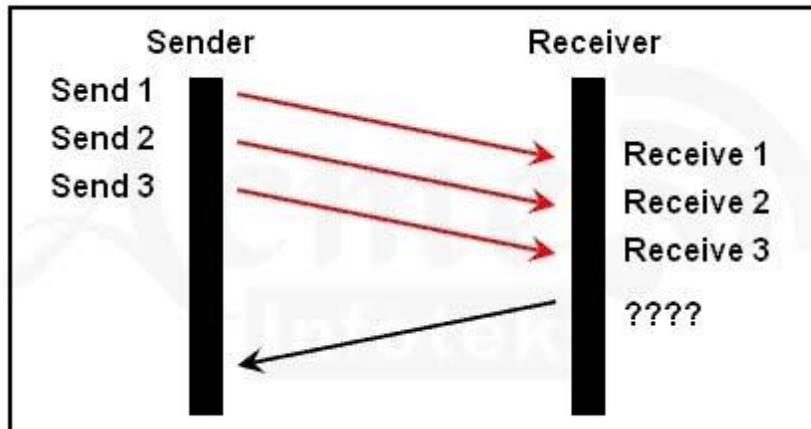
Section: (none)

Explanation

Explanation/Reference:

QUESTION 42

A TCP/IP transfer is diagrammed in the exhibit.



A window size of three has been negotiated for this transfer.

Which message will be returned from the receiver to the sender as part of this TCP/IP transfer?

- A. Send ACK 1-3
- B. Send ACK 3
- C. Send ACK 4
- D. Send ACK 4-6
- E. Send ACK 6
- F. Send ACK 7

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 43

Which two locations can be configured as a source for the IOS image in the boot system command? (Choose two.)

- A. RAM
- B. NVRAM
- C. flash memory
- D. HTTP server
- E. TFTP server
- F. Telnet server

Correct Answer: CE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 44

What is the default administrative distance of OSPF?

- A. 90
- B. 100
- C. 110
- D. 120

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 45

Which command shows your active Telnet connections?

- A. show cdp neighbors
- B. show session
- C. show users
- D. show vty logins

Correct Answer: B

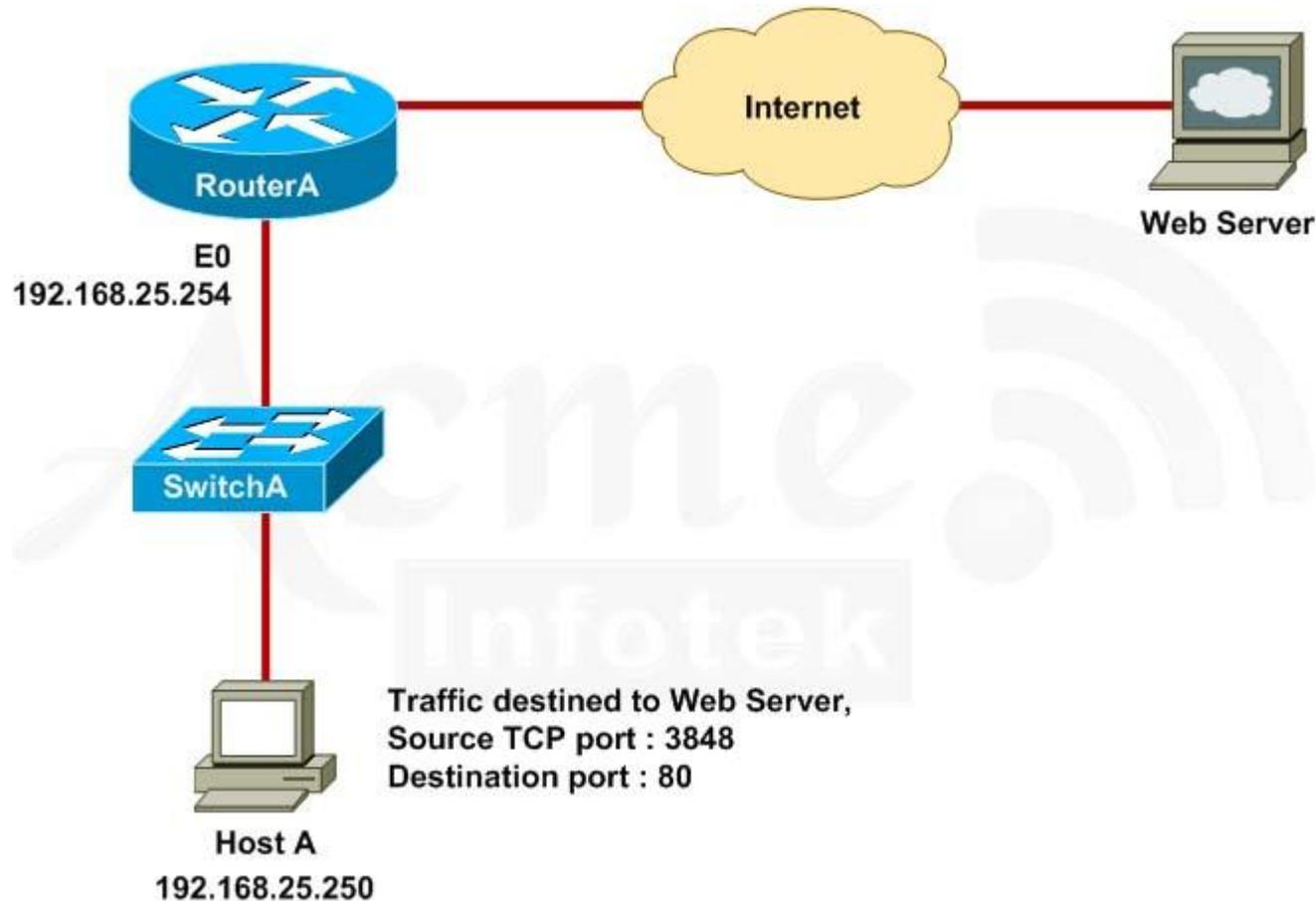
Section: (none)

Explanation

Explanation/Reference:

QUESTION 46

Refer to the exhibit.



NAT Overload is enabled on R1. Which statement is true when host A communicates with the web server?

- A. The web server uses 209.165.200.226 as the destination address and 80 as the destination port when sending packets to host A.
- B. Host A uses 192.168.25.254 as the destination address and 80 as the source port when sending packets to the web server.
- C. The web server uses 209.165.200.225 as the destination address and 3648 as the destination port when sending packets to host A.
- D. Host A uses 209.165.200.198 as the destination address and 3648 as the destination port when sending packets to the web server.

Correct Answer: C

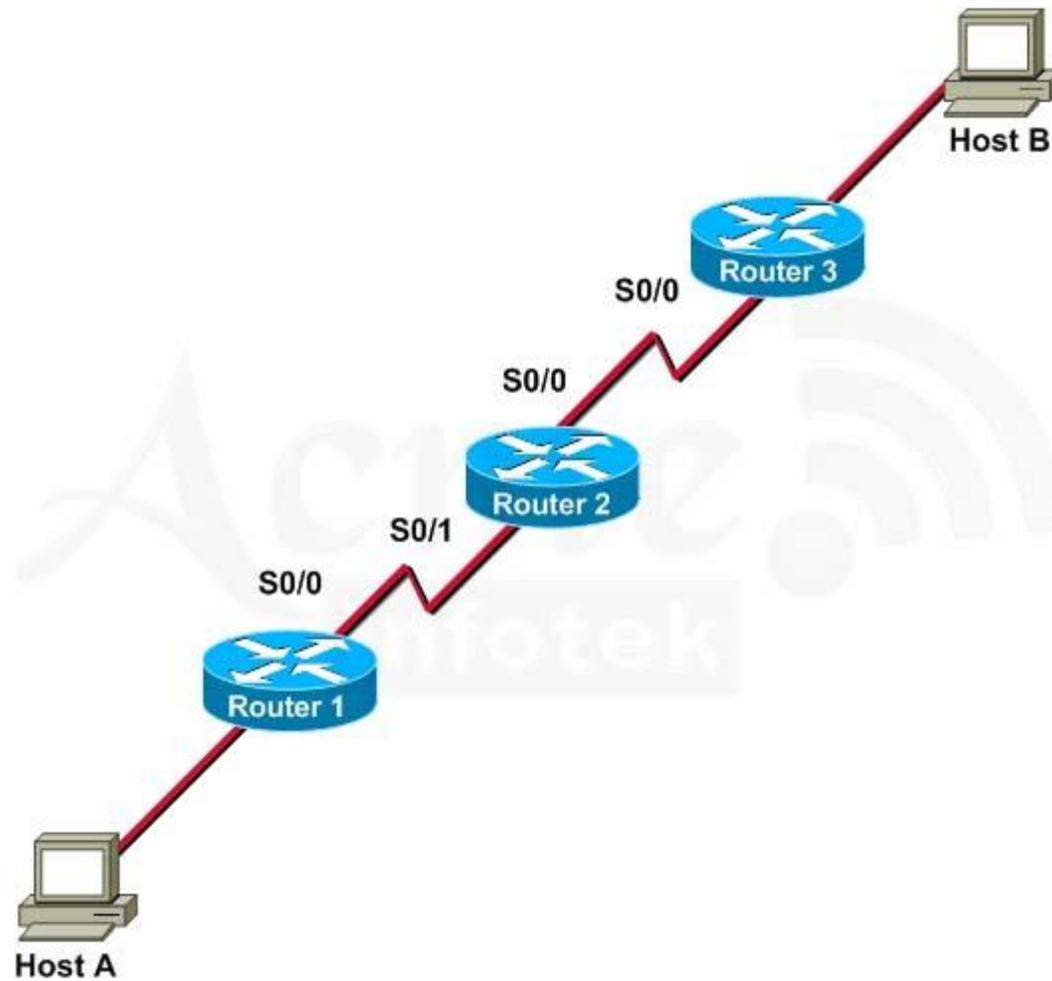
Section: (none)

Explanation

Explanation/Reference:

QUESTION 47

Refer to the exhibit.



Host A pings interface S0/0 on router 3. What is the TTL value for that ping?

A. 252

- B. 253
- C. 254
- D. 255

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 48

Refer to exhibit.

```
Router# show running-config
Building configuration...

Current configuration : 659 bytes
!
version 12.4
no service timestamp log datetime msec
no service timestamp debug datetime msec
service password-encryption
!
hostname Router
!
enable secret 5 $1$mERr$5rVt7rPBi54wqbxkx7m0
!
interface FastEthernet0/0
 ip address 192.168.1.1 255.255.255.0
 ip access-group 101 in
 duplex auto
 speed auto
!
access-list 101 deny tcp any any eq 22
access-list 101 permit ip any any
!
line con 0
 password 7 0822455D0A16
 login
line vty 0 4
 login
line vty 5 14
 login
!
end
```

A network administrator cannot establish a Telnet session with the indicated router. What is the cause of this failure?

- A. A Level 5 password is not set.
- B. An ACL is blocking Telnet access.
- C. The vty password is missing.
- D. The console password is missing.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 49

What are three reasons that an organization with multiple branch offices and roaming users might implement a Cisco VPN solution instead of point-to-point WAN links? (Choose three.)

- A. reduced cost
- B. better throughput
- C. broadband incompatibility
- D. increased security
- E. scalability
- F. reduced latency

Correct Answer: ADE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 50

On which options are standard access lists based?

- A. destination address and wildcard mask
- B. destination address and subnet mask
- C. source address and subnet mask
- D. source address and wildcard mask

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 51

Which command can be used from a PC to verify the connectivity between hosts that connect through a switch in the same LAN?

- A. ping address
- B. tracet address
- C. traceroute address
- D. arp address

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 52

What is the result of issuing the frame-relay map ip 192.168.1.2 202 broadcast command?

- A. defines the destination IP address that is used in all broadcast packets on DLCI 202
- B. defines the source IP address that is used in all broadcast packets on DLCI 202
- C. defines the DLCI on which packets from the 192.168.1.2 IP address are received
- D. defines the DLCI that is used for all packets that are sent to the 192.168.1.2 IP address

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 53

Which command would you configure globally on a Cisco router that would allow you to view directly connected Cisco devices?

- A. enable cdp
- B. cdp enable
- C. cdp run
- D. run cdp

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 54

At which layer of the OSI model does IPsec operate?

- A. network
- B. transport
- C. session
- D. application

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 55

What are two characteristics of SSH? (Choose two.)

- A. most common remote-access method
- B. unsecured
- C. encrypted
- D. uses port 22
- E. operates at the transport layer

Correct Answer: DE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 56

Which of the following is true regarding unused ports on a switch?

- A. Unsecured ports can create a security hole.
- B. If a device is plugged into an unused port, it will not be added to the network.
- C. Secure unused ports by using the shutdown command.
- D. To disable a port, you must use the switchport disable command.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 57

Which of the following is a characteristic of full-duplex communication?

- A. It is a CSMA/CD network.
- B. It is a CSMA/CA network.
- C. It is point-to-point only.
- D. Hub communication is done via full duplex.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 58

A config-register setting of 0x2122 indicates which of the following?

- A. ignores break
- B. boots into the bootstrap
- C. performs a boot from a network device
- D. console baud rate of 9600

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 59

Which command displays the CHAP authentication process as it occurs between two routers?

- A. debug chap authentication
- B. debug authentication
- C. debug chap ppp
- D. debug ppp authentication

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 60

Which two data link layers are supported by Cisco IOS Software for IPv6? (Choose two.)

- A. FDDI
- B. PPP
- C. NBMA
- D. Frame Relay SVC
- E. Frame Relay PVC

Correct Answer: BE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 61

Which two are features of IPv6? (Choose two.)

- A. anycast
- B. broadcast
- C. multicast
- D. podcast
- E. allcast

Correct Answer: AC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 62

Which statement describes the process of dynamically assigning IP addresses by the DHCP server?

- A. Addresses are allocated after a negotiation between the server and the host to determine the length of the agreement.
- B. Addresses are permanently assigned so that the hosts uses the same address at all times.
- C. Addresses are assigned for a fixed period of time, at the end of the period, a new request for an address must be made.
- D. Addresses are leased to hosts, which periodically contact the DHCP server to renew the lease.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 63

If an ethernet port on a router was assigned an IP address of 172.16.112.1/20, what is the maximum number of hosts allowed on this subnet?

- A. 1024
- B. 2046
- C. 4094
- D. 4096
- E. 8190

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 64

A network administrator is configuring ACLs on a Cisco router, to allow traffic from hosts on networks 192.168.146.0, 192.168.147.0, 192.168.148.0, and 192.168.149.0 only.

Which two ACL statements, when combined, are the best for accomplishing this task? (Choose two.)

- A. access-list 10 permit ip 192.168.146.0 0.0.1.255
- B. access-list 10 permit ip 192.168.147.0 0.0.255.255
- C. access-list 10 permit ip 192.168.148.0 0.0.1.255
- D. access-list 10 permit ip 192.168.149.0 0.0.255.255
- E. access-list 10 permit ip 192.168.146.0 0.0.0.255
- F. access-list 10 permit ip 192.168.146.0 255.255.255.0

Correct Answer: AC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 65

An employee of ABC company has moved to an office on a different floor. Although the administrator is able to telnet to all of the routers, the address of Switch F is needed in order to verify that the employee remains in the same VLAN. Which action could be used by the administrator to find the IP address of Switch F?

- A. Issue the show ip route command on Router A.
- B. Issue the show ip route command on Router C.
- C. Issue the show cdp neighbors command on Router B.
- D. Issue the show cdp neighbors detail command on Router C.
- E. Issue the show arp command on Router A.
- F. Issue the show arp command on Router B.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 66

After the show ip route command has been entered, the following routes are displayed. Which route will not be entered into the routing table of a neighboring router?

- A. R 192.168.8.0/24 [120/1] via 192.168.2.2, 00:00:10, Serial0
- B. R 192.168.11.0/24 [120/7] via 192.168.9.1, 00:00:03, Serial1
- C. C 192.168.1.0/24 is directly connected, Ethernet0
- D. R 192.168.5.0/24 [120/15] via 192.168.2.2, 00:00:10, Serial0 459

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 67

What is the subnetwork address for a host with the IP address 201.100.5.68/28?

- A. 201.100.5.0
- B. 201.100.5.32
- C. 201.100.5.64
- D. 201.100.5.65
- E. 201.100.5.31
- F. 201.100.5.1

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 68

Which statement describes the rule of split horizon?

- A. Only routers can split boundaries (horizons) between concentric networks.
- B. All distance vector protocols require fall back routes that may cause momentary loops as the topology changes.
- C. Networks can only remain fully converged if all information about routes is sent out all active interfaces.
- D. Information about a route should not be sent back in the direction from which the original update came.
- E. Each AS must keep routing tables converged to prevent dead routes from being advertised across the AS boundary.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 69

While troubleshooting a network problem, a technician discovers that the current copy of the Cisco IOS is outdated and needs to be updated. Which of the following commands would the technician issue to replace the Cisco router IOS with the newer version?

- A. Router# copy tftp flash
- B. Router(config)# restore flash
- C. Router(config)# repair flash
- D. Router# copy flash run
- E. Router> copy start flash
- F. Router# copy start flash

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 70

A network administrator is planning a network installation for a large organization. The design requires 100 separate subnetworks, so the company has acquired a Class B network address. What subnet mask will provide the 100 subnetworks required, if 500 usable host addresses are required per subnet?

- A. 255.255.240.0
- B. 255.255.248.0
- C. 255.255.252.0

- D. 255.255.254.0
- E. 255.255.255.0
- F. 255.255.255.192

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 71

An administrator must assign static IP addresses to the servers in a network.

For network 192.168.20.24/29, the router is assigned the first usable host address while the sales server is given the last usable host address.

Which of the following should be entered into the IP properties box for the sales server?

- A. IP address: 192.168.20.14
Subnet Mask: 255.255.255.248
Default Gateway: 192.168.20.9
- B. IP address: 192.168.20.254
Subnet Mask: 255.255.255.0
Default Gateway: 192.168.20.1
- C. IP address: 192.168.20.30
Subnet Mask: 255.255.255.248
Default Gateway: 192.168.20.25
- D. IP address: 192.168.20.30
Subnet Mask: 255.255.255.240
Default Gateway: 192.168.20.17
- E. IP address: 192.168.20.30
Subnet Mask: 255.255.255.240
Default Gateway: 192.168.20.25

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 72

The network administrator of the Oregon router adds the following command to the router configuration:

```
ip route 192.168.12.0 255.255.255.0 172.16.12.1.
```

What are the results of adding this command? (Choose two.)

- A. The command establishes a static route.
- B. The command invokes a dynamic routing protocol for 192.168.12.0.
- C. Traffic for network 192.168.12.0 is forwarded to 172.16.12.1.
- D. Traffic for all networks is forwarded to 172.16.12.1.
- E. This route is automatically propagated throughout the entire network.
- F. Traffic for network 172.16.12.0 is forwarded to the 192.168.12.0 network.

Correct Answer: AC

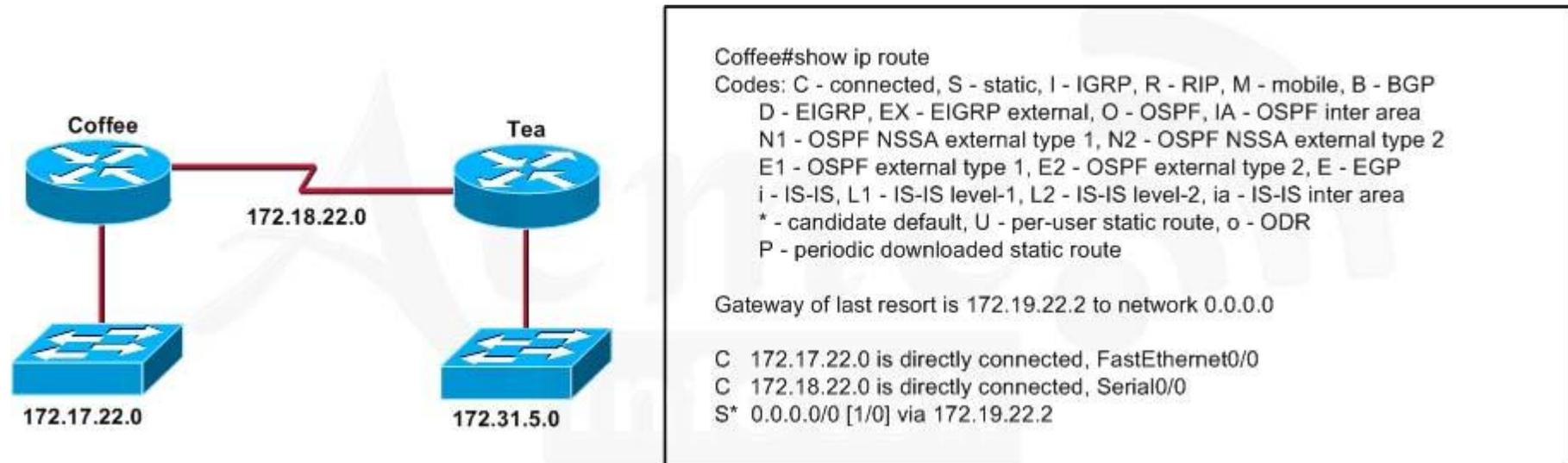
Section: (none)

Explanation

Explanation/Reference:

QUESTION 73

Users on the 172.17.22.0 network cannot reach the server located on the 172.31.5.0 network. The network administrator connected to router Coffee via the console port, issued the show ip route command, and was able to ping the server.



Based on the output of the show ip route command and the topology shown in the graphic, what is the cause of the failure?

- A. The network has not fully converged.
- B. IP routing is not enabled.
- C. A static route is configured incorrectly.
- D. The FastEthernet interface on Coffee is disabled.
- E. The neighbor relationship table is not correctly updated.
- F. The routing table on Coffee has not updated .

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 74

The network administrator has found the following problem.

Central# debug ip rip

<<some output text omitted>>

1d00h: RIP: received v1 update from 172.16.100.2 on Serial0/0

1d00h: 172.16.10.0 in 1 hops

1d00h: 172.16.20.0 in 1 hops

1d00h: 172.16.30.0 in 1 hops

Central# show ip route

Gateway of last resort is not set

172.17.0.0/24 is subnetted, 8 subnets

C 172.16.150.0 is directly connected, FastEthernet0/0

C 172.16.220.0 is directly connected, Loopback2

C 172.16.210.0 is directly connected, Loopback1

C 172.16.200.0 is directly connected, Loopback0

R 172.16.30.0 [120/1] via 172.16.100.2, 00:00:07, Serial0/0

S 172.16.200.0 [1/0] via 172.16.150.15

R 172.16.10.0 [120/1] via 172.16.100.2, 00:00:07, Serial0/0

C 172.16.100.0 is directly connected, Serial0/0

The remote networks 172.16.10.0, 172.16.20.0, and 172.16.30.0 are accessed through the Central router's serial 0/0 interface. No users are able to access 172.16.20.0. After reviewing the command output shown in the graphic, what is the most likely cause of the problem?

- A. no gateway of last resort on Central
- B. Central router's not receiving 172.16.20.0 update
- C. incorrect static route for 172.16.20.0
- D. 172.16.20.0 not located in Central's routing table

Correct Answer: C

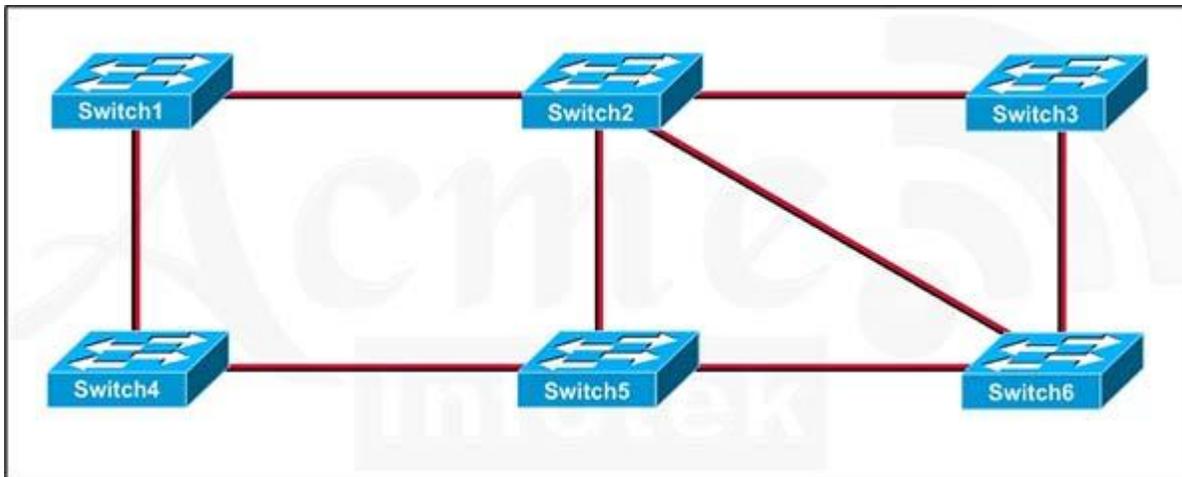
Section: (none)

Explanation

Explanation/Reference:

QUESTION 75

Refer to Exhibit:



Based on the network shown in the graphic which option contains both the potential networking problem and the protocol or setting that should be used to prevent the problem?

- A. routing loops, hold down timers
- B. switching loops, split horizon
- C. routing loops, split horizon
- D. switching loops, VTP
- E. routing loops, STP
- F. switching loops, STP

Correct Answer: F

Section: (none)

Explanation

Explanation/Reference:

QUESTION 76

What information does a router running a link-state protocol use to build and maintain its topological database? (Choose two.)

- A. hello packets
- B. SAP messages sent by other routers
- C. LSAs from other routers
- D. beacons received on point-to-point links
- E. routing tables received from other link-state routers
- F. TTL packets from designated routers

Correct Answer: AC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 77

Which statements describe the routing protocol OSPF? (Choose three.)

- A. It supports VLSM.
- B. It is used to route between autonomous systems.
- C. It confines network instability to one area of the network.
- D. It increases routing overhead on the network.
- E. It allows extensive control of routing updates.
- F. It is simpler to configure than RIP v2.

Correct Answer: ACE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 78

Which protocol reduces administrative overhead in a switched network by allowing the configuration of a new VLAN to be distributed to all the switches in a domain?

- A. STP
- B. VTP

- C. GVRP
- D. SNMP
- E. DHCP

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 79

A network administrator is trying to add a new router into an established OSPF network.

The networks attached to the new router do not appear in the routing tables of the other OSPF routers.

Given the information in the partial configuration shown below, what configuration error is causing this problem?

```
Router(config)# router ospf 1
Router(config-router)# network 10.0.0.0 255.0.0.0 area 0
```

- A. The process id is configured improperly.
- B. The OSPF area is configured improperly.
- C. The network wildcard mask is configured improperly.
- D. The network number is configured improperly.
- E. The AS is configured improperly.
- F. The network subnet mask is configured improperly.

Correct Answer: C

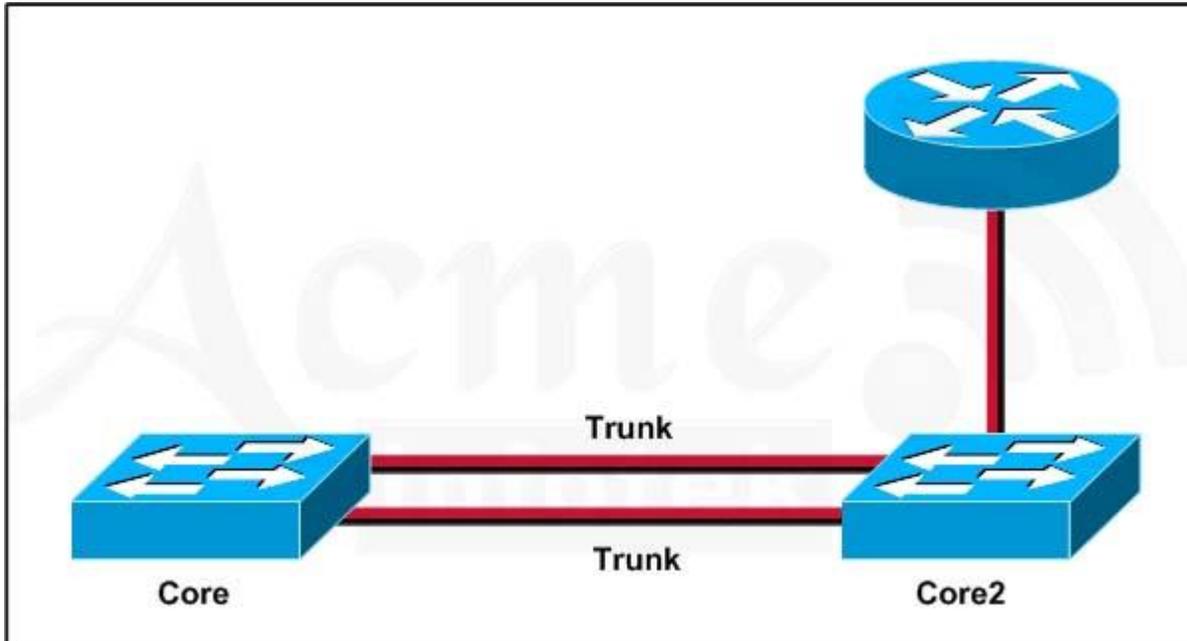
Section: (none)

Explanation

Explanation/Reference:

QUESTION 80

The switches shown in the diagram, Core and Core2, are both Catalyst 2950s.



The addressing scheme for each company site is as follows:

- Router Ethernet port - 1st usable address
- Core - 2nd usable address
- Core2 - 3rd usable address

For this network, which of the following commands must be configured on Core2 to allow it to be managed remotely from any subnet on the network? (Choose three.)

- A. Core2(config)# interface f0/0
Core2(config-if)# ip address 192.168.1.10 255.255.255.248
- B. Core2(config)# interface vlan 1
Core2(config-if)# ip address 192.168.1.11 255.255.255.248
- C. Core2(config)# line con 0
Core2(config-line)# password cisco
- D. Core2(config)# line vty 0 4
Core2(config-line)# password cisco
- E. Core2(config)# ip default-gateway 192.168.1.9
- F. Core2(config)# ip route 0.0.0.0 0.0.0.0 192.168.1.8

Correct Answer: BDE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 81

If all OSPF routers in a single area are configured with the same priority value, what value does a router use for the OSPF router ID in the absence of a loopback interface?

- A. the IP address of the first Fast Ethernet interface
- B. the IP address of the console management interface
- C. the highest IP address among its active interfaces
- D. the lowest IP address among its active interfaces
- E. the priority value until a loopback interface is configured

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 82

Which of the following describe the process identifier that is used to run OSPF on a router? (Choose two.)

- A. It is locally significant.
- B. It is globally significant.
- C. It is needed to identify a unique instance of an OSPF database.
- D. It is an optional parameter required only if multiple OSPF processes are running on the router.
- E. All routers in the same OSPF area must have the same process ID if they are to exchange routing information.

Correct Answer: AC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 83

The OSPF Hello protocol performs which of the following tasks? (Choose two.)

- A. It provides dynamic neighbor discovery.
- B. It detects unreachable neighbors in 90 second intervals.
- C. It maintains neighbor relationships.
- D. It negotiates correctness parameters between neighboring interfaces.
- E. It uses timers to elect the router with the fastest links as the designated router.
- F. It broadcasts hello packets throughout the internetwork to discover all routers that are running OSPF.

Correct Answer: AC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 84

Refer to the output of the corporate router routing table shown in the graphic.

Corp# show ip route

Gateway of last resort is not set

```
C 192.168.13.0/24 is directly connected, Serial0/1
C 192.168.14.0/24 is directly connected, FastEthernet0/0
C 192.168.15.0/24 is directly connected, Serial0/1.102
C 192.168.20.0/24 is directly connected, Serial0/1.117
R 192.168.16.0/24 [120/1] via 192.168.15.2, 00:00:05, Serial0/0.102
R 192.168.17.0/24 [120/1] via 192.168.15.2, 00:00:05, Serial0/0.102
R 192.168.30.0/24 [120/2] via 192.168.20.2, 00:00:25, Serial0/0.117
R 192.168.19.0/24 [120/1] via 192.168.20.2, 00:00:25, Serial0/0.117
R 192.168.21.0/24 [120/3] via 192.168.20.2, 00:00:25, Serial0/0.117
R 192.168.214.0/24 [120/1] via 192.168.14.2, 00:00:22, FastEthernet0/0
```

The corporate router receives an IP packet with a source IP address of 192.168.214.20 and a destination address of 192.168.22.3. What will the router do with this packet?

- A. It will encapsulate the packet as Frame Relay and forward it out interface Serial 0/0.117.
- B. It will discard the packet and send an ICMP Destination Unreachable message out interface FastEthernet 0/0.
- C. It will forward the packet out interface Serial 0/1 and send an ICMP Echo Reply message out interface serial 0/0.102.
- D. It will change the IP packet to an ARP frame and forward it out FastEthernet 0/0.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 85

A network administrator is troubleshooting the OSPF configuration of routers R1 and R2. The routers cannot establish an adjacency relationship on their common Ethernet link. The graphic shows the output of the show ip ospf interface e0 command for routers R1 and R2.

R1 Ethernet0 is up, line protocol is up
Internet address is 192.168.1.2/24, Area 0
Process ID 1, Router ID 192.168.31.33, Network Type BROADCAST, Cost: 1
Transmit Delay is 1 sec, State DR, Priority 1
Designated Router (ID) 192.168.31.33, Interface address 192.168.1.2
No backup designated router on this network
Timer intervals configured, Hello 5, Dead 20, Wait 20, Retransmit 5

R2 Ethernet0 is up, line protocol is up
Internet address is 192.168.1.1/24, Area 0
Process ID 1, Router ID 192.168.31.11, Network Type BROADCAST, Cost: 1
Transmit Delay is 1 sec, State DR, Priority 1
Designated Router (ID) 192.168.31.11, Interface address 192.168.1.11
No backup designated router on this network
Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5

Based on the information in the graphic, what is the cause of this problem?

- A. The OSPF area is not configured properly.
- B. The priority on R1 should be set higher.
- C. The cost on R1 should be set higher.
- D. The hello and dead timers are not configured properly.
- E. A backup designated router needs to be added to the network.
- F. The OSPF process ID numbers must match.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 86

What is the default administrative distance of the OSPF routing protocol?

- A. 90
- B. 100
- C. 110
- D. 120
- E. 130
- F. 170

Correct Answer: C

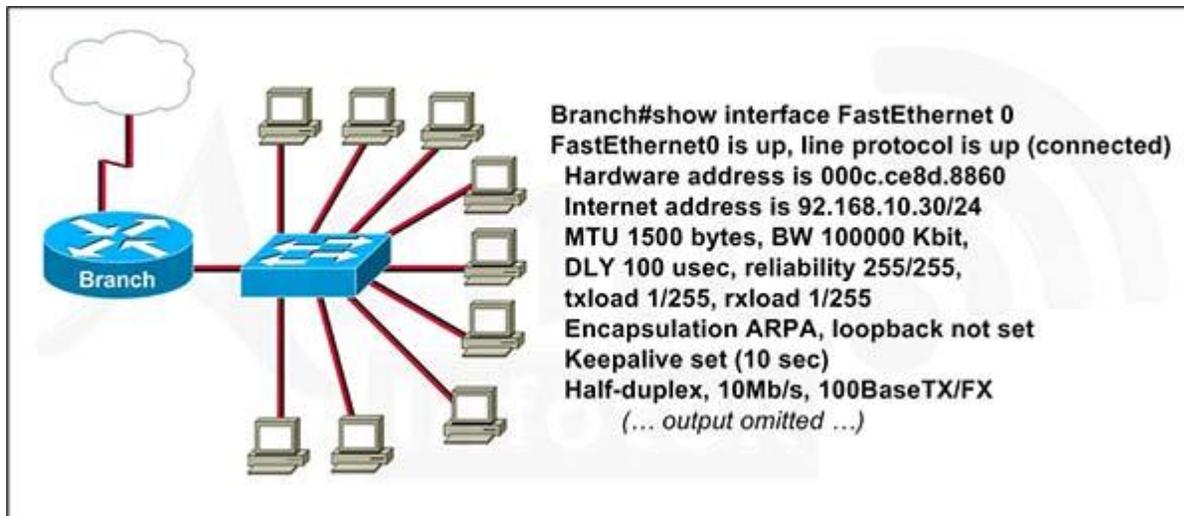
Section: (none)

Explanation

Explanation/Reference:

QUESTION 87

A router has been configured to provide the nine users on the branch office LAN with Internet access, as shown in the diagram.



It is found that some of the users on the LAN cannot reach the Internet.

Based on the topology and router output shown, which command should be issued on the router to correct the problem?

- A. Branch(config-if)# no shutdown
- B. Branch(config-if)# duplex full
- C. Branch(config-if)# no keepalive
- D. Branch(config-if)# ip address 192.168.10.30 255.255.255.240
- E. Branch(config-if)# bandwidth 100
- F. Branch(config-if)# encapsulation 802.3

Correct Answer: D

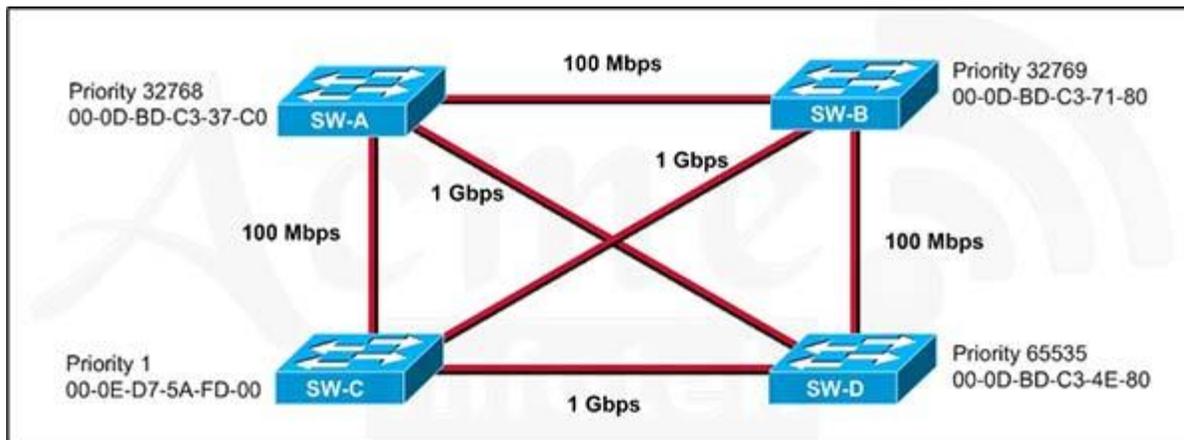
Section: (none)

Explanation

Explanation/Reference:

QUESTION 88

Refer to the exhibit.



Based on the information given, which switch will be elected root bridge and why?

- A. Switch A, because it has the lowest MAC address
- B. Switch A, because it is the most centrally located switch
- C. Switch B, because it has the highest MAC address
- D. Switch C, because it is the most centrally located switch
- E. Switch C, because it has the lowest priority

F. Switch D, because it has the highest priority

Correct Answer: E

Section: (none)

Explanation

Explanation/Reference:

QUESTION 89

What does a Layer 2 switch use to decide where to forward a received frame?

- A. source MAC address
- B. source IP address
- C. source switch port
- D. destination IP address
- E. destination port address
- F. destination MAC address

Correct Answer: F

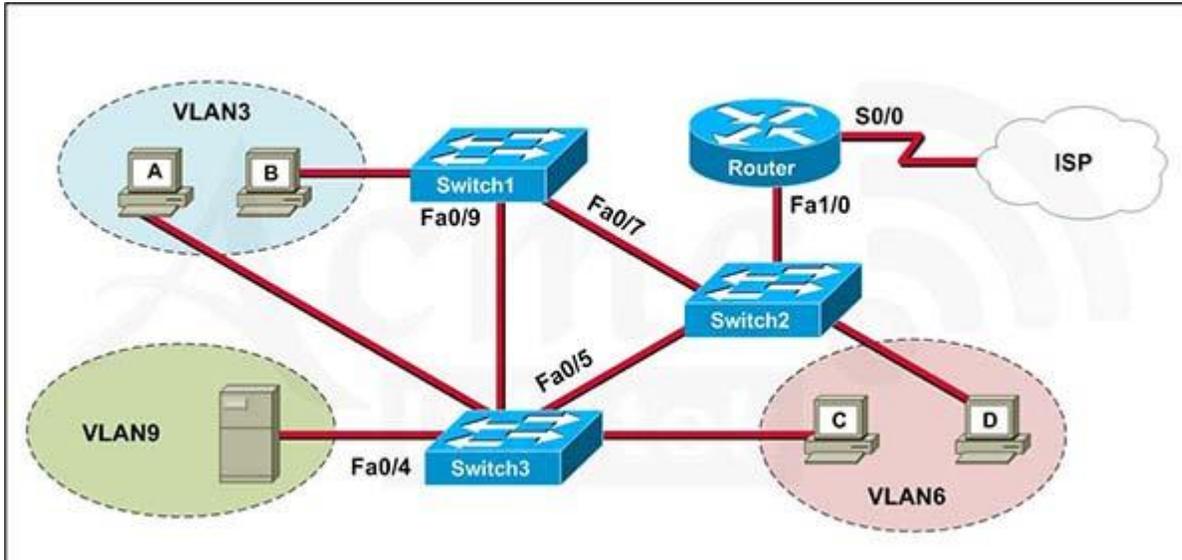
Section: (none)

Explanation

Explanation/Reference:

QUESTION 90

Refer to the exhibit.



A problem with network connectivity has been observed. It is suspected that the cable connected to switch port Fa0/9 on Switch1 is disconnected. What would be an effect of this cable being disconnected?

- A. Host B would not be able to access the server in VLAN9 until the cable is reconnected.
- B. Communication between VLAN3 and the other VLANs would be disabled.
- C. The transfer of files from Host B to the server in VLAN9 would be significantly slower.
- D. For less than a minute, Host B would not be able to access the server in VLAN9. Then normal network function would resume.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 91

Which two benefits can be obtained by using VTP in a switching environment? (Choose two.)

- A. Allowing frames from multiple VLANs to use a single interface.
- B. Allowing switches to read frame tags.
- C. Maintaining VLAN consistency across a switched network.

- D. Allowing VLAN information to be automatically propagated throughout the switching environment.
- E. It allows ports to be assigned to VLANs automatically.

Correct Answer: CD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 92

Which two statements are true about the command `ip route 172.16.3.0 255.255.255.0 192.168.2.4`? (Choose two.)

- A. It establishes a static route to the 172.16.3.0 network.
- B. It configures the router to send any traffic for an unknown destination to the 172.16.3.0 network.
- C. It creates a static route to the 192.168.2.0 network.
- D. It uses the default administrative distance.
- E. It configures the router to send any traffic for an unknown destination out the interface with the address 192.168.2.4.
- F. It is a route that would be used last if other routes to the same destination exist.

Correct Answer: AD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 93

Which two of the following are advantages of Layer 2 Ethernet switches over hubs? (Choose two.)

- A. To increase the size of broadcast domains
- B. To filter frames according to MAC addresses
- C. To allow simultaneous frame transmissions
- D. To increase the maximum length of UTP cabling between devices
- E. decreasing the number of collision domains
- F. increasing the size of broadcast domains

Correct Answer: BC

Section: (none)

Explanation

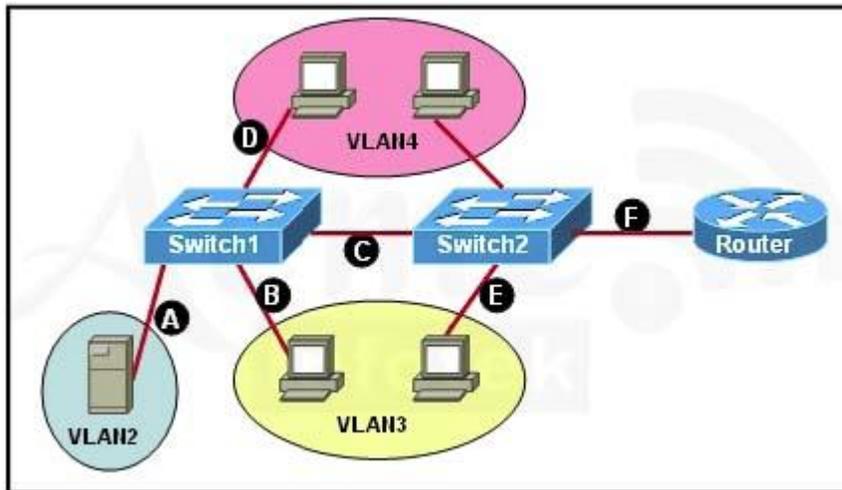
Explanation/Reference:

QUESTION 94

Refer to the exhibit.

A network associate needs to configure the switches and router in the graphic so that the hosts in VLAN3 and VLAN4 can communicate with the enterprise server in VLAN2.

Which two Ethernet segments would need to be configured as trunk links? (Choose two.)



- A. A
- B. B
- C. C
- D. D
- E. E
- F. F

Correct Answer: CF

Section: (none)

Explanation

Explanation/Reference:

QUESTION 95

Which two values are used by Spanning Tree Protocol to elect a root bridge? (Choose two.)

- A. bridge priority
- B. IP address
- C. MAC address
- D. IOS version
- E. amount of RAM
- F. speed of the links

Correct Answer: AC

Section: (none)

Explanation

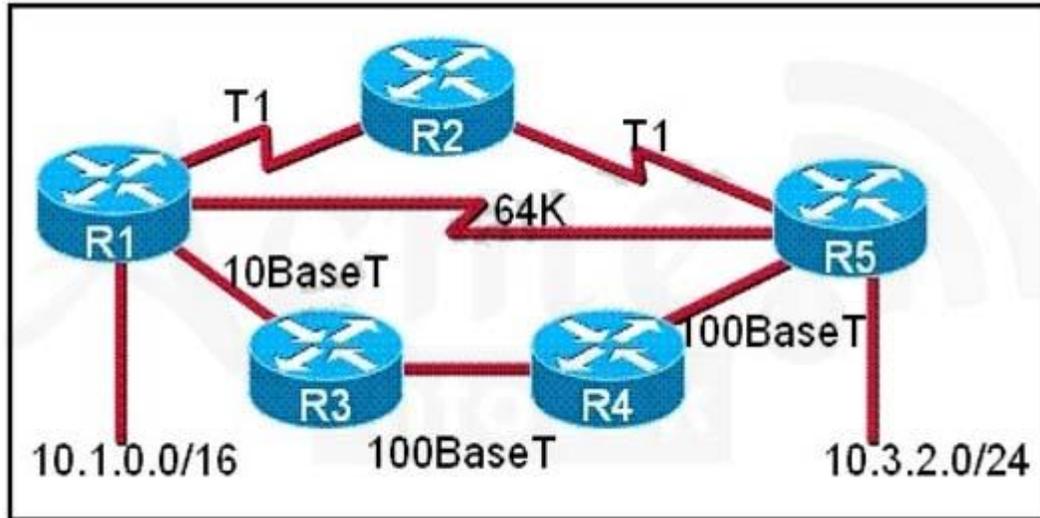
Explanation/Reference:

QUESTION 96

Refer to the exhibit.

Assume that the routing protocol referenced in each choice below is configured with its default settings and the given routing protocol is running on all the routers.

Which two conditional statements accurately state the path that will be chosen between networks 10.1.0.0 and 10.3.2.0 for the routing protocol mentioned? (Choose two.)



- A. If OSPF is the routing protocol, the path will be from R1 to R3 to R4 to R5.
- B. If OSPF is the routing protocol, the path will be from R1 to R2 to R5.
- C. If OSPF is the routing protocol, the path will be from R1 to R5.
- D. If RIPv2 is the routing protocol, the path will be from R1 to R3 to R4 to R5.
- E. If RIPv2 is the routing protocol, the path will be from R1 to R5.

Correct Answer: AE

Section: (none)

Explanation

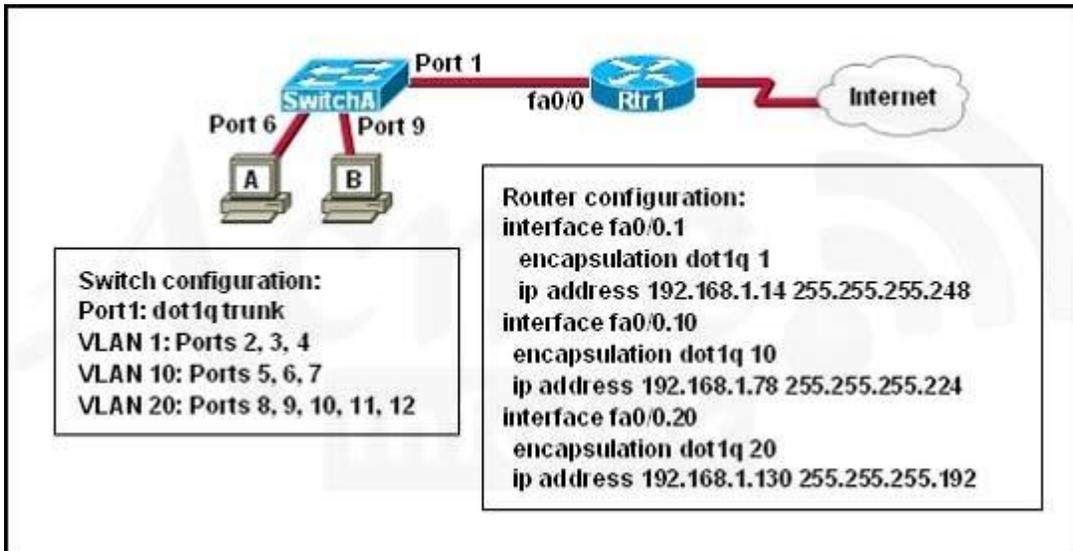
Explanation/Reference:

QUESTION 97

Refer to the exhibit.

A network administrator is adding two new hosts to SwitchA.

Which three values could be used for the configuration of these hosts? (Choose three.)



- A. host A IP address: 192.168.1.79
- B. host A IP address: 192.168.1.64
- C. host A default gateway: 192.168.1.78
- D. host B IP address: 192.168.1.128
- E. host B default gateway: 192.168.1.129
- F. host B IP address: 192.168.1.190

Correct Answer: ACF

Section: (none)

Explanation

Explanation/Reference:

QUESTION 98

What will happen after changing the configuration register to 0x2142 and rebooting the router? (Choose two.)

- A. The IOS image will be ignored.
- B. The router will prompt to enter initial configuration mode.
- C. The router will boot to ROM.
- D. Any configuration entries in NVRAM will be ignored.

E. The configuration in flash memory will be booted.

Correct Answer: BD

Section: (none)

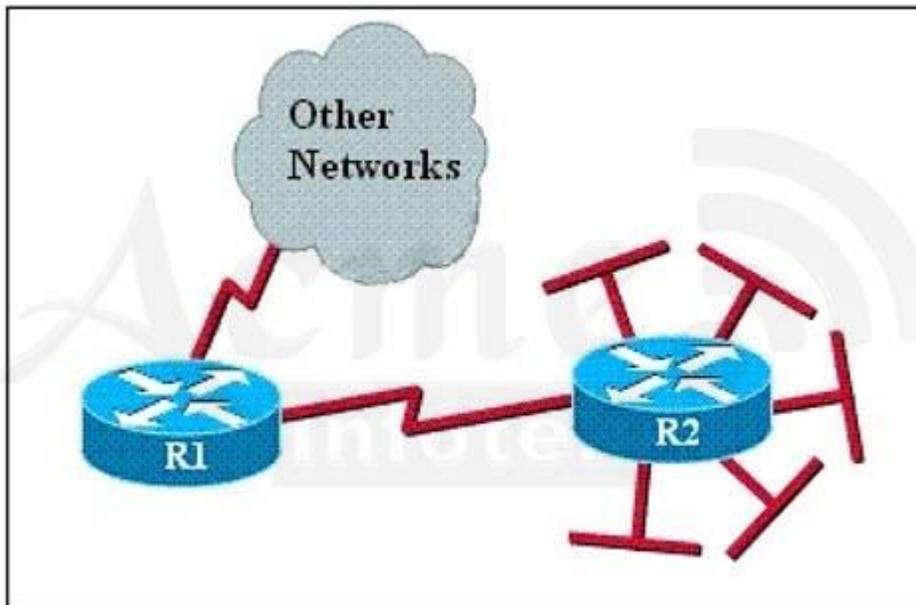
Explanation

Explanation/Reference:

QUESTION 99

Refer to the exhibit.

The networks connected to router R2 have been summarized as a 192.168.176.0/21 route and sent to R1. Which two packet destination addresses will R1 forward to R2? (Choose two.)



- A. 192.168.194.160
- B. 192.168.183.41
- C. 192.168.159.2
- D. 192.168.183.255
- E. 192.168.179.4
- F. 192.168.184.45

Correct Answer: BE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 100

Which three statements are typical characteristics of VLAN arrangements? (Choose three.)

- A. A new switch has no VLANs configured.
- B. Connectivity between VLANs requires a Layer 3 device.
- C. VLANs typically decrease the number of collision domains.
- D. Each VLAN uses a separate address space.
- E. A switch maintains a separate bridging table for each VLAN.
- F. VLANs cannot span multiple switches.

Correct Answer: BDE

Section: (none)

Explanation

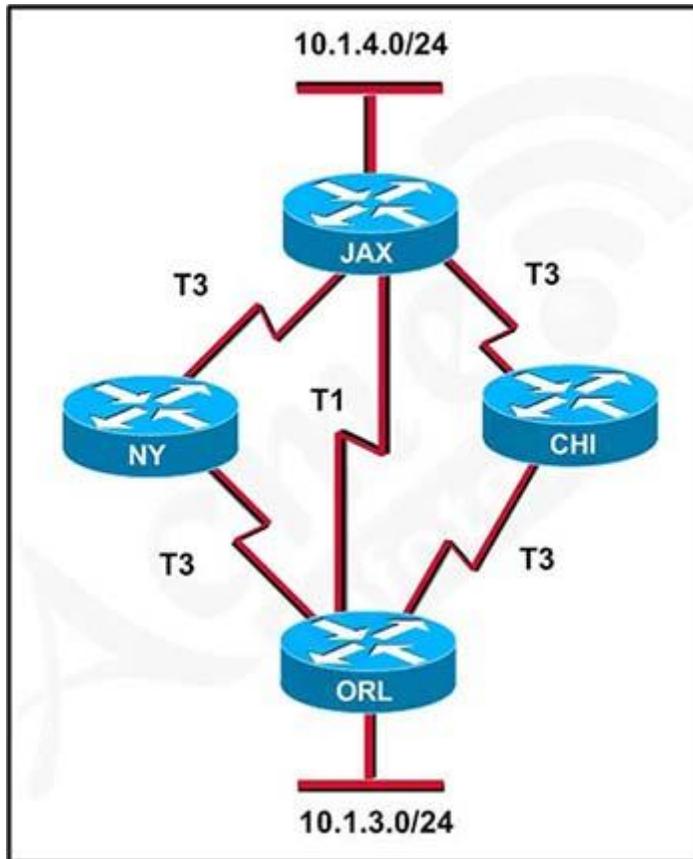
Explanation/Reference:

Exam

QUESTION 1

Refer to the exhibit.

Which three statements are true about how router JAX will choose a path to the 10.1.3.0/24 network when different routing protocols are configured? (Choose three.)



- A. By default, if RIPv2 is the routing protocol, only the path JAX-ORL will be installed into the routing table.
- B. The equal cost paths JAX-CHI-ORL and JAX- NY-ORL will be installed in the routing table if RIPv2 is the routing protocol.
- C. When EIGRP is the routing protocol, only the path JAX-ORL will be installed in the routing table by default.
- D. When EIGRP is the routing protocol, the equal cost paths JAX-CHI-ORL, and JAX-NY-ORL will be installed in the routing table by default.
- E. With EIGRP and OSPF both running on the network with their default configurations, the EIGRP paths will be installed in the routing table.

F. The OSPF paths will be installed in the routing table, if EIGRP and OSPF are both running on the network with their default configurations.

Correct Answer: ADE

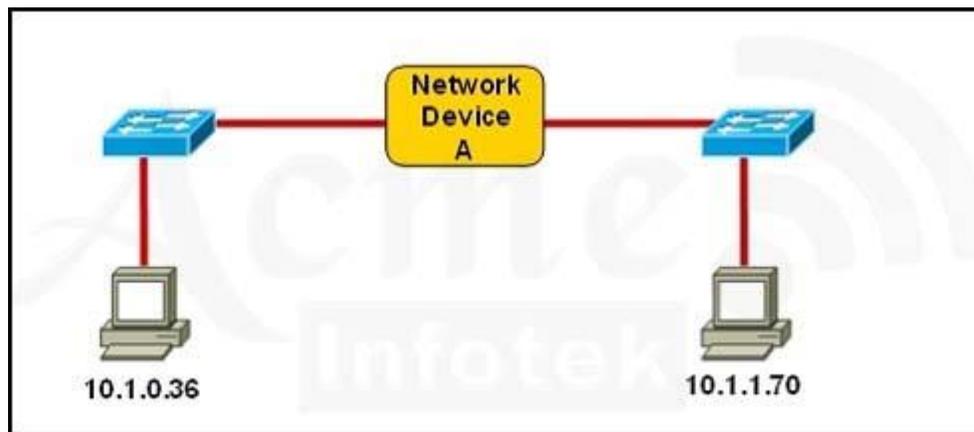
Section: (none)

Explanation

Explanation/Reference:

QUESTION 2

Refer to the exhibit. Which three statements correctly describe Network Device A? (Choose three.)



- A. With a network wide mask of 255.255.255.128, each interface does not require an IP address.
- B. With a network wide mask of 255.255.255.128, each interface does require an IP address on a unique IP subnet.
- C. With a network wide mask of 255.255.255.0, must be a Layer 2 device for the PCs to communicate with each other.
- D. With a network wide mask of 255.255.255.0, must be a Layer 3 device for the PCs to communicate with each other.
- E. With a network wide mask of 255.255.254.0, each interface does not require an IP address.

Correct Answer: BDE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 3

On the basis of the IEEE 802.1w standard, which two switch ports can forward traffic?

- A. alternate
- B. backup
- C. designated
- D. disabled
- E. root

Correct Answer: CE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 4

Refer to the exhibit.

Given the output shown from this Cisco Catalyst 2950, what is the most likely reason that interface FastEthernet 0/10 is not the root port for VLAN 2?

```
Switch#show spanning-tree interface fastethernet0/10
Vlan          Role Sts Cost      Prio.Nbr Type
-----
VLAN0001      Root FWD 19        128.1    P2p
VLAN0002      Altn FWD 19        128.1    P2p
VLAN0003      Root FWD 19        128.1    P2p
```

- A. This switch has more than one interface connected to the root network segment in VLAN 2.
- B. This switch is running RSTP while the elected designated switch is running 802.1d Spanning Tree.
- C. This switch interface has a higher path cost to the root bridge than another in the topology.
- D. This switch has a lower bridge ID for VLAN 2 than the elected designated switch.

Correct Answer: C

Section: (none)

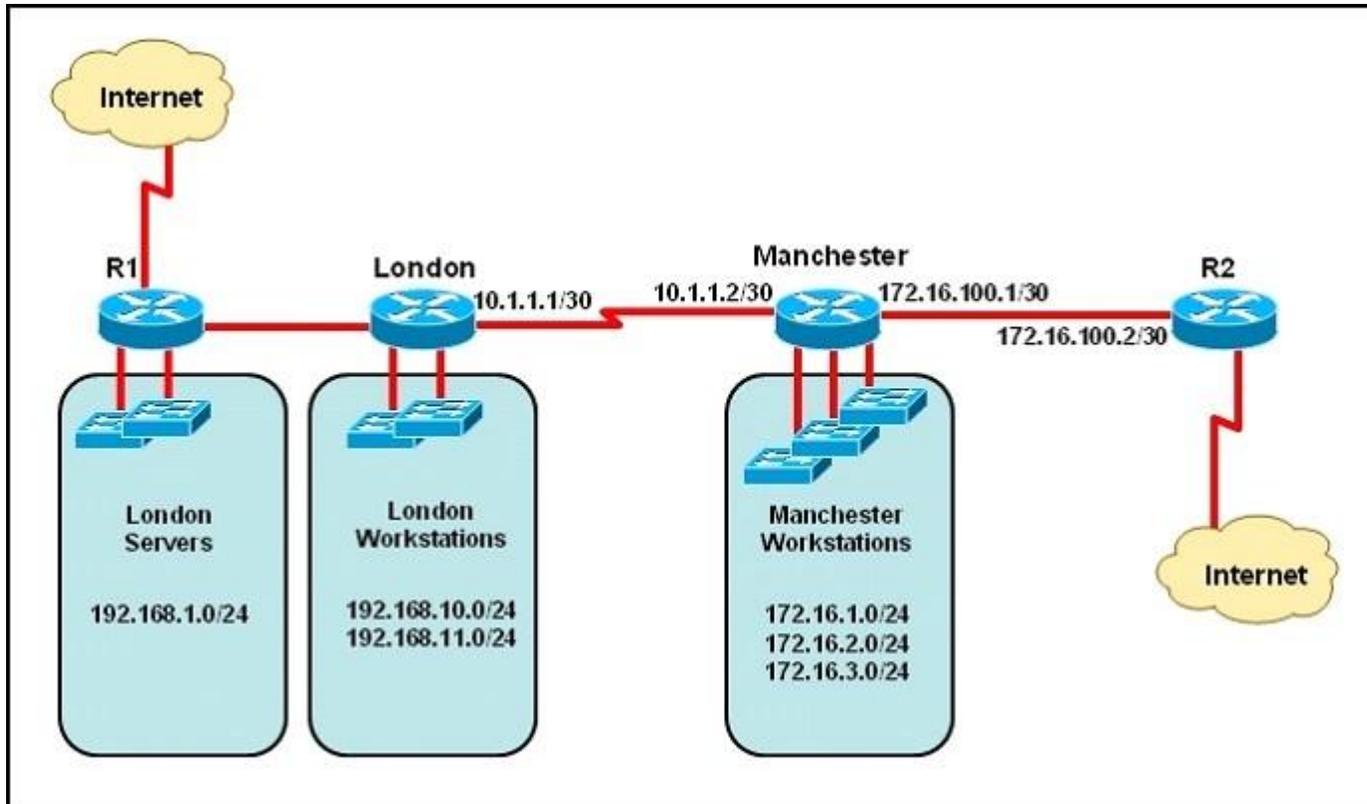
Explanation

Explanation/Reference:

QUESTION 5

Refer to the exhibit.

The network administrator must establish a route by which London workstations can forward traffic to the Manchester workstations. What is the simplest way to accomplish this?



- Configure a dynamic routing protocol on London to advertise all routes to Manchester.
- Configure a dynamic routing protocol on London to advertise summarized routes to Manchester.
- Configure a dynamic routing protocol on Manchester to advertise a default route to the London router.
- Configure a static default route on London with a next hop of 10.1.1.1.
- Configure a static route on London to direct all traffic destined for 172.16.0.0/22 to 10.1.1.2.

F. Configure Manchester to advertise a static default route to London.

Correct Answer: E

Section: (none)

Explanation

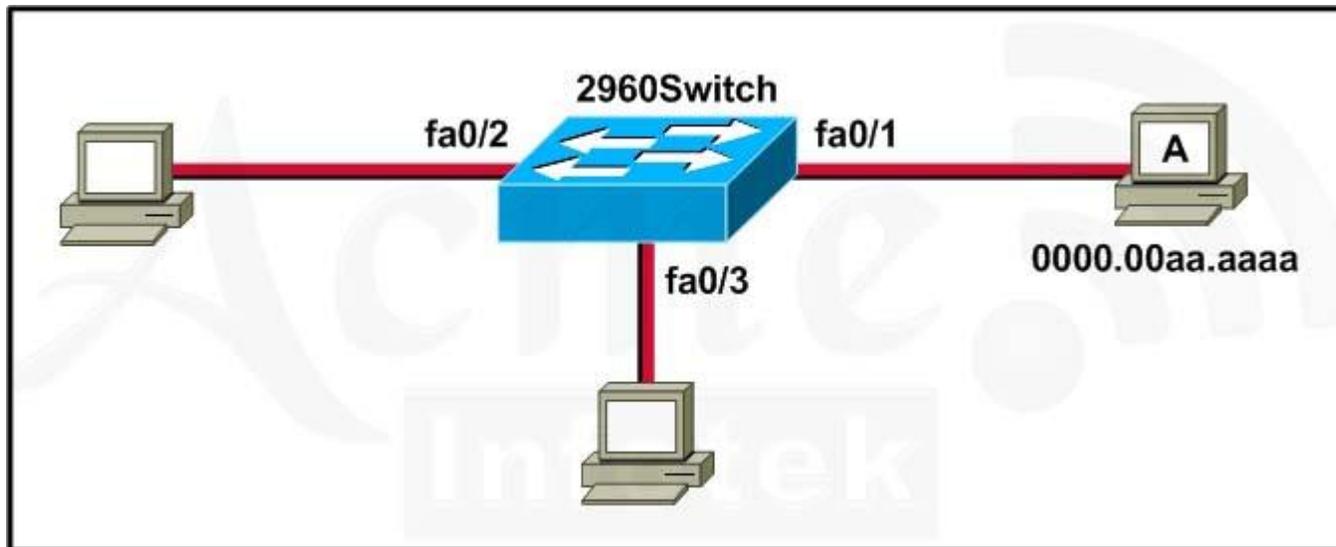
Explanation/Reference:

QUESTION 6

Refer to the exhibit.

This command is executed on 2960Switch:

```
2960Switch(config)# mac-address-table static 0000.00aa.aaaa vlan 10 interface fa0/1
```



Which two of these statements correctly identify results of executing the command? (Choose two.)

- A. Port security is implemented on the fa0/1 interface.
- B. MAC address 0000.00aa.aaaa does not need to be learned by this switch.
- C. Only MAC address 0000.00aa.aaaa can source frames on the fa0/1 segment.
- D. Frames with a Layer 2 source address of 0000.00aa.aaaa will be forwarded out fa0/1.
- E. MAC address 0000.00aa.aaaa will be listed in the MAC address table for interface fa0/1 only.

Correct Answer: BE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 7

Which of the following describes the roles of devices in a WAN? (Choose three.)

- A. A CSU/DSU terminates a digital local loop.
- B. A modem terminates a digital local loop.
- C. A CSU/DSU terminates an analog local loop.
- D. A modem terminates an analog local loop.
- E. A router is commonly considered a DTE device.
- F. A router is commonly considered a DCE device.

Correct Answer: ADE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 8

What are two characteristics of Telnet? (Choose two.)

- A. It sends data in clear text format.
- B. It is no longer supported on Cisco network devices.
- C. It is more secure than SSH.
- D. It requires an enterprise license in order to be implemented.
- E. It requires that the destination device be configured to support Telnet connections.

Correct Answer: AE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 9

Which two security appliances will you use in a network? (Choose two.)

- A. ATM
- B. ids
- C. ios
- D. iox
- E. ips
- F. SDM

Correct Answer: BE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 10

A single 802.11g access point has been configured and installed in the center of a square office.

A few wireless users are experiencing slow performance and drops while most users are operating at peak efficiency.

What are three likely causes of this problem? (Choose three.)

- A. mismatched TKIP encryption
- B. null SSID
- C. cordless phones
- D. mismatched SSID
- E. metal file cabinets
- F. antenna type or direction

Correct Answer: CEF

Section: (none)

Explanation

Explanation/Reference:

QUESTION 11

Given that Host A and Host B are in different networks. When Host A is trying to communicate with Host B, which step will Host A take first?

- A. Send a TCP SYN and wait for the SYN ACK with the IP address of Host B.
- B. Drop the data.
- C. Create an ARP request to get a MAC address for Host B.
- D. Send the data frames to the default gateway.

Correct Answer: D

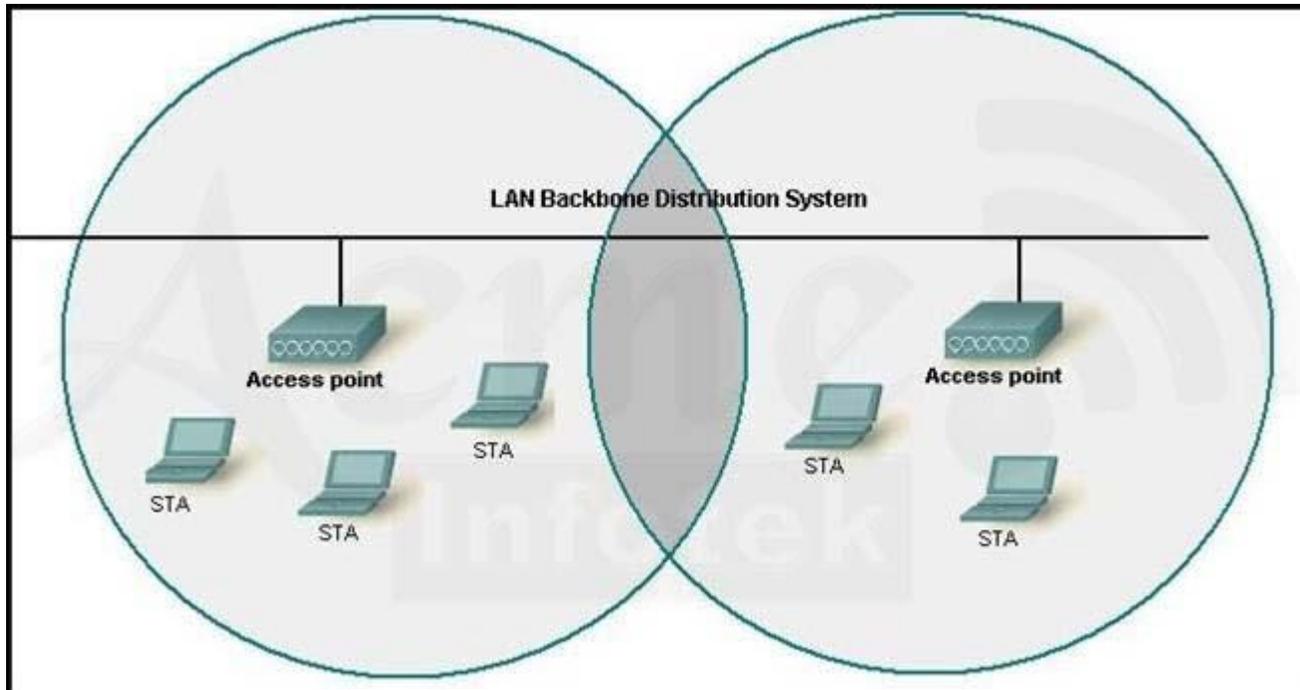
Section: (none)

Explanation

Explanation/Reference:

QUESTION 12

Refer to the exhibit. What two facts can be determined from the WLAN diagram? (Choose two.)



- A. The area of overlap of the two cells represents a basic service set (BSS).
- B. The network diagram represents an extended service set (ESS).

- C. Access points in each cell must be configured to use channel 1.
- D. The area of overlap must be less than 10% of the area to ensure connectivity.
- E. The two APs should be configured to operate on different channels.

Correct Answer: BE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 13

Which two devices can interfere with the operation of a wireless network because they operate on similar frequencies? (Choose two.)

- A. toaster
- B. IP phone
- C. AM radio
- D. cordless phone
- E. microwave oven
- F. copier

Correct Answer: DE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 14

Which two descriptions are correct about characteristics of IPv6 unicast addressing? (Choose two.)

- A. Global addresses start with 2000::/3.
- B. Link-local addresses start with FE00:/12.
- C. Link-local addresses start with FF00::/10.
- D. There is only one loopback address and it is ::1.
- E. If a global address is assigned to an interface, then that is the only allowable address for the interface.

Correct Answer: AD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 15

Refer to the exhibit. Which statement is true?

```
SwitchA# show spanning-tree vlan 20
```

```
VLAN0020
```

```
Spanning tree enabled protocol rstp
```

```
Root ID    Priority    24596  
Address    0017.596d.2a00  
Cost       38  
Port       11(FastEthernet0/10)  
Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec
```

```
Bridge ID  Priority    28692 (priority 28672 sys-id-ext 1)  
Address    0017.596d.1580  
Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec  
Aging Time 300
```

Interface	Role	Sts	Cost	Prio.Nbr	Type
Fa0/11	Root	FWD	19	128.11	P2p
Fa0/12	Altn	BLK	19	128.12	P2p

- A. The Fa0/11 role confirms that SwitchA is the root bridge for VLAN 20.
- B. VLAN 20 is running the Per VLAN Spanning Tree Protocol.
- C. The MAC address of the root bridge is 0017.596d.1580.
- D. SwitchA is not the root bridge, because not all of the interface roles are designated.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 16

Which two of these statements are true of IPv6 address representation? (Choose two.)

- A. There are four types of IPv6 addresses: unicast, multicast, anycast, and broadcast.
- B. A single interface may be assigned multiple IPv6 addresses of any type.
- C. Every IPv6 interface contains at least one loopback address.
- D. The first 64 bits represent the dynamically created interface ID.
- E. Leading zeros in an IPv6 16 bit hexadecimal field are mandatory.

Correct Answer: BC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 17

What are three basic parameters to configure on a wireless access point? (Choose three.)

- A. SSID
- B. RTS/CTS
- C. AES-CCMP
- D. TKIP/MIC
- E. RF channel
- F. authentication method

Correct Answer: AEF

Section: (none)

Explanation

Explanation/Reference:

QUESTION 18

Refer to the exhibit.

A system administrator installed a new switch using a script to configure it. IP connectivity was tested using pings to SwitchB. Later attempts to access NewSwitch using Telnet from SwitchA failed. Which statement is true?

```
SwitchA# show spanning-tree vlan 20

VLAN0020
  Spanning tree enabled protocol rstp
  Root ID    Priority    24596
             Address    0017.596d.2a00
             Cost        38
             Port        11 (FastEthernet0/11)
             Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec
  Bridge ID  Priority    28692 (priority 28672 sys-id-ext 20)
             Address    0017.596d.1580
             Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec
             Aging Time 300

Interface    Role Sts Cost      Prio.Nbr Type
-----
Fa0/11       Root FWD 19        128.11  P2p
Fa0/12       Altn BLK 19        128.12  P2p
```

- A. Executing password recovery is required.
- B. The virtual terminal lines are misconfigured.
- C. Use Telnet to connect to RouterA and then to NewSwitch to correct the error.
- D. Power cycle of NewSwitch will return it to a default configuration.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 19

Which two of these statements regarding RSTP are correct? (Choose two.)

- A. RSTP cannot operate with PVST+.
- B. RSTP defines new port roles.
- C. RSTP defines no new port states.

- D. RSTP is a proprietary implementation of IEEE 802.1D STP.
- E. RSTP is compatible with the original IEEE 802.1D STP.

Correct Answer: BE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 20

Which three of these statements regarding 802.1 Q trunking are correct? (Choose three.)

- A. 802.1 Q native VLAN frames are untagged by default.
- B. 802.1 Q trunking ports can also be secure ports.
- C. 802.1 Q trunks can use 10 Mb/s Ethernet interfaces.
- D. 802.1 Q trunks require full-duplex, point-to-point connectivity.
- E. 802.1 Q trunks should have native VLANs that are the same at both ends.

Correct Answer: ACE

Section: (none)

Explanation

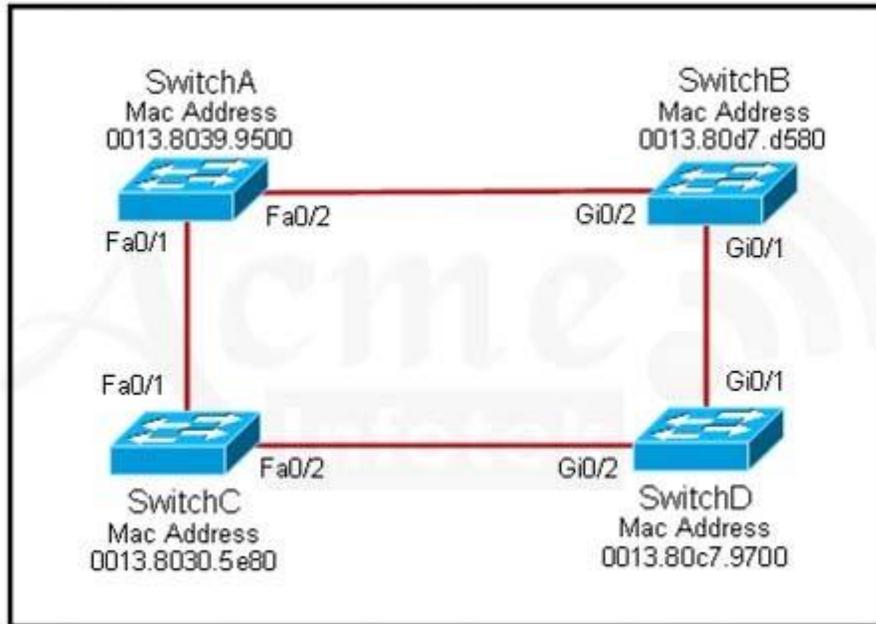
Explanation/Reference:

QUESTION 21

Refer to the exhibit.

Each of these four switches has been configured with a hostname, as well as being configured to run RSTP. No other configuration changes have been made.

Which three of these show the correct RSTP port roles for the indicated switches and interfaces? (Choose three.)



- A. SwitchA, Fa0/2, designated
- B. SwitchA, Fa0/1, root
- C. SwitchB, Gi0/2, root
- D. SwitchB, Gi0/1, designated
- E. SwitchC, Fa0/2, root
- F. SwitchD, Gi0/2, root

Correct Answer: ABF

Section: (none)

Explanation

Explanation/Reference:

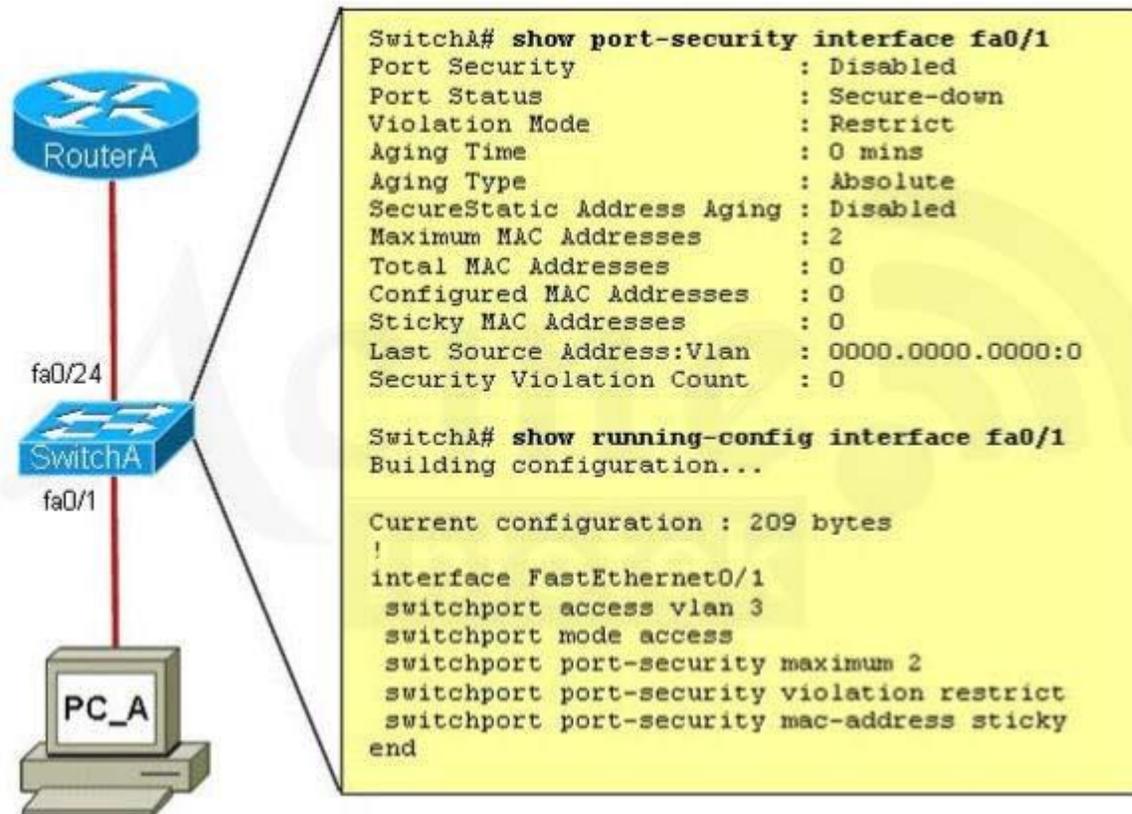
QUESTION 22

Refer to the exhibit.

A junior network administrator was given the task of configuring port security on SwitchA to allow only PC_A to access the switched network through port fa0/1.

If any other device is detected, the port is to drop frames from this device. The administrator configured the interface and tested it with successful pings

from PC_A to RouterA, and then observes the output from these two show commands.



Which two of these changes are necessary for SwitchA to meet the requirements? (Choose two.)

- A. Configure port security to shut down the interface in the event of a violation.
- B. Port security needs to be enabled on the interface.
- C. Enable port security globally.
- D. Port security needs to be configured to allow only one learned MAC address.
- E. Port security interface counters need to be cleared before using the show command.
- F. The port security configuration needs to be saved to NVRAM before it can become active.

Correct Answer: BD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 23

Which of the following correctly describe steps in the OSI data encapsulation process? (Choose two)

- A. The transport layer divides a data stream into segments and may add reliability and flow control information.
- B. The data link layer adds physical source and destination addresses and an FCS to the segment.
- C. Packets are created when the network layer encapsulates a frame with source and destination host addresses and protocol-related control information.
- D. Packets are created when the network layer adds Layer 3 addresses and control information to a segment.
- E. The presentation layer translates bits into voltages for transmission across the physical link.

Correct Answer: AD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 24

For which type of connection should a straight-through cable be used?

- A. switch to switch
- B. switch to hub
- C. switch to router
- D. hub to hub
- E. router to PC

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 25

Which set of commands is recommended to prevent the use of a hub in the access layer?

- A. `switch(config-if)#switchport mode trunk`
`switch(config-if)#switchport port-security maximum 1`
- B. `switch(config-if)#switchport mode trunk`
`switch(config-if)#switchport port-security mac-address 1`
- C. `switch(config-if)#switchport mode access`
`switch(config-if)#switchport port-security maximum 1`
- D. `switch(config-if)#switchport mode access`
`switch(config-if)#switchport port-security mac-address 1`

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 26

By default, each port in a Cisco Catalyst switch is assigned to VLAN1. Which two recommendations are key to avoid unauthorized management access? (Choose two.)

- A. Create an additional ACL to block the access to VLAN 1.
- B. Move the management VLAN to something other than default.
- C. Move all ports to another VLAN and deactivate the default VLAN.
- D. Limit the access in the switch using port security configuration.
- E. Use static VLAN in trunks and access ports to restrict connections.
- F. Shutdown all unused ports in the Catalyst switch.

Correct Answer: BF

Section: (none)

Explanation

Explanation/Reference:

QUESTION 27

Which Cisco Catalyst feature automatically disables the port in an operational PortFast upon receipt of a BPDU?

- A. BackboneFast
- B. UplinkFast
- C. Root Guard
- D. BPDU Guard
- E. BPDU Filter

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 28

Which type of cable is used to connect the COM port of a host to the COM port of a router or switch?

- A. crossover
- B. straight-through
- C. rolled
- D. shielded twisted-pair

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 29

What is known as "one-to-nearest" addressing in IPv6?

- A. global unicast
- B. anycast
- C. multicast
- D. unspecified address

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 30

Which option is a valid IPv6 address?

- A. 2001:0000:130F::099a::12a
- B. 2002:7654:A1AD:61:81AF:CCC1
- C. FEC0:ABCD:WXYZ:0067::2A4
- D. 2004:1:25A4:886F::1

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 31

How many bits are contained in each field of an IPv6 address?

- A. 24
- B. 4
- C. 8
- D. 16

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 32

Which layer of the OSI reference model uses the hardware address of a device to ensure message delivery to the proper host on a LAN?

- A. physical
- B. data link
- C. network
- D. transport

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 33

Which layer of the OSI reference model uses flow control, sequencing, and acknowledgments to ensure that reliable networking occurs?

- A. data link
- B. network
- C. transport
- D. presentation
- E. physical

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 34

What is the principle reason to use a private IP address on an internal network?

- A. Subnet strategy for private companies.
- B. Manage and scale the growth of the internal network.
- C. Conserve public IP addresses so that we do not run out of them.
- D. Allow access reserved to the devices.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 35

Which IP address can be assigned to an Internet interface?

- A. 10.180.48.224
- B. 9.255.255.10
- C. 192.168.20.223
- D. 172.16.200.18

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 36

What will happen if a private IP address is assigned to a public interface connected to an ISP?

- A. Addresses in a private range will be not routed on the Internet backbone.
- B. Only the ISP router will have the capability to access the public network.
- C. The NAT process will be used to translate this address in a valid IP address.
- D. Several automated methods will be necessary on the private network.
- E. A conflict of IP addresses happens, because other public routers can use the same range.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 37

When is it necessary to use a public IP address on a routing interface?

- A. Connect a router on a local network.
- B. Connect a router to another router.
- C. Allow distribution of routes between networks.
- D. Translate a private IP address.
- E. Connect a network to the Internet.

Correct Answer: E

Section: (none)
Explanation

Explanation/Reference:

QUESTION 38

What is the first 24 bits in a MAC address called?

- A. NIC
- B. BIA
- C. oui
- D. vai

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 39

In an Ethernet network, under what two scenarios can devices transmit? (Choose two.)

- A. when they receive a special token
- B. when there is a carrier
- C. when they detect no other devices are sending
- D. when the medium is idle
- E. when the server grants access

Correct Answer: CD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 40

Which term describes the process of encapsulating IPv6 packets inside IPv4 packets?

- A. tunneling
- B. hashing
- C. routing
- D. NAT

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 41

Which statement about RIPng is true?

- A. RIPng uses broadcasts to exchange routes.
- B. RIPng is enabled on each interface separately.
- C. There can be only one RIPng process per router.
- D. RIPng allows for routes with up to 30 hops.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 42

Which statement about IPv6 is true?

- A. Addresses are not hierarchical and are assigned at random.
- B. Only one IPv6 address can exist on a given interface.
- C. There are 2.7 billion addresses available.
- D. Broadcasts have been eliminated and replaced with multicasts.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 43

Which line from the output of the show ip interface command indicates a layer 1 problem?

- A. Serial0/1 is up, line protocol is down
- B. Serial0/1 is down, line protocol is down
- C. Serial0/1 is up, line protocol is up
- D. Serial0/1 is administratively down, line protocol is down

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 44

A network admin wants to know every hop the packets take when he accesses cisco.com. Which command is the most appropriate to use?

- A. path cisco.com
- B. debug cisco.com
- C. trace cisco.com
- D. traceroute cisco.com

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 45

QoS policies are applied on the switches of a LAN. Which type of command will show the effects of the policy in real time?

- A. show command
- B. debug command
- C. configuration command
- D. rommon command

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 46

Which command will show the MAC addresses of stations connected to switch ports?

- A. show mac-address
- B. show arp
- C. show table
- D. show switchport

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 47

What is the name of the VTP mode of operation that enables a switch to forward only VTP advertisements while still permitting the editing of local VLAN information?

- A. server
- B. client
- C. tunnel
- D. transparent

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 48

Which port state is introduced by Rapid-PVST?

- A. learning
- B. listening
- C. discarding
- D. forwarding

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 49

What speeds must be disabled in a mixed 802.11b/g WLAN to allow only 802.11g clients to connect?

- A. 6, 9, 12, 18
- B. 1, 2, 5.5, 6
- C. 5.5, 6, 9, 11
- D. 1, 2, 5.5, 11

Correct Answer: D

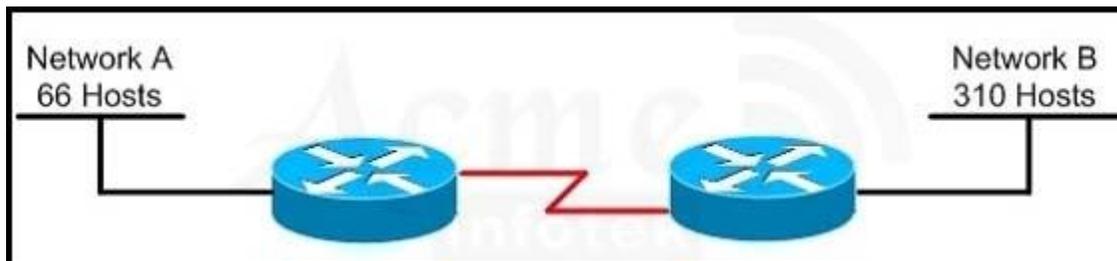
Section: (none)

Explanation

Explanation/Reference:

QUESTION 50

Refer to the exhibit. Which VLSM mask will allow for the appropriate number of host addresses for Network A?



- A. /25

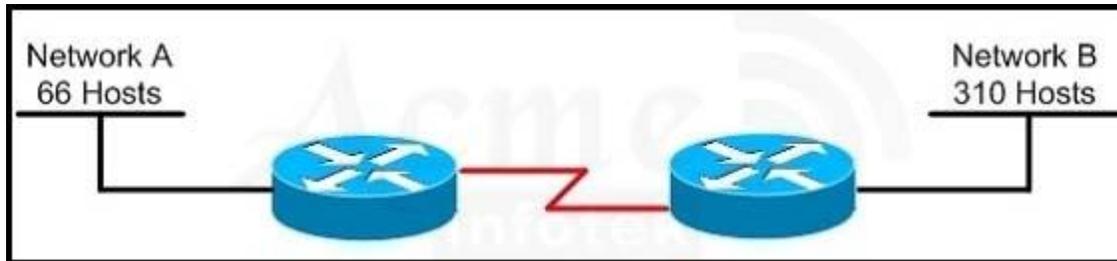
- B. /26
- C. /27
- D. /28

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 51

Refer to the exhibit. Which subnet mask will place all hosts on Network B in the same subnet with the least amount of wasted addresses?



- A. 255.255.255.0
- B. 255.255.254.0
- C. 255.255.252.0
- D. 255.255.248.0

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 52

A new hardware item is using an IEEE 802.11b wireless LAN. What is the maximum data rate specified for this WLAN?

- A. 10 mbps
- B. 11 Mbps

- C. 1000 Mbps
- D. 16 Mbps
- E. 100 Mbps

Correct Answer: B

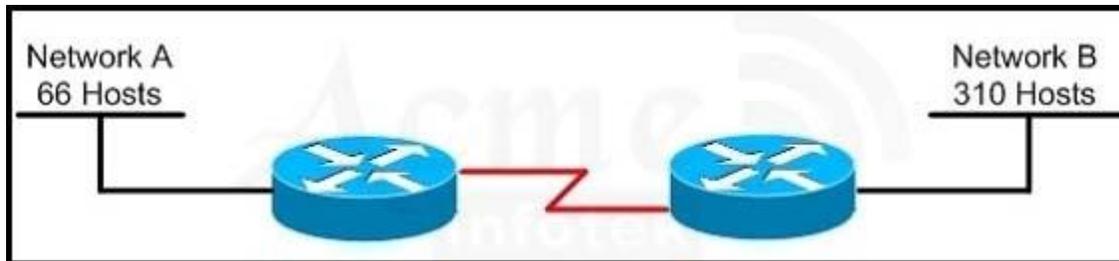
Section: (none)

Explanation

Explanation/Reference:

QUESTION 53

Refer to the exhibit. Which mask is correct to use for the WAN link between the routers that will provide connectivity while wasting the least amount of addresses?



- A. /23
- B. /24
- C. /25
- D. /30

Correct Answer: D

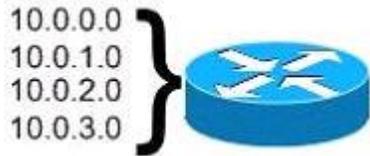
Section: (none)

Explanation

Explanation/Reference:

QUESTION 54

Refer to the exhibit. What is the most appropriate summarization for these routes?



- A. 10.0.0.0 /21
- B. 10.0.0.0 /22
- C. 10.0.0.0 /23
- D. 10.0.0.0 /24

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 55

Which two tasks does the Dynamic Host Configuration Protocol perform? (Choose two.)

- A. Set the IP gateway to be used by the network
- B. Perform host discovery used DHCPDISCOVER message
- C. Configure IP address parameters from DHCP server to a host
- D. Provide an easy management of layer 3 devices
- E. Monitor IP performance using the DHCP server
- F. Assign and renew IP address from the default pool

Correct Answer: CF

Section: (none)

Explanation

Explanation/Reference:

QUESTION 56

Which two benefits are provided by using a hierarchical addressing network addressing scheme? (Choose two.)

- A. reduces routing table entries

- B. auto-negotiation of media rates
- C. efficient utilization of MAC addresses
- D. dedicated communications between devices
- E. ease of management and troubleshooting

Correct Answer: AE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 57

Which two benefits are provided by creating VLANs? (Choose two.)

- A. added security
- B. dedicated bandwidth
- C. provides segmentation
- D. allows switches to route traffic between subinterfaces
- E. contains collisions

Correct Answer: AC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 58

Which two link protocols are used to carry multiple VLANs over a single link? (Choose two.)

- A. VTP
- B. 802.1q
- C. IGP
- D. isl
- E. 802.3u

Correct Answer: BD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 59

Which two protocols are used by bridges and/or switches to prevent loops in a layer 2 network? (Choose two.)

- A. 802.1d
- B. VTP
- C. 802.1q
- D. STP
- E. SAP

Correct Answer: AD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 60

On the network 131.1.123.0/27, what is the last IP address that can be assigned to a host?

- A. 131.1.123.30
- B. 131.1.123.31
- C. 131.1.123.32
- D. 131.1.123.33

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 61

The ip subnet zero command is not configured on a router. What would be the IP address of Ethernet 0/0 using the first available address from the sixth subnet of the network 192.168.8.0/29?

- A. 192.168.8.25
- B. 192.168.8.41
- C. 192.168.8.49
- D. 192.168.8.113

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 62

For the network 192.0.2.0/23, which option is a valid IP address that can be assigned to a host?

- A. 192.0.2.0
- B. 192.0.2.255
- C. 192.0.3.255
- D. 192.0.4.0

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 63

How many addresses for hosts will the network 124.12.4.0/22 provide?

- A. 510
- B. 1022
- C. 1024
- D. 2048

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 64

Where does routing occur within the DoD TCP/IP reference model?

- A. application
- B. internet
- C. network
- D. transport

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 65

Which VTP mode is capable of creating only local VLANs and does not synchronize with other switches in the VTP domain?

- A. client
- B. dynamic
- C. server
- D. static
- E. transparent

Correct Answer: E

Section: (none)

Explanation

Explanation/Reference:

QUESTION 66

Which switch would STP choose to become the root bridge in the selection process?

- A. 32768: 11-22-33-44-55-66
- B. 32768: 22-33-44-55-66-77
- C. 32769: 11-22-33-44-55-65
- D. 32769: 22-33-44-55-66-78

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 67

A switch is configured with all ports assigned to VLAN 2. In addition, all ports are configured as full-duplex FastEthernet. What is the effect of adding switch ports to a new VLAN on this switch?

- A. The additions will create more collisions domains.
- B. An additional broadcast domain will be created.
- C. More bandwidth will be required than was needed previously.
- D. IP address utilization will be more efficient.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 68

VLAN is a most useful technology, which is often used in different network environments. It is important for you to have a real understanding of the changes brought by VLAN. Refer to the following statements about VLAN, which two are correct?

- A. VLANs increase the size of collision domains.
- B. VLANs allow logical grouping of users by function.
- C. VLANs simplify switch administration.
- D. VLANs enhance network security.

Correct Answer: BD

Section: (none)

Explanation

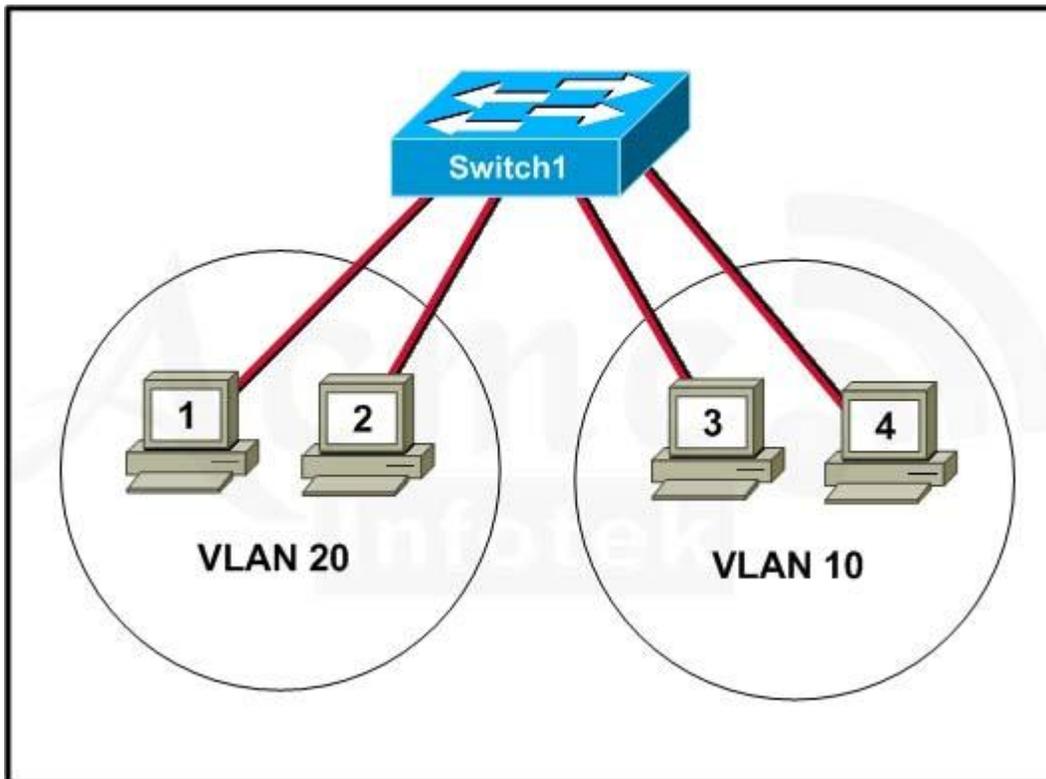
Explanation/Reference:

QUESTION 69

Refer to the exhibit.

Hosts on the same VLAN can communicate with each other but are unable to communicate with hosts on different VLANs.

What is needed to allow communication between VLANs?



- A. a router with an IP address on the physical interface that is connected to the switch
- B. a router with subinterfaces configured on the physical interface that is connected to the switch
- C. a switch with an access link that is configured between the switches
- D. a switch with a trunk link that is configured between the switches

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 70

When a DHCP server is configured, which two IP addresses should never be assignable to hosts? (Choose two.)

- A. network or subnetwork IP address
- B. broadcast address on the network
- C. IP address leased to the LAN
- D. IP address used by the interfaces
- E. manually assigned address to the clients
- F. designated IP address to the DHCP server

Correct Answer: AB

Section: (none)

Explanation

Explanation/Reference:

QUESTION 71

How does a DHCP server dynamically assign IP addresses to hosts?

- A. Addresses are allocated after a negotiation between the server and the host to determine the length of the agreement.
- B. Addresses are permanently assigned so that the hosts uses the same address at all times.
- C. Addresses are assigned for a fixed period of time, at the end of the period, a new request for an address must be made.
- D. Addresses are leased to hosts. A host will usually keep the same address by periodically contacting the DHCP server to renew the lease.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 72

Which network protocol does DNS use?

- A. FTP
- B. TFTP
- C. TCP

- D. udp
- E. scp

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 73

When two hosts are trying to communicate across a network, how does the host originating the communication determine the hardware address of the host that it wants to "talk" to?

- A. RARP request
- B. Show Network Address request
- C. Proxy ARP request
- D. ARP request
- E. Show Hardware Address request

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 74

During the data transmission between hosts over a network, which process does the data experience?

- A. standardization
- B. conversion
- C. encapsulation
- D. synchronization

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 75

An administrator attempts a traceroute but receives a "Destination Unreadable" message. Which protocol is responsible for that message?

- A. RARP
- B. RUDP
- C. ICMP
- D. SNMP

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 76

When you are logged into a switch, which prompt indicates that you are in privileged mode?

- A. %
- B. @
- C. >
- D. \$
- E. #

Correct Answer: E

Section: (none)

Explanation

Explanation/Reference:

QUESTION 77

Which command shows system hardware and software version information?

- A. show configuration
- B. show environment
- C. show inventory
- D. show platform

E. show version

Correct Answer: E

Section: (none)

Explanation

Explanation/Reference:

This question is to examine the show version command. By using the show version command, you can display information such as Cisco IOS software version, hardware platform, flash and memory size.

So the correct answer is E.

QUESTION 78

Cisco Catalyst switches CAT1 and CAT2 have a connection between them using ports FA0/13.

An 802.1Q trunk is configured between the two switches.

On CAT1, VLAN 10 is chosen as native, but on CAT2 the native VLAN is not specified.

What will happen in this scenario?

- A. 802.1 Q giants frames could saturate the link.
- B. VLAN 10 on CAT1 and VLAN 1 on CAT2 will send untagged frames.
- C. A native VLAN mismatch error message will appear.
- D. VLAN 10 on CAT1 and VLAN 1 on CAT2 will send tagged frames.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 79

Which command would correctly configure a serial port on a router with the last usable host address in the 192.216.32.32/29 subnet?

- A. router (config-if)# ip address 192.216.32.38 255.255.255.240
- B. router (config-if)# ip address 192.216.32.39 255.255.255.224
- C. router (config-if)# ip address 192.216.32.63 255.255.255.248
- D. router (config-if)# ip address 192.216.32.39 255.255.255.248
- E. router (config-if)# ip address 192.216.32.63 255.255.255.248
- F. router (config-if)# ip address 192.216.32.38 255.255.255.248

Correct Answer: F

Section: (none)
Explanation

Explanation/Reference:

QUESTION 80

The network default gateway applying to a host by DHCP is 192.168.5.33/28. Which option is the valid IP address of this host?

- A. 192.168.5.55
- B. 192.168.5.47
- C. 192.168.5.40
- D. 192.168.5.32
- E. 192.168.5.14

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 81

Which command is used to see the path taken by packets across an IP network?

- A. show ip route
- B. show route
- C. trace route
- D. trace ip route

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 82

Which command is used to debug a ping command?

- A. debug icmp
- B. debug ip icmp
- C. debug tcp
- D. debug packet

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 83

Which command displays CPU utilization?

- A. show protocols
- B. show process
- C. show system
- D. show version

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 84

When configuring a serial interface on a router, what is the default encapsulation?

- A. atm-dxi
- B. frame-relay
- C. hdlc
- D. lapb
- E. ppp

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 85

What must be set correctly when configuring a serial interface so that higher-level protocols calculate the best route?

- A. bandwidth
- B. delay
- C. load
- D. reliability

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 86

A company implements video conferencing over IP on their Ethernet LAN. The users notice that the network slows down, and the video either stutters or fails completely. What is the most likely reason for this?

- A. minimum cell rate (MCR)
- B. quality of service (QoS)
- C. modulation
- D. packet switching exchange (PSE)
- E. reliable transport protocol (RTP)

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 87

Which layer in the OSI reference model is responsible for determining the availability of the receiving program and checking to see if enough resources exist for that communication?

- A. transport

- B. network
- C. presentation
- D. session
- E. application

Correct Answer: E

Section: (none)

Explanation

Explanation/Reference:

QUESTION 88

Data transfer is slow between the source and destination.

The quality of service requested by the transport layer in the OSI reference model is not being maintained.

To fix this issue, at which layer should the troubleshooting process begin?

- A. presentation
- B. session
- C. transport
- D. network
- E. physical

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 89

Which protocols are found in the network layer of the OSI reference model and are responsible for path determination and traffic switching?

- A. LAN
- B. routing
- C. WAN
- D. network

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 90

Which command reveals the last method used to powercycle a router?

- A. show reload
- B. show boot
- C. show running-config
- D. show version

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 91

Which three options are valid WAN connectivity methods? (Choose three.)

- A. PPP
- B. wap
- C. HDLC
- D. MPLS
- E. L2TPv3
- F. ATM

Correct Answer: ACF

Section: (none)

Explanation

Explanation/Reference:

QUESTION 92

Refer to the exhibit. Which WAN protocol is being used?

```
RouterA#show interface pos8/0/0
pos8/0/0 is up, line protocol is up
Hardware is Packet over Sonet
Keepalive set (10 sec)
Scramble disabled
LMI enq sent 2474988, LMI stat recvd 2474969, LMI upd recvd 0, DTE LMI up
Broadcast queue 0/256, broadcasts sent/dropped 25760668/0, interface broadcasts 25348176
Last input 00:00:00, output 00:00:00, output hang never
Last clearing of "show interface" counters 40w6d
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 39000 bits/sec, 60 packets/sec
 63153396 packets input, 4389121455 bytes, 0 no buffer
  Received 0 broadcasts (0 IP multicast)
  0 runts, 0 giants, 0 throttles
  0 parity
44773 input errors, 39138 CRC, 0 frame, 0 overrun, 0 ignored, 27 abort
945596253 packets output, 62753244360 bytes, 0 underruns
 0 output errors, 0 applique, 0 interface resets
 0 output buffer failures, 0 output buffers swapped out
 0 carrier transitions
```

- A. ATM
- B. HDLC
- C. Frame Relay
- D. ppp

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 93

What is the difference between a CSU/DSU and a modem?

- A. A CSU/DSU converts analog signals from a router to a leased line; a modem converts analog signals from a router to a leased line.
- B. A CSU/DSU converts analog signals from a router to a phone line; a modem converts digital signals from a router to a leased line.
- C. A CSU/DSU converts digital signals from a router to a phone line; a modem converts analog signals from a router to a phone line.
- D. A CSU/DSU converts digital signals from a router to a leased line; a modem converts digital signals from a router to a phone line.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 94

A network administrator must configure 200 switch ports to accept traffic from only the currently attached host devices. What would be the most efficient way to configure MAC-level security on all these ports?

- A. Visually verify the MAC addresses and then telnet to the switches to enter the switchport-port security mac-address command.
- B. Have end users e-mail their MAC addresses. Telnet to the switch to enter the switchport-port security mac-address command.
- C. Use the switchport port-security MAC address sticky command on all the switch ports that have end devices connected to them.
- D. Use show mac-address-table to determine the addresses that are associated with each port and then enter the commands on each switch for MAC address port-security.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 95

When troubleshooting a Frame Relay connection, what is the first step when performing a loopback test?

- A. Set the encapsulation of the interface to HDLC.
- B. Place the CSU/DSU in local-loop mode.
- C. Enable local-loop mode on the DCE Frame Relay router.
- D. Verify that the encapsulation is set to Frame Relay.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 96

What occurs on a Frame Relay network when the CIR is exceeded?

- A. All TCP traffic is marked discard eligible.
- B. All UDP traffic is marked discard eligible and a BECN is sent.
- C. All TCP traffic is marked discard eligible and a BECN is sent.
- D. All traffic exceeding the CIR is marked discard eligible.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 97

What are two characteristics of Frame Relay point-to-point subinterfaces? (Choose two.)

- A. They create split-horizon issues.
- B. They require a unique subnet within a routing domain.
- C. They emulate leased lines.
- D. They are ideal for full-mesh topologies.
- E. They require the use of NBMA options when using OSPF.

Correct Answer: BC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 98

Refer to the exhibit. Addresses within the range 10.10.10.0/24 are not being translated to the 1.1.128.0/16 range. Which command shows if 10.10.10.0/24 are allowed inside addresses?

```
RouterA# show running-config
!
ip nat pool inside_green 1.1.128.1 1.1.255.254
ip nat inside list 101 pool inside_green
!
```

- A. debug ip nat
- B. show access-list

- C. show ip nat translation
- D. show ip nat statistics

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 99

A wireless client cannot connect to an 802.11b/g BSS with a b/g wireless card.

The client section of the access point does not list any active WLAN clients. What is a possible reason for this?

- A. The incorrect channel is configured on the client.
- B. The client's IP address is on the wrong subnet.
- C. The client has an incorrect pre-shared key.
- D. The SSID is configured incorrectly on the client.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 100

Which two features did WPAv1 add to address the inherent weaknesses found in WEP? (Choose two.)

- A. a stronger encryption algorithm
- B. key mixing using temporal keys
- C. shared key authentication
- D. a shorter initialization vector
- E. per frame sequence counters

Correct Answer: BE

Section: (none)

Explanation

Explanation/Reference:

Exam

QUESTION 1

Which two wireless encryption methods are based on the RC4 encryption algorithm? (Choose two.)

- A. WEP
- B. CCKM
- C. AES
- D. TKIP
- E. ccmp

Correct Answer: AD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 2

What are two characteristics of RIPv2? (Choose two.)

- A. classful routing protocol
- B. variable-length subnet masks
- C. broadcast addressing
- D. manual route summarization
- E. uses SPF algorithm to compute path

Correct Answer: BD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 3

Which two Ethernet fiber-optic modes support distances of greater than 550 meters?

- A. 1000BASE-CX
- B. 100BASE-FX
- C. 1000BASE-LX

- D. 1000BASE-SX
- E. 1000BASE-ZX

Correct Answer: CE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 4

What two things will a router do when running a distance vector routing protocol? (Choose two.)

- A. Send periodic updates regardless of topology changes.
- B. Send entire routing table to all routers in the routing domain.
- C. Use the shortest-path algorithm to determine best path.
- D. Update the routing table based on updates from their neighbors.
- E. Maintain the topology of the entire network in its database.

Correct Answer: AD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 5

Refer to the exhibit. According to the routing table, where will the router send a packet destined for 10.1.5.65?

Network	Interface	Next-hop
10.1.1.0/24	e0	directly connected
10.1.2.0/24	e1	directly connected
10.1.3.0/25	s0	directly connected
10.1.4.0/24	s1	directly connected
10.1.5.0/24	e0	10.1.1.2
10.1.5.64/28	e1	10.1.2.2
10.1.5.64/29	s0	10.1.3.3
10.1.5.64/27	s1	10.1.4.4

- A. 10.1.1.2
- B. 10.1.2.2
- C. 10.1.3.3
- D. 10.1.4.4

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 6

Which command shows if an access list is assigned to an interface?

- A. show ip interface [interface] access-lists
- B. show ip access-lists interface [interface]
- C. show ip interface [interface]
- D. show ip access-lists [interface]

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 7

Refer to the exhibit. Which rule does the DHCP server use when there is an IP address conflict?

```
Router# show ip dhcp conflict
IP address      Detection method  Detection time
172.16.1.32     Ping              Feb 16 1998 12:28 PM
172.16.1.64     Gratuitous ARP    Feb 23 1998 08:12 AM
```

- A. The address is removed from the pool until the conflict is resolved.

- B. The address remains in the pool until the conflict is resolved.
- C. Only the IP detected by Gratuitous ARP is removed from the pool.
- D. Only the IP detected by Ping is removed from the pool.
- E. The IP will be shown, even after the conflict is resolved.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 8

Refer to the exhibit. You are connected to the router as user Mike. Which command allows you to see output from the OSPF debug command?

```
Router#show users
  Line      User      Host(s)      Idle      Location
*322 vty 0  Mike      idle         00:00:00  laptop

  Interface  User      Mode      Idle      Peer Address

Router#debug ip ospf events
OSPF events debugging is on
Router#
```

- A. terminal monitor
- B. show debugging
- C. show sessions
- D. show ip ospf interface

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 9

Refer to the exhibit. If number 2 is selected from the setup script, what happens when the user runs setup from a privileged prompt?

```
[0] Go to the IOS command prompt without saving this config.  
[1] Return back to the setup without saving this config.  
[2] Save this configuration to nvram and exit.
```

Enter your selection [2]:

- A. Setup is additive and any changes will be added to the config script.
- B. Setup effectively starts the configuration over as if the router was booted for the first time.
- C. Setup will not run if an enable secret password exists on the router.
- D. Setup will not run, because it is only viable when no configuration exists on the router.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 10

Refer to the exhibit. Which (config-router) command will allow the network represented on the interface to be advertised by RIP?

```
router rip  
  version 2  
  no auto-summary  
!  
interface ethernet0  
  ip address 10.12.0.1 255.255.0.0
```

- A. network ethernet0
- B. redistribute 10.12.0.0
- C. redistribute ethernet0
- D. network 10.12.0.0

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 11

Refer to the exhibit. What information can be gathered from the output?

```
RouterA# debug ip rip
RIP protocol debugging is on

00:34:32: RIP: sending v2 flash update to 224.0.0.9 via FastEthernet0/1 (172.16.1.1)
00:34:32: RIP: build flash update entries
00:34:32:      10.10.1.0/24 via 0.0.0.0, metric 1, tag 0
00:34:32: RIP: sending v2 flash update to 224.0.0.9 via Loopback0 (10.10.1.1)
00:34:32: RIP: build flash update entries
00:34:32:      10.0.0.0/8 via 0.0.0.0, metric 2, tag 0
00:34:32:      172.16.1.0/24 via 0.0.0.0, metric 1, tag 0
00:34:32: RIP: ignored v2 packet from 10.10.1.1 (sourced from one of our addresses)
00:34:33: RIP: received v2 packet from 172.16.1.2 on FastEthernet0/0
00:34:33:      10.0.0.0/8 via 0.0.0.0 in 1 hops
00:34:44: RIP: sending v2 flash update to 224.0.0.9 via FastEthernet0/1 (172.16.1.1)
00:34:44: RIP: build flash update entries
00:34:44:      10.10.1.0/24 via 0.0.0.0, metric 1, tag 0
```

- A. One router is running RIPv1.
- B. RIP neighbor is 224.0.0.9.
- C. The network contains a loop.
- D. Network 10.10.1.0 is reachable.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 12

Refer to the exhibit. What type of connection would be supported by the cable diagram shown?

Pin Number	Color	Function	Pin	Color	Function
1	White/Green	TX+	1	White/Green	TX+
2	Green	TX-	2	Green	TX-
3	White/Orange	RX+	3	White/Orange	RX+
6	Orange	RX-	6	Orange	RX-

- A. PC to router
- B. PC to switch
- C. server to router
- D. router to router

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

The cable is wired as straight-thru.

QUESTION 13

Refer to the exhibit. What type of connection would be supported by the cable diagram shown?

Pin Number	Color	Function	Pin	Color	Function
1	White/Green	TX+	3	Orange	RX+
2	Green	TX-	6	White/Orange	RX-
3	White/Orange	RX+	1	Green	TX+
6	Orange	RX-	2	White/Green	TX-

- A. PC to router
- B. PC to switch
- C. server to switch
- D. switch to router

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 14

Which two statements describe the Cisco implementation of VLANs? (Choose two.)

- A. VLAN 1 is the default Ethernet VLAN.
- B. CDP advertisements are only sent on VLAN 1002.
- C. By default, the management VLAN is VLAN 1005.
- D. By default, the switch IP address is in VLAN 1005.
- E. VLANs 1002 through 1005 are automatically created and cannot be deleted.

Correct Answer: AE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 15

Refer to the exhibit. What can be determined about the router from the console output?

```
1 FastEthernet/IEEE 802.3 interface(s)
125K bytes of non-volatile configuration memory.

65536K bytes of ATA PCMCIA card at slot 0 (Sector size 512 bytes).
8192K bytes of Flash internal SIMM (Sector size 256K).

--- System Configuration Dialog ---

Would you like to enter the initial configuration dialog? [yes/no]:
```

- A. No configuration file was found in NVRAM.
- B. No configuration file was found in flash.
- C. No configuration file was found in the PCMCIA card.
- D. Configuration file is normal and will load in 15 seconds.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 16

Refer to the exhibit. What can be determined from the output?

```
Router#show ip arp
```

Protocol	Address	Age (min)	Hardware Addr	Type	Interface
Internet	192.168.1.1	-	ca00.17d0.0008	ARPA	FastEthernet0/0
Internet	192.168.3.1	-	ca00.17d0.0008	ARPA	FastEthernet0/0
Internet	192.168.1.2	0	ca01.17d0.0008	ARPA	FastEthernet0/0

- A. 192.168.1.2 is local to the router.
- B. 192.168.3.1 is local to the router.
- C. 192.168.1.2 will age out in less than 1 minute.
- D. 192.168.3.1 has aged out and is marked for deletion.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

The "Age" field in the "show ip arp" command is the age in minutes of the cache entry.

A hyphen (-) means the address is local so in this case 192.168.1.1 & 192.168.3.1 are local to this router -> B is correct.

Note: The "Age 0" means that the address was cached less than 1 minute ago.

QUESTION 17

Refer to the exhibit. Which command would allow the translations to be created on the router?

```
RouterA#show ip nat translations
Pro Inside global      Inside local      Outside local     Outside global
--- 1.1.128.1           10.18.14.90      ---              ---
--- 1.1.129.107        10.18.14.91      ---              ---
--- 1.1.130.178        10.18.14.92      ---              ---
--- 1.1.131.177        10.18.14.89      ---              ---
--- 1.1.132.171        10.10.16.204     ---              ---
--- 1.1.133.172        10.10.24.210     ---              ---
--- 1.1.134.173        10.10.24.216     ---              ---
--- 1.1.135.168        10.19.16.95      ---              ---
--- 1.1.134.169        10.19.16.96      ---              ---
--- 1.1.130.170        10.20.122.234    ---              ---
--- 1.1.135.174        10.20.122.240    ---              ---
```

- A. ip nat pool mynats 1.1.128.1 1.1.135.254 prefix-length 19
- B. ip nat outside mynats 1.1.128.1 1.1.135.254 prefix-length 19
- C. ip nat pool mynats 1.1.128.1 1.1.135.254 prefix-length 18
- D. ip nat outside mynats 1.1.128.1 1.1.135.254 prefix-length 18

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 18

Refer to the exhibit.

An administrator pings the default gateway at 10.10.10.1 and sees the output as shown. At which OSI layer is the problem?

```
C:\> ping 10.10.10.1
```

```
Pinging 10.10.10.1 with 32 bytes of data:
```

```
Request timed out.
```

```
Ping statistics for 10.10.10.1:
```

```
Packets: Sent = 4, Received = 0, Lost = 4 (100% loss)
```

- A. data link layer
- B. application layer
- C. access layer
- D. session layer
- E. network layer

Correct Answer: E

Section: (none)

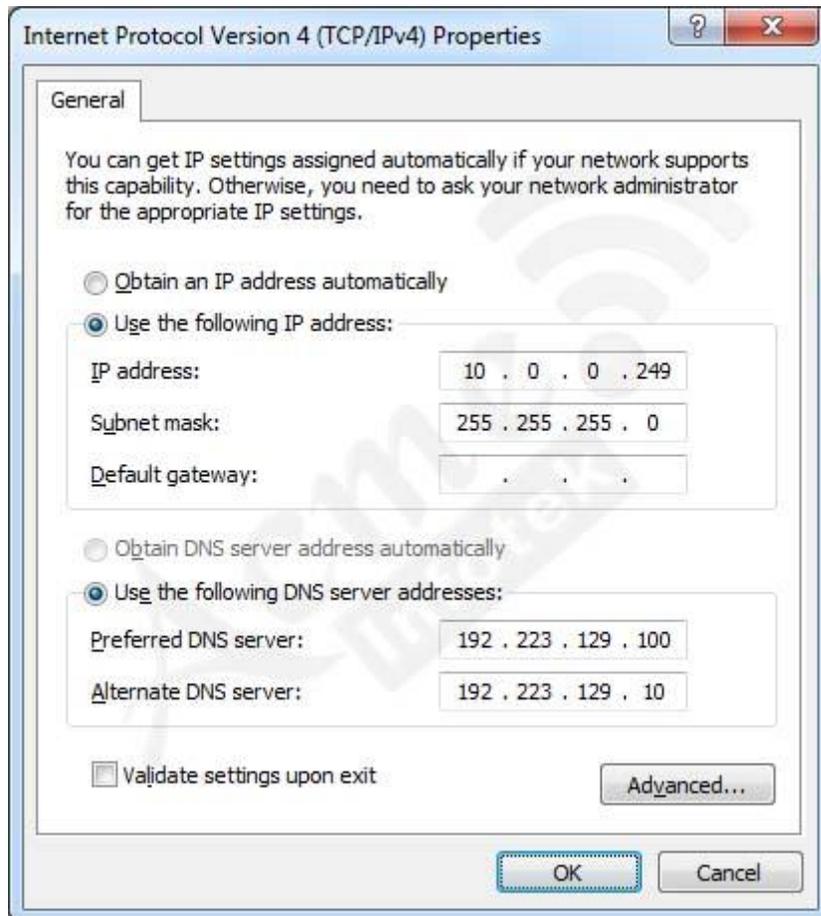
Explanation

Explanation/Reference:

The command ping uses ICMP protocol, which is a network layer protocol used to propagate control message between host and router. The command ping is often used to verify the network connectivity, so it works at the network layer.

QUESTION 19

Refer to the exhibit. Which value will be configured for Default Gateway of the Local Area Connection?



- A. 10.0.0.0
- B. 10.0.0.254
- C. 192.223.129.0
- D. 192.223.129.254

Correct Answer: B

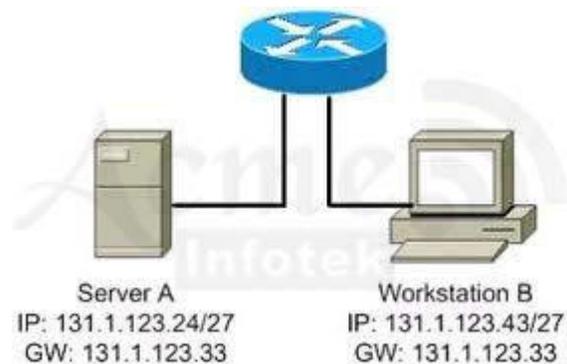
Section: (none)

Explanation

Explanation/Reference:

QUESTION 20

Refer to the exhibit. The user at Workstation B reports that Server A cannot be reached. What is preventing Workstation B from reaching Server A?



- A. The IP address for Server A is a broadcast address.
- B. The IP address for Workstation B is a subnet address.
- C. The gateway for Workstation B is not on the same subnet.
- D. The gateway for Server A is not on the same subnet.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 21

Refer to the exhibit. What does the (*) represent in the output?

```
02:16:29: NAT: s=10.10.0.2->1.2.4.2, d=1.2.4.1 [51607]
02:16:29: NAT: s=1.2.4.1, d=1.2.4.2->10.10.0.2 [55227]
02:16:29: NAT*: s=10.10.0.2->1.2.4.2, d=1.2.4.1 [51608]
02:16:29: NAT*: s=10.10.0.2->1.2.4.2, d=1.2.4.1 [51609]
```

- A. Packet is destined for a local interface to the router.

- B. Packet was translated, but no response was received from the distant device.
- C. Packet was not translated, because no additional ports are available.
- D. Packet was translated and fast switched to the destination.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 22

Refer to the exhibit. What command sequence will enable PAT from the inside to outside network?

```
ip nat pool isp-net 1.2.4.10 1.2.4.240 netmask 255.255.255.0
!
interface ethernet 1
  description ISP Connection
  ip address 1.2.4.2 255.255.255.0
  ip nat outside
!
Interface ethernet 0
  description Ethernet to Firewall eth0
  ip address 10.10.0.1 255.255.255.0
  ip nat inside
!
access-list 1 permit 10.0.0.0 0.255.255.255
```

- A. (config) ip nat pool isp-net 1.2.4.2 netmask 255.255.255.0 overload
- B. (config-if) ip nat outside overload
- C. (config) ip nat inside source list 1 interface ethernet1 overload
- D. (config-if) ip nat inside overload

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 23

Refer to the exhibit.

What will happen to HTTP traffic coming from the Internet that is destined for 172.16.12.10 if the traffic is processed by this ACL?

```
router#show access-lists
Extended IP access list 110
 10 deny tcp 172.16.0.0 0.0.255.255 any eq telnet
 20 deny tcp 172.16.0.0 0.0.255.255 any eq smtp
 30 deny tcp 172.16.0.0 0.0.255.255 any eq http
 40 permit tcp 172.16.0.0 0.0.255.255 any
```

- A. Traffic will be dropped per line 30 of the ACL.
- B. Traffic will be accepted per line 40 of the ACL.
- C. Traffic will be dropped, because of the implicit deny all at the end of the ACL.
- D. Traffic will be accepted, because the source address is not covered by the ACL.

Correct Answer: C

Section: (none)

Explanation

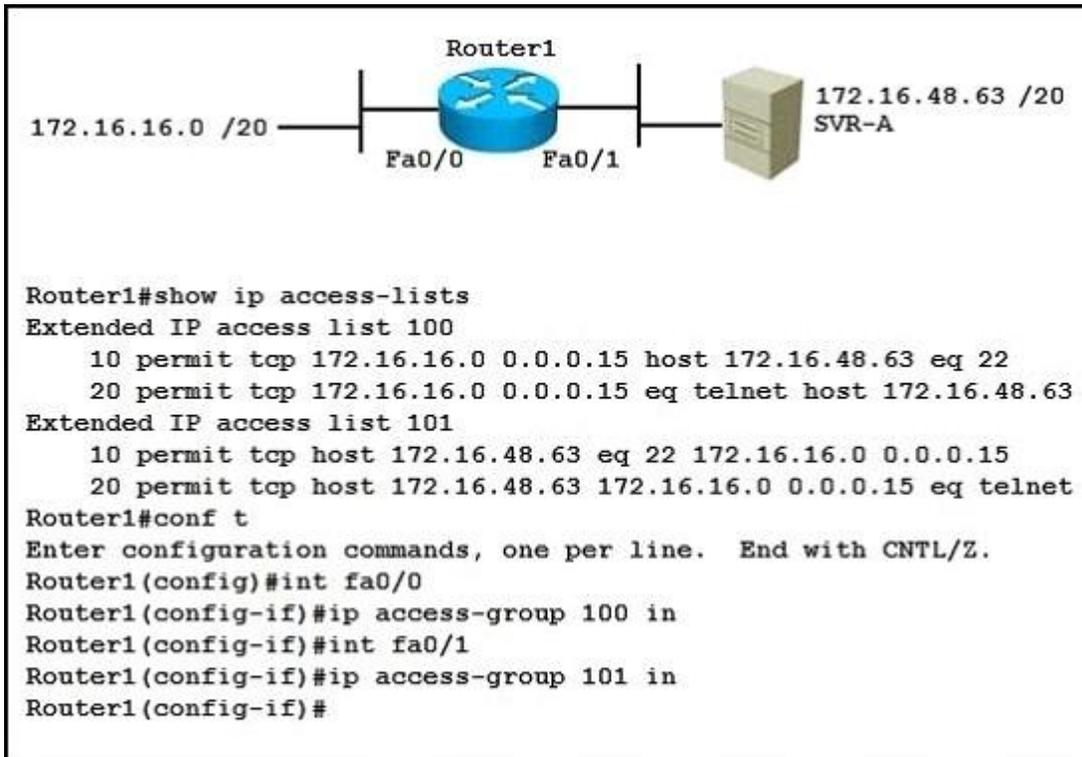
Explanation/Reference:

In Line 30 only deny http Traffic that come from 172.16.0.0 and goes to any.

QUESTION 24

Refer to the exhibit.

Which statement describes the effect that the Router1 configuration has on devices in the 172.16.16.0 subnet when they try to connect to SVR-A using Telnet or SSH?



- A. Devices will not be able to use Telnet or SSH.
- B. Devices will be able to use SSH, but not Telnet.
- C. Devices will be able to use Telnet, but not SSH.
- D. Devices will be able to use Telnet and SSH.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 25

What are three advantages of VLANs? (Choose three.)

- A. VLANs establish broadcast domains in switched networks.
- B. VLANs utilize packet filtering to enhance network security.
- C. VLANs provide a method of conserving IP addresses in large networks.
- D. VLANs provide a low-latency internetworking alternative to routed networks.
- E. VLANs allow access to network services based on department, not physical location.
- F. VLANs can greatly simplify adding, moving, or changing hosts on the network.

Correct Answer: AEF

Section: (none)

Explanation

Explanation/Reference:

VLAN technology is often used in practice, because it can better control layer2 broadcast to improve network security. This makes network more flexible and scalable. Packet filtering is a function of firewall instead of VLAN.

QUESTION 26

An administrator would like to configure a switch over a virtual terminal connection from locations outside of the local LAN. Which of the following are required in order for the switch to be configured from a remote location? (Choose two.)

- A. The switch must be configured with an IP address, subnet mask, and default gateway.
- B. The switch must be connected to a router over a VLAN trunk.
- C. The switch must be reachable through a port connected to its management VLAN.
- D. The switch console port must be connected to the Ethernet LAN.
- E. The switch management VLAN must be created and have a membership of at least one switch port.
- F. The switch must be fully configured as an SNMP agent.

Correct Answer: AC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 27

Which of the following host addresses are members of networks that can be routed across the public Internet? (Choose three.)

- A. 10.172.13.65
- B. 172.16.223.125
- C. 172.64.12.29

- D. 192.168.23.252
- E. 198.234.12.95
- F. 212.193.48.254

Correct Answer: CEF

Section: (none)

Explanation

Explanation/Reference:

QUESTION 28

Given a subnet mask of 255.255.255.224, which of the following addresses can be assigned to network hosts? (Choose three.)

- A. 15.234.118.63
- B. 92.11.178.93
- C. 134.178.18.56
- D. 192.168.16.87
- E. 201.45.116.159
- F. 217.63.12.192

Correct Answer: BCD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 29

Which of the following are benefits of VLANs? (Choose three.)

- A. They increase the size of collision domains.
- B. They allow logical grouping of users by function.
- C. They can enhance network security.
- D. They increase the size of broadcast domains while decreasing the number of collision domains.
- E. They increase the number of broadcast domains while decreasing the size of the broadcast domains.
- F. They simplify switch administration.

Correct Answer: BCE

Section: (none)
Explanation

Explanation/Reference:

QUESTION 30

In order to resolve the LAN connectivity problems, which router IOS commands will you use? (Choose three.)

- A. ping
- B. tracert
- C. ipconfig
- D. show ip route
- E. winipcfg
- F. show interfaces

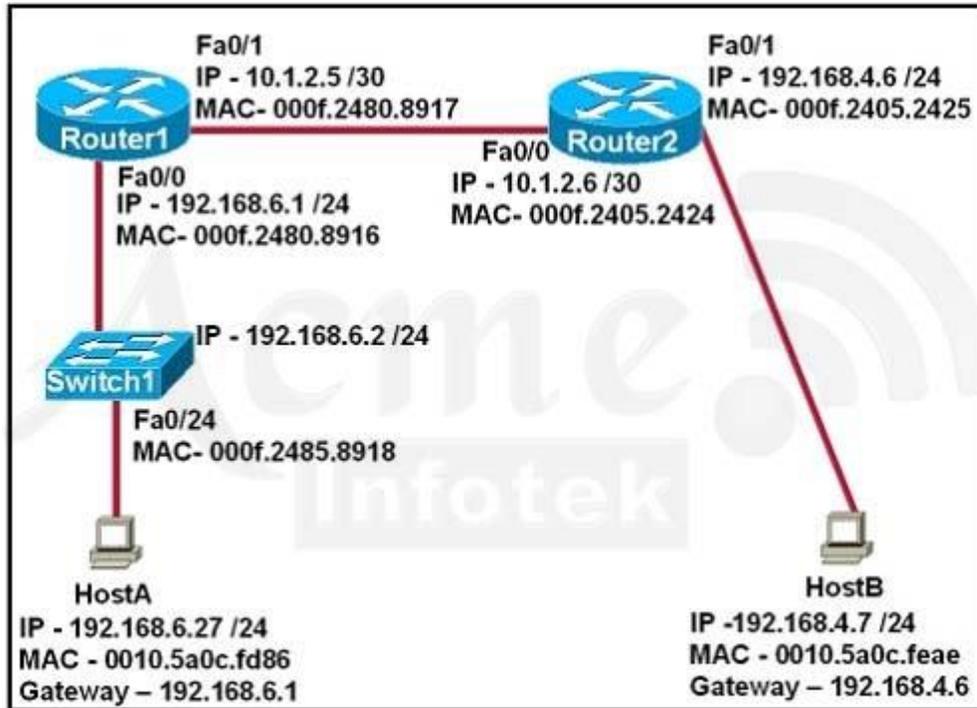
Correct Answer: ADF

Section: (none)
Explanation

Explanation/Reference:

QUESTION 31

Refer to the exhibit. After HostA pings HostB, which entry will be in the ARP cache of HostA to support this transmission?



- A.
- | Interface Address | Physical Address | Type |
|-------------------|------------------|---------|
| 192.168.4.7 | 000f.2480.8916 | dynamic |
- B.
- | Interface Address | Physical Address | Type |
|-------------------|------------------|---------|
| 192.168.4.7 | 0010.5a0c.feae | dynamic |
- C.
- | Interface Address | Physical Address | Type |
|-------------------|------------------|---------|
| 192.168.6.1 | 0010.5a0c.feae | dynamic |

D.

Interface Address	Physical Address	Type
192.168.6.1	000f.2480.8916	dynamic

E.

Interface Address	Physical Address	Type
192.168.6.2	0010.5a0c.fea	dynamic

F.

Interface Address	Physical Address	Type
192.168.6.2	000f.2485.8918	dynamic

Correct Answer: D

Section: (none)

Explanation

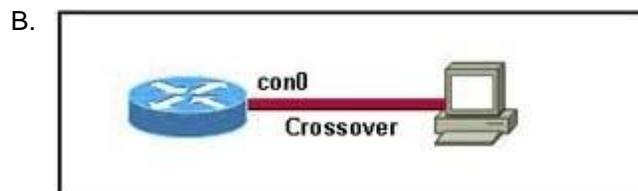
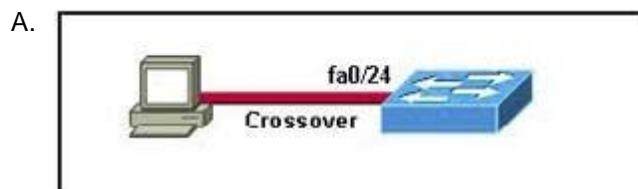
Explanation/Reference:

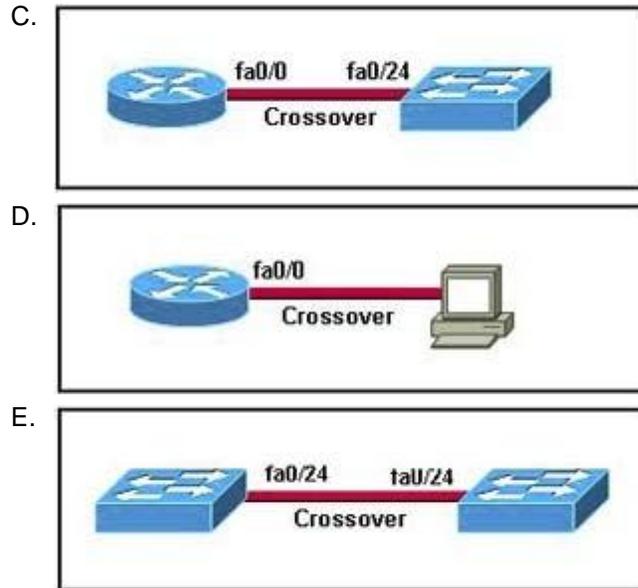
When a host needs to reach a device on another subnet, the ARP cache entry will be that of the Ethernet address of the local router (default gateway) for the physical MAC address.

The destination IP address will not change, and will be that of the remote host (HostB).

QUESTION 32

Which two topologies are using the correct type of twisted-pair cables? (Choose two.)





Correct Answer: DE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 33

Which of the following are true regarding bridges and switches? (Choose two.)

- A. Bridges are faster than switches because they have fewer ports.
- B. A switch is a multiport bridge.
- C. Bridges and switches learn MAC addresses by examining the source MAC address of each frame received.
- D. A bridge will forward a broadcast but a switch will not.
- E. Bridges and switches increase the size of a collision domain.

Correct Answer: BC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 34

What are some of the advantages of using a router to segment the network? (Choose two.)

- A. Filtering can occur based on Layer 3 information.
- B. Broadcasts are eliminated.
- C. Routers generally cost less than switches.
- D. Broadcasts are not forwarded across the router.
- E. Adding a router to the network decreases latency.

Correct Answer: AD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 35

Which of the following statements are true regarding bridges and switches? (Choose 3.)

- A. Switches are primarily software based while bridges are hardware based.
- B. Both bridges and switches forward Layer 2 broadcasts.
- C. Bridges are frequently faster than switches.
- D. Switches have a higher number of ports than most bridges.
- E. Bridges define broadcast domains while switches define collision domains.
- F. Both bridges and switches make forwarding decisions based on Layer 2 addresses.

Correct Answer: BDF

Section: (none)

Explanation

Explanation/Reference:

QUESTION 36

Which characteristics are representative of a link-state routing protocol? (Choose three.)

- A. provides common view of entire topology
- B. exchanges routing tables with neighbors

- C. calculates shortest path
- D. utilizes event-triggered updates
- E. utilizes frequent periodic updates

Correct Answer: ACD

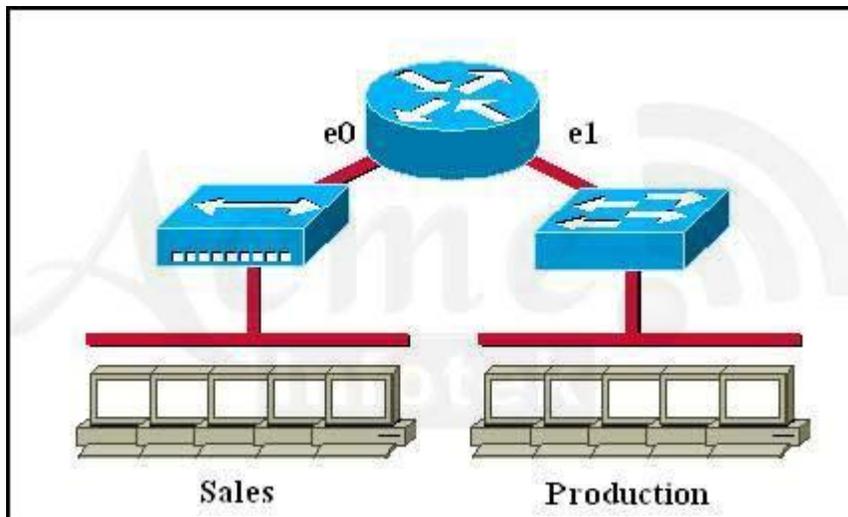
Section: (none)

Explanation

Explanation/Reference:

QUESTION 37

Which of the following statements describe the network shown in the graphic? (Choose two.)



What are the proper statements?. (Choose two)

- A. There are two broadcast domains in the network.
- B. There are four broadcast domains in the network.
- C. There are six broadcast domains in the network.
- D. There are four collision domains in the network.
- E. There are five collision domains in the network.
- F. There are seven collision domains in the network.

Correct Answer: AF

Section: (none)

Explanation

Explanation/Reference:

QUESTION 38

Use the output from the router shown in the graphic above to determine which of the following are correct. (Choose two.)

```
John#show ip protocol
Routing Protocol is "rip"
  Sending updates every 30 seconds, next due in 4 seconds
  Invalid after 180 seconds, hold down 180, flushed after 240
  Outgoing update filter list for all interfaces is not set
  Incoming update filter list for all interfaces is not set
  Redistributing: rip
  Default version control: send version 1, receive any version
  Interface      Send Recv Triggered RIP Key-chain
  Serial0/0      1  1 2
  Serial0/1      1  1 2
  Automatic network summarization is in effect
  Maximum path: 4
  Routing for Networks:
    10.0.0.0
  Routing Information Sources:
    Gateway       Distance   Last Update
  10.168.11.14    120       00:00:22
  Distance: (default is 120)

John#show ip interfaces brief
Interface      IP-Address      OK?  Method Status
FastEthernet0/0 192.168.18.1    YES  manual up
Serial0/0       10.168.11.17    YES  manual up
FastEthernet0/1 unassigned      YES  NVRAM  administratively down
Serial0/1       192.168.11.21   YES  manual up
```

- A. Router John uses a link-state routing protocol.
- B. Router John will receive routing updates on the Serial0/0 interface.
- C. Router John will receive routing updates on the Serial0/1 interface.
- D. Router John will send routing updates out the Serial0/0 interface.
- E. Router John will send routing updates out the FastEthernet0/0 interface.

F. Router John will send routing updates out the Serial0/1 interface.

Correct Answer: BD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 39

A national retail chain needs to design an IP addressing scheme to support a nationwide network.

The company needs a minimum of 300 sub-networks and a maximum of 50 host addresses per subnet.

Working with only one Class B address, which of the following subnet masks will support an appropriate addressing scheme? (Choose two.)

- A. 255.255.255.0
- B. 255.255.255.128
- C. 255.255.252.0
- D. 255.255.255.224
- E. 255.255.255.192
- F. 255.255.248.0

Correct Answer: BE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 40

Given the address 192.168.20.19/28, which of the following are valid host addresses on this subnet? (Choose two.)

- A. 192.168.20.29
- B. 192.168.20.16
- C. 192.168.20.17
- D. 192.168.20.31
- E. 192.168.20.0

Correct Answer: AC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 41

An inbound access list has been configured on a serial interface to deny packet entry for TCP and UDP ports 21, 23 and 25. What types of packets will be permitted by this ACL? (Choose three.)

- A. HTTP
- B. FTP
- C. POP3
- D. Telnet
- E. SMTP
- F. DNS

Correct Answer: ACF

Section: (none)

Explanation

Explanation/Reference:

QUESTION 42

As a network technician, do you know which are valid modes for a switch port used as a VLAN trunk? (Choose three.)

- A. transparent
- B. auto
- C. on
- D. desirable
- E. blocking
- F. forwarding

Correct Answer: BCD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 43

OSPF routing uses the concept of areas. What are the characteristics of OSPF areas? (Choose Three.)

- A. Each OSPF area requires a loopback interface to be configured.
- B. Areas may be assigned any number from 0 to 65535.
- C. Area 0 is called the backbone area.
- D. Hierarchical OSPF networks do not require multiple areas.
- E. Multiple OSPF areas must connect to area 0.
- F. Single area OSPF networks must be configured in area 1.

Correct Answer: BCE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 44

What information can be used by a router running a link-state protocol to build and maintain its topological database? (Choose two.)

- A. hello packets
- B. SAP messages sent by other routers
- C. LSAs from other routers
- D. beacons received on point-to-point links
- E. routing tables received from other link-state routers
- F. TTL packets from designated routers

Correct Answer: AC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 45

Which items are correct about the routing protocol OSPF? (Choose three.)

- A. It supports VLSM.
- B. It is used to route between autonomous systems.
- C. It confines network instability to one area of the network.

- D. It increases routing overhead on the network.
- E. It allows extensive control of routing updates.
- F. It is simpler to configure than RIP v2.

Correct Answer: ACE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 46

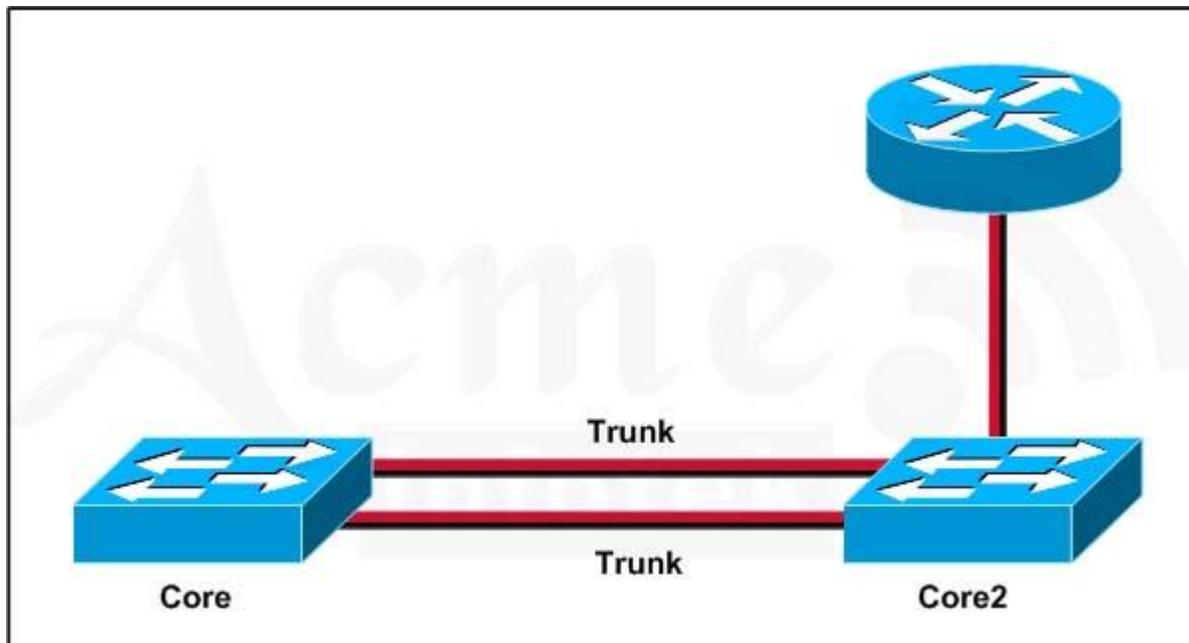
The switches shown in the diagram. Core and Core2, are both Catalyst 2950s. The addressing scheme for each company site is as follows:

Router Ethernet port: 1st usable address

Core: second usable address

Core2: third usable address

For this network, which of the following commands must be configured on Core2 to allow it to be managed remotely from any subnet on the network?
(Choose three.)



- A. Core2(config)# interface f0/0
Core2(config-if)# ip address 192.168.1.10 255.255.255.248
- B. Core2(config)# interface vlan 1
Core2(config-if)# ip address 192.168.1.11 255.255.255.248
- C. Core2(config)# line con 0
Core2(config-line)# password cisco
- D. Core2(config)# line vty 0 4
Core2(config-line)# password cisco
- E. Core2(config)# ip default-gateway 192.168.1.9
- F. Core2(config)# ip route 0.0.0.0 0.0.0.0 192.168.1.8

Correct Answer: BDE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 47

An administrator is unsuccessful in adding VLAN 50 to a switch.

While troubleshooting the problem, the administrator views the output of the show vtp status command, which is displayed in the graphic.

What commands must be issued on this switch to add VLAN 50 to the database? (Choose two.)

```
Switch# show vtp status

VTP Version                : 2
Configuration Revision     : 7
Maximum VLANs supported local : 68
Number of existing VLANs   : 8
VTP Operating Mode         : Client
VTP Domain Name            : corp
VTP Pruning Mode           : Disabled
VTP V2 Mode                 : Disabled
VTP Traps Generation       : Disabled
MD5 digest                  : 0x22 0xF3 0x1A
Configuration last modified by 172.18.22.15 at 5-28-03 11:53:20
```

- A. Switch(config-if)# switchport access vlan 50
- B. Switch(vlan)#vtp mode server

- C. Switch(config)# config-revision 20
- D. Switch(config)# vlan 50 name Tech
- E. Switch(vlan)#vlan50
- F. Switch(vlan)# switchport trunk vlan 50

Correct Answer: BE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 48

Which of the following IP addresses fall into the CIDR block of 115.64.4.0/22? (Choose three.)

- A. 115.64.8.32
- B. 115.64.7.64
- C. 115.64.6.255
- D. 115.64.3.255
- E. 115.64.5.128
- F. 115.64.12.128

Correct Answer: BCE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 49

Which of the following are types of flow control? (Choose three.)

- A. buffering
- B. cut-through
- C. windowing
- D. congestion avoidance
- E. load balancing

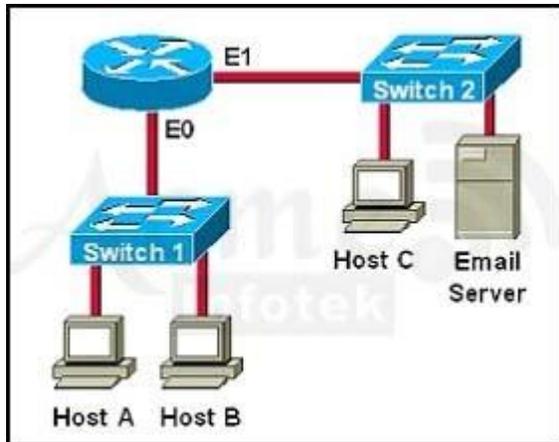
Correct Answer: ACD

Section: (none)
Explanation

Explanation/Reference:

QUESTION 50

Which destination addresses will be used by Host A to send data to Host C? (Choose two.)



- A. the IP address of Switch 1
- B. the MAC address of Switch 1
- C. the IP address of Host C
- D. the MAC address of Host C
- E. the IP address of the router's E0 interface
- F. the MAC address of the router's E0 interface

Correct Answer: CF

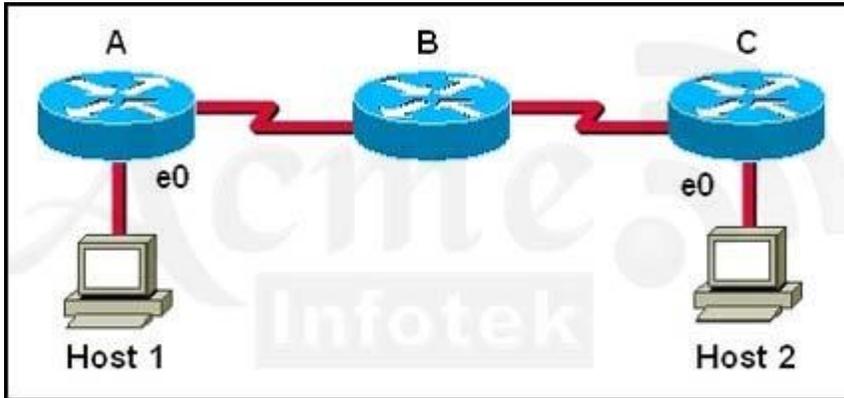
Section: (none)

Explanation

Explanation/Reference:

QUESTION 51

Host 1 is trying to communicate with Host 2. The e0 interface on Router C is down. Which of the following are true? (Choose two.)



- A. Router C will send a Destination Unreachable message type.
- B. Router C will send a Source Quench message type.
- C. Router C will use ICMP to inform Host 1, Router A, and Router B that Host 2 cannot be reached.
- D. Router C will send a Router Selection message type.
- E. Router C will use ICMP to inform Host 1 that Host 2 cannot be reached.
- F. Router C will use ICMP to inform Router B that Host 2 cannot be reached.

Correct Answer: AE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 52

To configure the VLAN trunking protocol to communicate VLAN information between two switches, what two requirements must be met? (Choose two.)

- A. Each end of the trunk line must be set to IEEE 802.1 E encapsulation.
- B. The VTP management domain name of both switches must be set the same.
- C. All ports on both the switches must be set as access ports.
- D. One of the two switches must be configured as a VTP server.
- E. A rollover cable is required to connect the two switches together.
- F. A router must be used to forward VTP traffic between VLANs.

Correct Answer: BD

Section: (none)
Explanation

Explanation/Reference:

QUESTION 53

Which of the following describe the process identifier that is used to run OSPF on a router? (Choose two.)

- A. It is locally significant.
- B. It is globally significant.
- C. It is needed to identify a unique instance of an OSPF database.
- D. It is an optional parameter required only if multiple OSPF processes are running on the router.
- E. All routers in the same OSPF area must have the same process ID if they are to exchange routing information.

Correct Answer: AC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 54

What functions do routers perform in a network? (Choose two.)

- A. packet switching
- B. access layer security
- C. path selection
- D. VLAN membership assignment
- E. bridging between LAN segments
- F. microsegmentation of broadcast domains

Correct Answer: AC

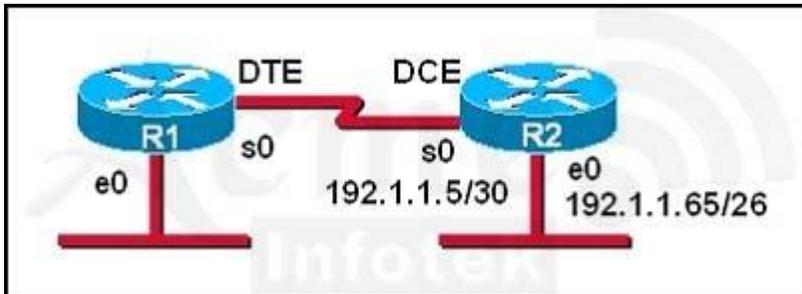
Section: (none)

Explanation

Explanation/Reference:

QUESTION 55

Which series of commands will configure router R1 for LAN-to-LAN communication with router R2?
The enterprise network address is 192.1.1.0/24 and the routing protocol in use is RIP. (Choose three.)



- A. R1(config)# interface ethernet 0
R1(config-if)# ip address 192.1.1.129 255.255.255.192
R1(config-if)# no shutdown
- B. R1(config)# interface ethernet 0
R1(config-if)# ip address 192.1.1.97 255.255.255.192
R1(config-if)# no shutdown
- C. R1(config)# interface serial 0
R1(config-if)# ip address 192.1.1.4 255.255.255.252
R1(config-if)# clock rate 56000
- D. R1(config)# interface serial 0
R1(config-if)# ip address 192.1.1.6 255.255.255.252
R1(config-if)# no shutdown
- E. R1(config)# router rip
R1(config-router)# network 192.1.1.4
R1(config-router)# network 192.1.1.128
- F. R1(config)# router rip
R1(config-router)# version 2
R1(config-router)# network 192.1.1.0

Correct Answer: ADF

Section: (none)

Explanation

Explanation/Reference:

QUESTION 56

A network administrator wants to ensure that only the server can connect to port Fa0/1 on a Catalyst switch.

The server is plugged into the switch Fa0/1 port and the network administrator is about to bring the server online. What can the administrator do to ensure that only the MAC address of the server is allowed by switch port Fa0/1? (Choose two.)

- A. Configure port Fa0/1 to accept connections only from the static IP address of the server.
- B. Employ a proprietary connector type on Fa0/1 that is incompatible with other host connectors.
- C. Configure the MAC address of the server as a static entry associated with port Fa0/1.
- D. Bind the IP address of the server to its MAC address on the switch to prevent other hosts from spoofing the server IP address.
- E. Configure port security on Fa0/1 to reject traffic with a source MAC address other than that of the server.
- F. Configure an access list on the switch to deny server traffic from entering any port other than Fa0/1.

Correct Answer: CE

Section: (none)

Explanation

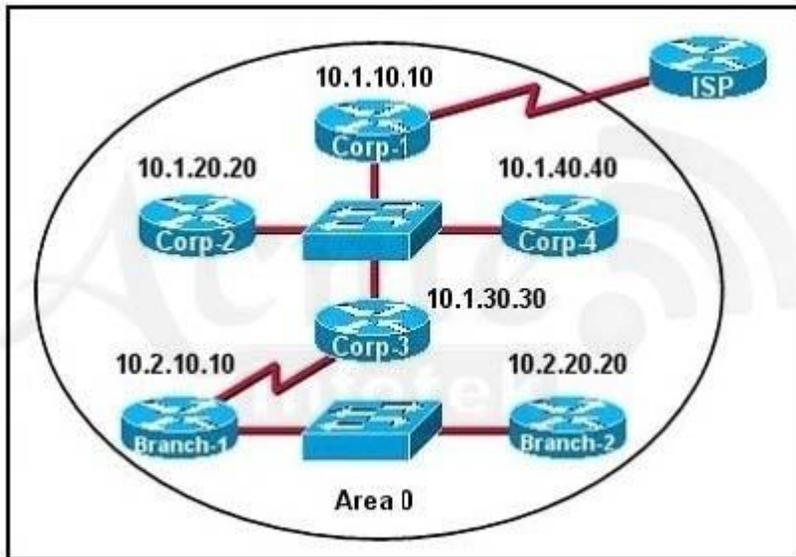
Explanation/Reference:

QUESTION 57

The internetwork infrastructure of company XYZ consists of a single OSPF area as shown in the graphic.

There is concern that a lack of router resources is impeding internetwork performance. As part of examining the router resources, the OSPF DRs need to be known.

All the router OSPF priorities are at the default and the router IDs are shown with each router. Which routers are likely to have been elected as DR? (Choose two.)



- A. Corp-1
- B. Corp-2
- C. Corp-3
- D. Corp-4
- E. Branch-1
- F. Branch-2

Correct Answer: DF

Section: (none)

Explanation

Explanation/Reference:

QUESTION 58

At which layers of the OSI model do WANs operate? (Choose two.)

- A. application layer
- B. session layer
- C. transport layer

- D. network layer
- E. datalink layer
- F. physical layer

Correct Answer: EF

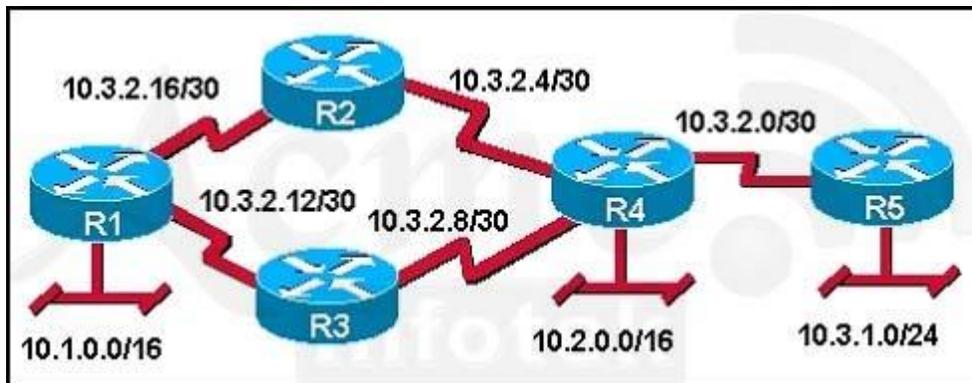
Section: (none)

Explanation

Explanation/Reference:

QUESTION 59

Which routing protocols can be used within the enterprise network shown in the diagram? (Choose three.)



- A. RIP v1
- B. RIPv2
- C. IGRP
- D. OSPF
- E. BGP
- F. EIGRP

Correct Answer: BDF

Section: (none)

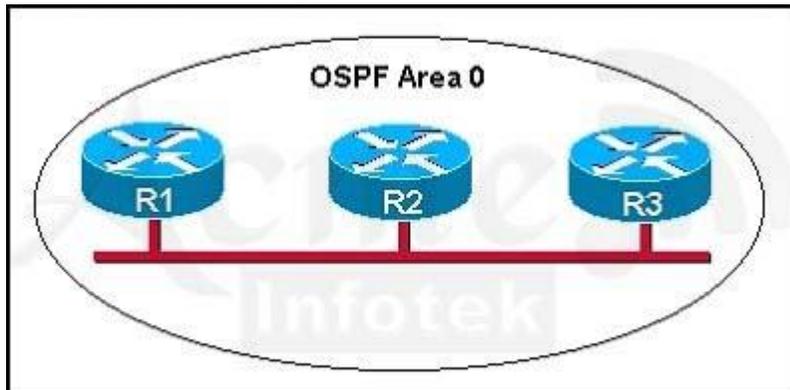
Explanation

Explanation/Reference:

QUESTION 60

Refer to the graphic.

R1 is unable to establish an OSPF neighbor relationship with R3.
What are possible reasons for this problem? (Choose two.)



- A. All of the routers need to be configured for backbone Area 1.
- B. R1 and R2 are the DR and BDR, so OSPF will not establish neighbor adjacency with R3.
- C. A static route has been configured from R1 to R3 and prevents the neighbor adjacency from being established.
- D. The hello and dead interval timers are not set to the same values on R1 and R3.
- E. EIGRP is also configured on these routers with a lower administrative distance.
- F. R1 and R3 are configured in different areas.

Correct Answer: DF

Section: (none)

Explanation

Explanation/Reference:

QUESTION 61

Which statements are true about EIGRP successor routes? (Choose two.)

- A. A successor route is used by EIGRP to forward traffic to a destination.
- B. Successor routes are saved in the topology table to be used if the primary route fails.
- C. Successor routes are flagged as "active" in the routing table.

- D. A successor route may be backed up by a feasible successor route.
- E. Successor routes are stored in the neighbor table following the discovery process.

Correct Answer: AD

Section: (none)

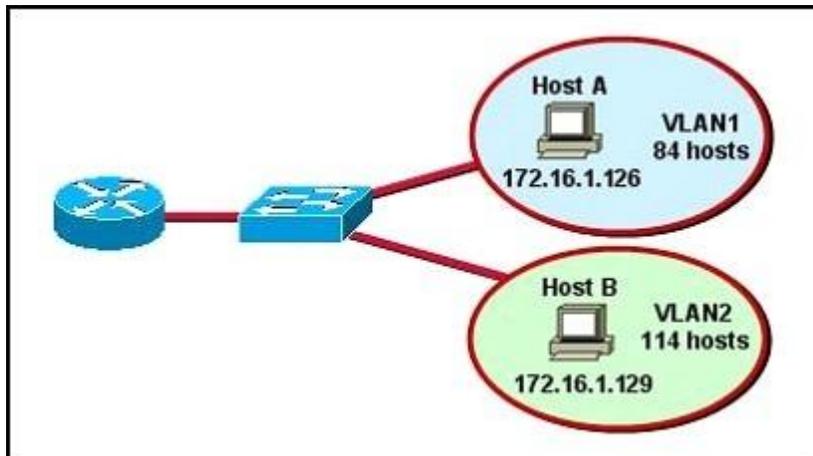
Explanation

Explanation/Reference:

QUESTION 62

Refer to the diagram. All hosts have connectivity with one another.

Which statements describe the addressing scheme that is in use in the network? (Choose three.)



- A. The subnet mask in use is 255.255.255.192.
- B. The subnet mask in use is 255.255.255.128.
- C. The IP address 172.16.1.25 can be assigned to hosts in VLAN1
- D. The IP address 172.16.1.205 can be assigned to hosts in VLAN1
- E. The LAN interface of the router is configured with one IP address.
- F. The LAN interface of the router is configured with multiple IP addresses.

Correct Answer: BCF

Section: (none)

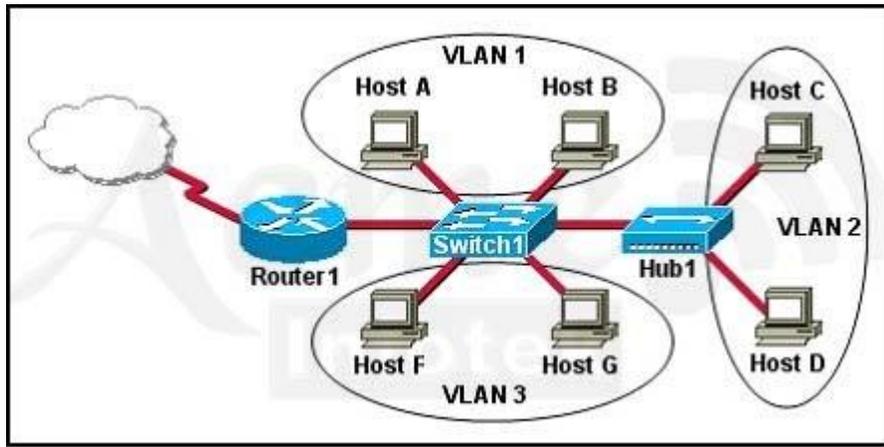
Explanation

Explanation/Reference:

QUESTION 63

Refer to the diagram.

Which three statements describe the router port configuration and the switch port configuration as shown in the topology? (Choose three.)



- A. The Router1 WAN port is configured as a trunking port.
- B. The Router1 port connected to Switch1 is configured using subinterfaces.
- C. The Router1 port connected to Switch1 is configured as 10 Mbps.
- D. The Switch1 port connected to Router1 is configured as a trunking port.
- E. The Switch1 port connected to Host B is configured as an access port.
- F. The Switch1 port connected to Hub1 is configured as full duplex.

Correct Answer: BDE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 64

Which routing protocols will support the following IP addressing scheme? (Choose three.)

Network 1 - 192.168.10.0 /26

Network 2 - 192.168.10.64 /27

Network 3 - 192.168.10.96 /27
Network 4 - 192.168.10.128 /30
Network 5 - 192.168.10.132 /30

- A. RIP version 1
- B. RIP version 2
- C. IGRP
- D. EIGRP
- E. OSPF

Correct Answer: BDE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 65

Refer to the partial command output shown.

Which two statements are correct regarding the router hardware? (Choose two.)

```
System image file is "flash:c2600-do3s-mz.120-5.T1"

cisco 2621 (MPC860) processor (revision 0x600) with 53248K/12288K
bytes of memory

Processor board ID JAD05280307 (3536592999)
M860 processor: part number 0, mask 49
Bridging software.
X.25 software, Version 3.0.0.
2 FastEthernet/IEEE 802.3 interface(s)
2 Serial(sync/async) network interface(s)
2 Low-speed serial(sync/async) network interface(s)
16 terminal line(s)

32K bytes of non-volatile configuration memory.
16384K bytes of processor board System flash (Read/write)
```

- A. Total RAM size is 32 KB.
- B. Total RAM size is 16384 KB (16 MB).
- C. Total RAM size is 65536 KB (64 MB).

- D. Flash size is 32 KB.
- E. Flash size is 16384 KB (16 MB).
- F. Flash size is 65536 KB (64 MB).

Correct Answer: CE

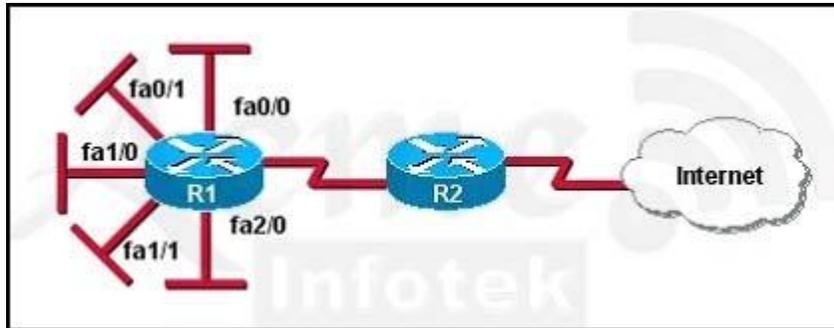
Section: (none)

Explanation

Explanation/Reference:

QUESTION 66

The Ethernet networks connected to router R1 in the graphic have been summarized for router R2 as 192.1.144.0/20. Which of the following packet destination addresses will R2 forward to R1, according to this summary? (Choose two.)



- A. 192.1.159.2
- B. 192.1.160.11
- C. 192.1.138.41
- D. 192.1.151.254
- E. 192.1.143.145
- F. 192.1.1.144

Correct Answer: AD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 67

The show interfaces serial 0/0 command resulted in the following output.
Which three are possible reasons for this interface status? (Choose three.)

```
Router#show interface Serial 0/0
Serial0/0 is up, line protocol is down
  Hardware address is HD64570
  Internet address is 192.168.100.1/24
  MTU 1500 bytes, BW 1544 Kbit, DLY 100 usec,
  reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation HDLC, loopback not set
  Keepalive set (10 sec)
```

What are possible causes for this interface status? (Choose three.)

- A. The interface is shut down.
- B. No keep-alive messages are received.
- C. The clock rate is not set.
- D. No loopback address is set.
- E. No cable is attached to the interface.
- F. There is a mismatch in the encapsulation type.

Correct Answer: BCF

Section: (none)

Explanation

Explanation/Reference:

QUESTION 68

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

- A. addresses chosen by a company to communicate with the Internet
- B. addresses that cannot be routed through the public Internet
- C. addresses that can be routed through the public Internet
- D. a scheme to conserve public addresses

E. addresses licensed to enterprises or ISPs by an Internet registry organization

Correct Answer: BD

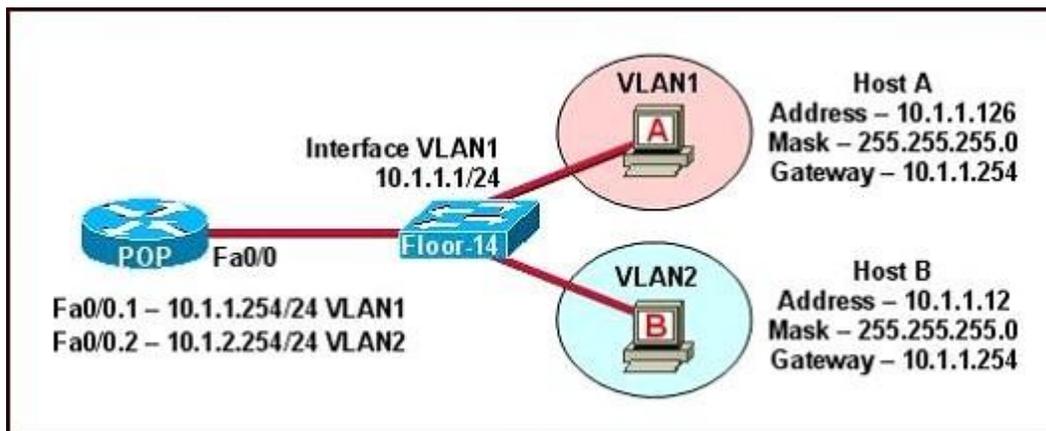
Section: (none)

Explanation

Explanation/Reference:

QUESTION 69

Refer to the exhibit.



The network shown in the diagram is experiencing connectivity problems. Which of the following will correct the problems? (Choose two.)

- A. Configure the gateway on Host A as 10.1.1.1.
- B. Configure the gateway on Host B as 10.1.2.254.
- C. Configure the IP address of Host A as 10.1.2.2.
- D. Configure the IP address of Host B as 10.1.2.2.
- E. Configure the masks on both hosts to be 255.255.255.224.
- F. Configure the masks on both hosts to be 255.255.255.240.

Correct Answer: BD

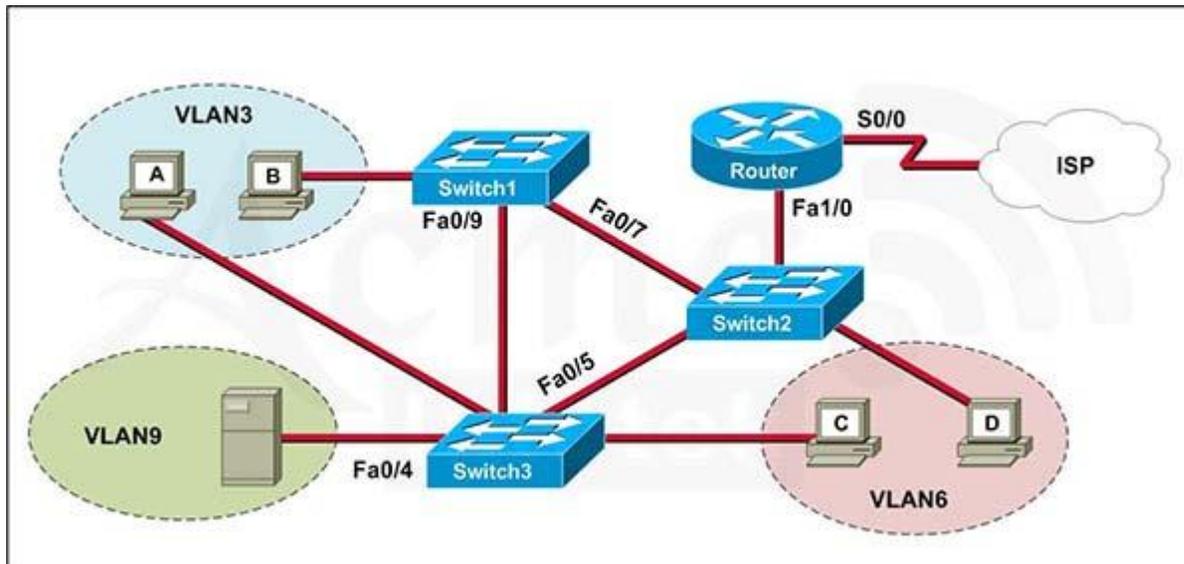
Section: (none)

Explanation

Explanation/Reference:

QUESTION 70

A network associate is trying to understand the operation of the FLD Corporation by studying the network in the exhibit. The associate knows that the server in VLAN 4 provides the necessary resources to support the user hosts in the other VLANs. The associate needs to determine which interfaces are access ports. Which interfaces are access ports? (Choose three.)



- A. Switch1 - Fa 0/2
- B. Switch1 - Fa 0/9
- C. Switch2 - Fa 0/3
- D. Switch2 - Fa 0/4
- E. Switch2 - Fa 0/8
- F. Router - Fa 1/0

Correct Answer: ACD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 71

What are two results of entering the

```
Switch(config)# vtp mode client
```

command on a Catalyst switch? (Choose two.)

- A. The switch will ignore VTP summary advertisements.
- B. The switch will forward VTP summary advertisements.
- C. The switch will process VTP summary advertisements.
- D. The switch will originate VTP summary advertisements.
- E. The switch will create, modify and delete VLANs for the entire VTP domain.

Correct Answer: BC

Section: (none)

Explanation

Explanation/Reference:

QUESTION 72

A network administrator issues the ping 192.168.2.5 command and successfully tests connectivity to a host that has been newly connected to the network.

Which protocols were used during the test? (Choose two.)

- A. ARP
- B. CDP
- C. DHCP
- D. DNS
- E. ICMP

Correct Answer: AE

Section: (none)

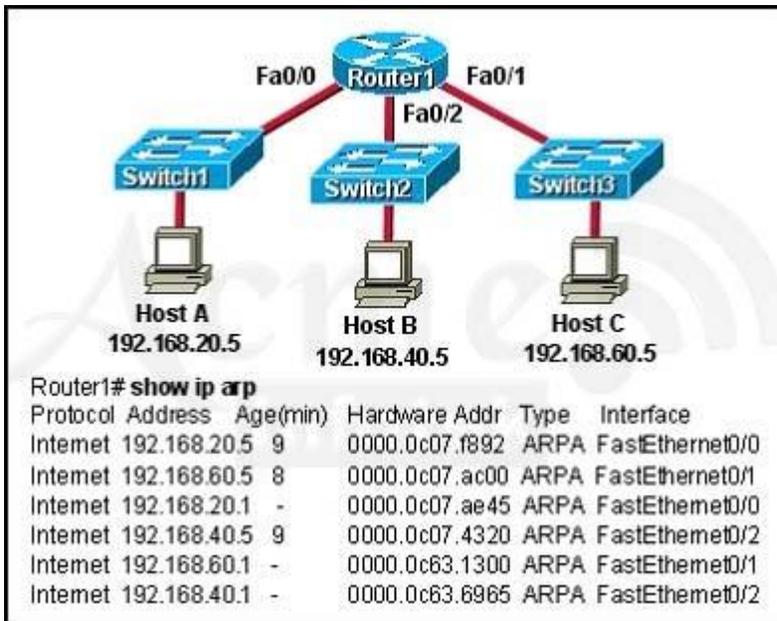
Explanation

Explanation/Reference:

QUESTION 73

Refer to the exhibit.

Host A is to send data to Host B. How will Router1 handle the data frame received from Host A? (Choose three.)



- A. Router1 will strip off the source MAC address and replace it with the MAC address on the forwarding FastEthernet interface.
- B. Router1 will strip off the source IP address and replace it with the IP address on the forwarding FastEthernet interface.
- C. Router1 will strip off the destination MAC address and replace it with the MAC address of Host B.
- D. Router1 will strip off the destination IP address and replace it with the IP address of Host B.
- E. Router1 will forward the data frame out interface FastEthernet0/1.
- F. Router1 will forward the data frame out interface FastEthernet0/2.

Correct Answer: ACF

Section: (none)

Explanation

Explanation/Reference:

QUESTION 74

Refer to the exhibit. What will Router1 do when it receives the data frame shown? (Choose three.)

```
Router1# show ip arp
Protocol  Address      Age(min)  Hardware Addr  Type   Interface
Internet 192.168.20.5  9         0000.0c07.f892  ARPA   FastEthernet0/0
Internet 192.168.60.5  8         0000.0c07.ac00  ARPA   FastEthernet0/1
Internet 192.168.20.1  -         0000.0c63.ae45  ARPA   FastEthernet0/0
Internet 192.168.40.5  9         0000.0c07.4320  ARPA   FastEthernet0/2
Internet 192.168.60.1  -         0000.0c63.1300  ARPA   FastEthernet0/1
Internet 192.168.40.1  -         0000.0c36.6965  ARPA   FastEthernet0/2
```

Data Frame:

Source MAC	Source IP	Destination MAC	Destination IP
0000.0c07.f892	192.168.20.5	0000.0c63.ae45	192.168.40.5

- A. Router1 will strip off the source MAC address and replace it with the MAC address 0000.0c36.6965.
- B. Router1 will strip off the source IP address and replace it with the IP address 192.168.40.1.
- C. Router1 will strip off the destination MAC address and replace it with the MAC address 0000.0c07.4320.
- D. Router1 will strip off the destination IP address and replace it with the IP address of 192.168.40.1.
- E. Router1 will forward the data packet out interface FastEthernet0/1.
- F. Router1 will forward the data packet out interface FastEthernet0/2.

Correct Answer: ACF

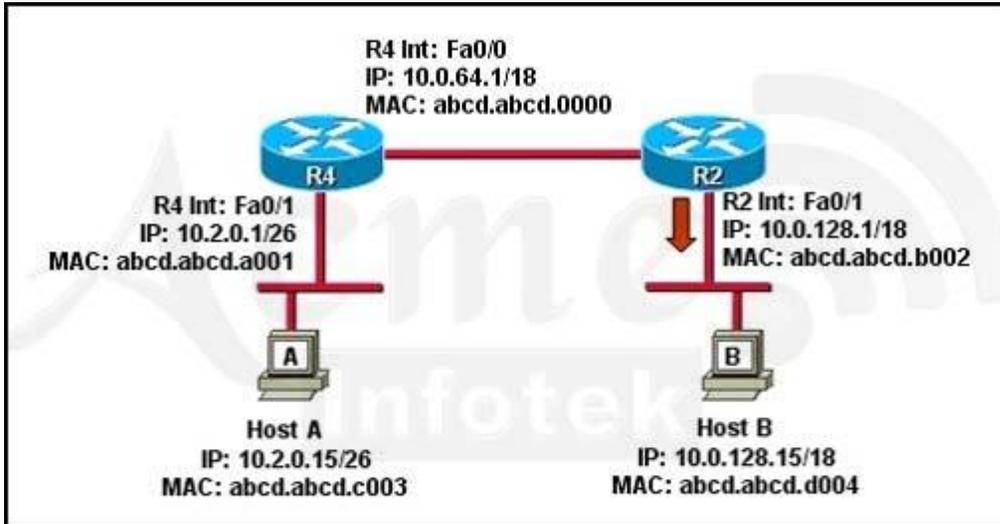
Section: (none)

Explanation

Explanation/Reference:

QUESTION 75

Refer to the exhibit. Host A pings Host B. What source MAC address and source IP address are contained in the frame as the frame leaves R2 destined for host B?



- A. abcd.abcd.a001
- B. abcd.abcd.b002
- C. abcd.abcd.c003
- D. 10.2.0.15
- E. 10.0.64.1
- F. 10.0.128.15

Correct Answer: BD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 76

Refer to the exhibit. A network associate has configured OSPF with the command:

City(config-router)# network 192.168.12.64 0.0.0.63 area 0

```
City#show ip interface brief
```

Interface	IP-Address	OK?	Method	Status	Protocol
FastEthernet0/0	192.168.12.48	YES	manual	up	up
FastEthernet0/1	192.168.12.65	YES	manual	up	up
Serial0/0	192.168.12.121	YES	manual	up	up
Serial0/1	unassigned	YES	unset	up	up
Serial0/1.102	192.168.12.125	YES	manual	up	up
Serial0/1.103	192.168.12.129	YES	manual	up	up
Serial0/1.104	192.168.12.133	YES	manual	up	up

```
City#
```

After completing the configuration, the associate discovers that not all the interfaces are participating in OSPF. Which three of the interfaces shown in the exhibit will participate in OSPF according to this configuration statement? (Choose three.)

- A. FastEthernet0/0
- B. FastEthernet0 /1
- C. Serial0/0
- D. Serial0/1.102
- E. Serial0/1.103
- F. Serial0/1.104

Correct Answer: BCD

Section: (none)

Explanation

Explanation/Reference:

QUESTION 77

A Catalyst 2950 needs to be reconfigured. What steps will ensure that the old configuration is erased? (Choose three.)

- A. Erase flash.
- B. Restart the switch.
- C. Delete the VLAN database.
- D. Erase the running configuration.
- E. Erase the startup configuration.

F. Modify the configuration register.

Correct Answer: BCE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 78

Refer to the exhibit. The FMJ manufacturing company is concerned about unauthorized access to the Payroll Server. The Accounting1, CEO, Mgr1, and Mgr2 workstations should be the only computers with access to the Payroll Server. What two technologies should be implemented to help prevent unauthorized access to the server? (Choose two.)



- A. access lists
- B. encrypted router passwords
- C. STP
- D. VLANs
- E. VTP
- F. wireless LANs

Correct Answer: AD

Section: (none)

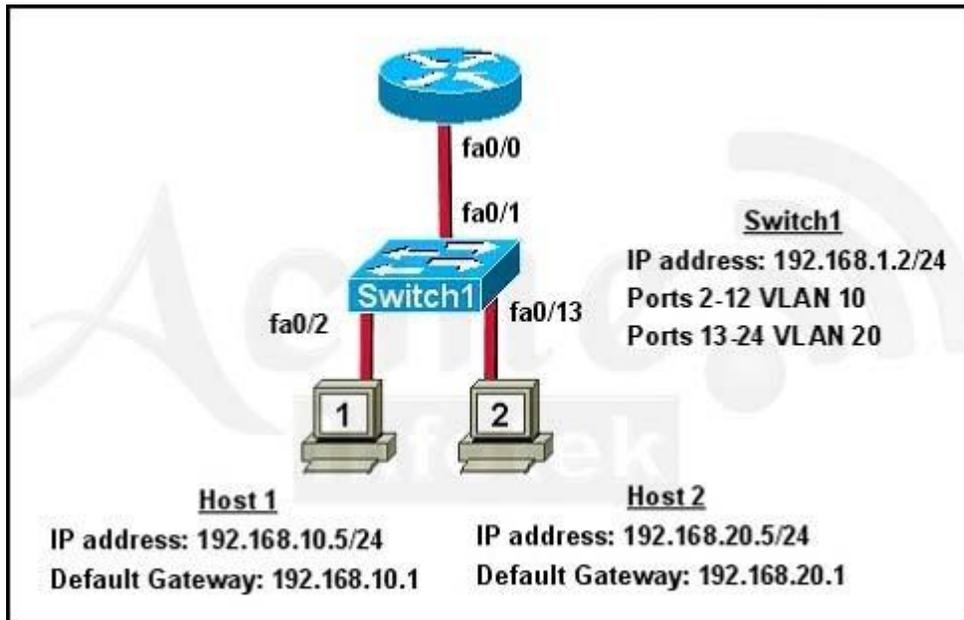
Explanation

Explanation/Reference:

QUESTION 79

Refer to the exhibit.

What commands must be configured on the 2950 switch and the router to allow communication between host 1 and host 2? (Choose two.)



- A. Router(config)# interface fastethernet 0/0
 Router(config-if)# ip address 192.168.1.1 255.255.255.0
 Router(config-if)# no shut down
- B. Router(config)# interface fastethernet 0/0
 Router(config-if)# no shut down
 Router(config)# interface fastethernet 0/0.1
 Router(config-subif)# encapsulation dot1q 10
 Router(config-subif)# ip address 192.168.10.1 255.255.255.0
 Router(config)# interface fastethernet 0/0.2
 Router(config-subif)# encapsulation dot1q 20
 Router(config-subif)# ip address 192.168.20.1 255.255.255.0
- C. Router(config)# router eigrp 100
 Router(config-router)# network 192.168.10.0
 Router(config-router)# network 192.168.20.0
- D. Switch1(config)# vlan database

- ```
Switch1(config-vlan)# vtp domain XYZ
Switch1(config-vlan)# vtp server
```
- E. Switch1(config)# interface fastethernet 0/1  
Switch1(config-if)# switchport mode trunk
- F. Switch1(config)# interface vlan 1  
Switch1(config-if)# ip default-gateway 192.168.1.1

**Correct Answer:** BE

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 80

Which three Layer 2 encapsulation types would be used on a WAN rather than a LAN? (Choose three.)

- A. HDLC
- B. Ethernet
- C. Token Ring
- D. PPP
- E. FDDI
- F. Frame Relay

**Correct Answer:** ADF

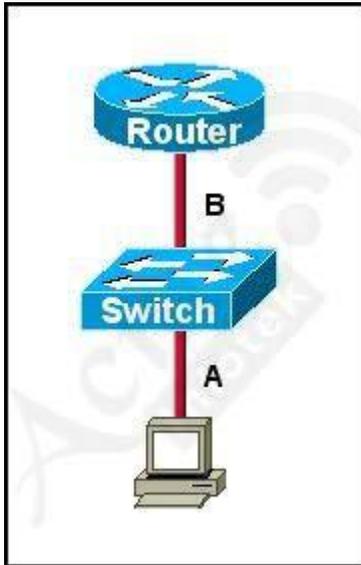
**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 81

Refer to the exhibit. The two connected ports on the switch are not turning orange or green.  
What would be the most effective steps to troubleshoot this physical layer problem? (Choose three.)



- A. Ensure that the Ethernet encapsulations match on the interconnected router and switch ports.
- B. Ensure that cables A and B are straight-through cables.
- C. Ensure cable A is plugged into a trunk port.
- D. Ensure the switch has power.
- E. Reboot all of the devices.
- F. Reseat all cables.

**Correct Answer:** BDF

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 82

The following output was shown on router R:

```
R 10.10.10.8 [120/2] via 10.10.10.6, 00:00:25, Serial0/1
```

Based on the information shown above, what can be determined from the line of show ip route output shown in the exhibit? (Choose two)

- A. The next routing update can be expected in 35 seconds.
- B. The IP address 10.10.10.6 is configured on S0/1.
- C. The IP address 10.10.10.8 is configured on S0/1.
- D. This route is using the default administrative distance.
- E. The 10.10.10.8 network is two hops away from this router.

**Correct Answer:** DE

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 83

Refer to the exhibit.

All of the routers in the network are configured with the ip subnet-zero command.

Which network addresses should be used for Link A and Network A? (Choose two.)



- A. Network A - 172.16.3.48/26
- B. Network A - 172.16.3.128/25
- C. Network A - 172.16.3.192/26

- D. Link A - 172.16.3.0/30
- E. Link A - 172.16.3.40/30
- F. Link A - 172.16.3.112/30

**Correct Answer:** BD

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 84**

Which two subnetworks would be included in the summarized address of 172.31.80.0 /20? (Choose two.)

- A. 172.31.17.4/30
- B. 172.31.51.16/30
- C. 172.31.64.0/18
- D. 172.31.80.0 /22
- E. 172.31.92.0/22
- F. 172.31.192.0/18

**Correct Answer:** DE

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 85**

The network administrator has discovered that the power supply has failed on a switch in the company LAN and that the switch has stopped functioning. It has been replaced with a Cisco Catalyst 2950 series switch. What must be done to ensure that this new switch becomes the root bridge on the network?

- A. Lower the bridge priority number.
- B. Change the MAC address of the switch.
- C. Increase the VTP revision number for the domain.
- D. Lower the root path cost on the switch ports.
- E. Assign the switch an IP address with the lowest value.

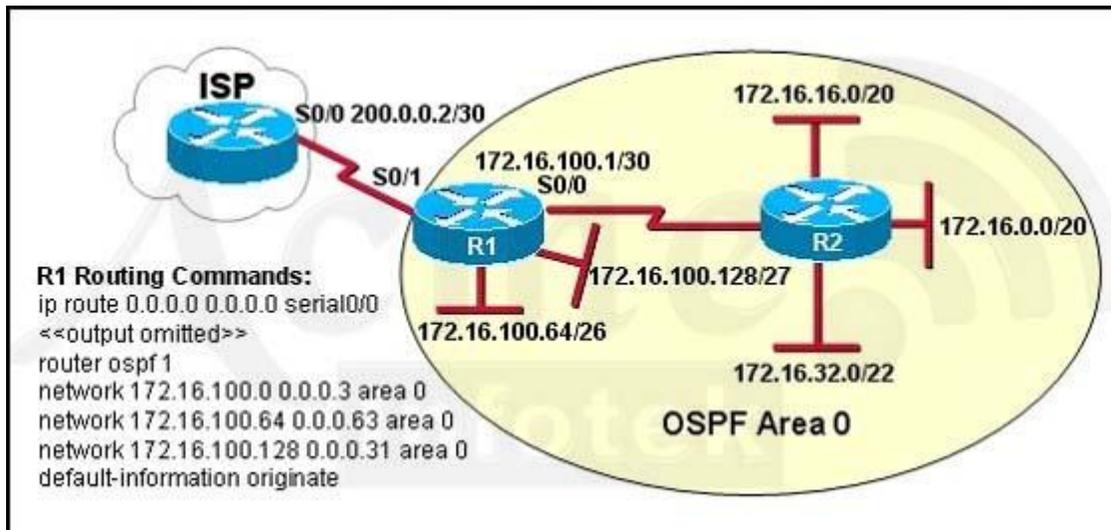
**Correct Answer:** A

**Section: (none)**  
**Explanation**

**Explanation/Reference:**

**QUESTION 86**

Refer to the exhibit.  
 Assume that all of the router interfaces are operational and configured correctly.  
 How will router R2 be affected by the configuration of R1 that is shown in the exhibit?



- A. Router R2 will not form a neighbor relationship with R1.
- B. Router R2 will obtain a full routing table, including a default route, from R1.
- C. R2 will obtain OSPF updates from R1, but will not obtain a default route from R1.
- D. R2 will not have a route for the directly connected serial network, but all other directly connected networks will be present, as well as the two Ethernet networks connected to R1.

**Correct Answer: B**  
**Section: (none)**  
**Explanation**

**Explanation/Reference:**

**QUESTION 87**

Which three IP addresses can be assigned to hosts if the subnet mask is /27 and subnet zero is usable? (Choose three.)

- A. 10.15.32.17
- B. 17.15.66.128
- C. 66.55.128.1
- D. 135.1.64.34
- E. 129.33.192.192
- F. 192.168.5.63

**Correct Answer:** ACD

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 88**

Refer to the exhibit.

A packet with a source IP address of 192.168.2.4 and a destination IP address of 10.1.1.4 arrives at the HokesB router. What action does the router take?

```
HokesB# show ip route
< output omitted >
Gateway of last resort is not set
 192.168.2.0/28 is subnetted, 6 subnets
D 192.168.2.64 [90/20514560] via 192.168.0.6, 01:22:10, Serial0/1
D 192.168.2.80 [90/20514560] via 192.168.0.6, 01:22:10, Serial0/1
D 192.168.2.32 [90/20514560] via 192.168.9.2, 01:22:10, Serial0/0
D 192.168.2.48 [90/20514560] via 192.168.9.2, 01:22:10, Serial0/0
D 192.168.2.0 [90/30720] via 192.168.1.10, 01:22:10, FastEthernet0/0
D 192.168.2.6 [90/156160] via 192.168.1.10, 01:22:11, FastEthernet0/0
 192.168.9.0/30 is subnetted, 1 subnets
C 192.168.9.0 is directly connected, Serial0/0
 192.168.0.0/30 is subnetted, 1 subnets
C 192.168.0.4 is directly connected, Serial0/1
 192.168.1.0/30 is subnetted, 1 subnets
C 192.168.1.8 is directly connected, FastEthernet0/0
HokesB#
```

- A. forwards the received packet out the Serial0/0 interface
- B. forwards a packet containing an EIGRP advertisement out the Serial0/1 interface
- C. forwards a packet containing an ICMP message out the FastEthernet0/0 interface
- D. forwards a packet containing an ARP request out the FastEthernet0/1 interface

**Correct Answer:** C

**Section:** (none)

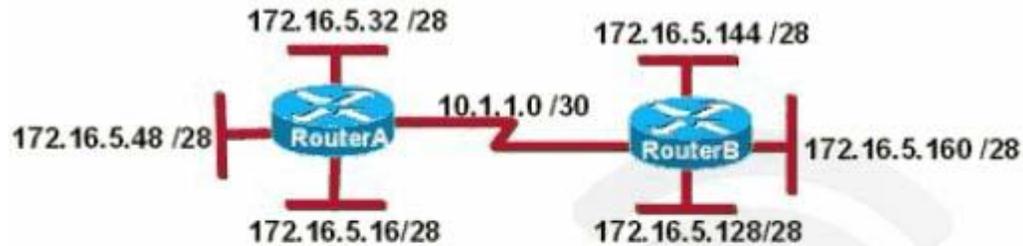
**Explanation**

**Explanation/Reference:**

#### **QUESTION 89**

Refer to the exhibit.

From RouterA, a network administrator is able to ping the serial interface of RouterB but unable to ping any of the subnets attached to RouterB. Based on the partial outputs in the exhibit, what could be the problem?



```
RouterA# show ip protocols
Routing Protocol is "eigrp 100"
<output omitted>
Routing for Networks:
 10.0.0.0
 172.16.0.0
Routing Information Sources:
Gateway Distance Last Update
(this router) 90 00:13:50
10.1.1.2 90 00:13:50
Distance: internal 90 external 170
RouterA#
```

```
RouterB# show ip protocols
Routing Protocol is "eigrp 100"
<output omitted>
Routing for Networks:
 10.0.0.0
 172.16.0.0
Routing Information Sources:
Gateway Distance Last Update
(this router) 90 00:06:30
10.1.1.1 90 00:06:30
Distance: internal 90 external 170
RouterB#
```

```
RouterB# show ip route
<output omitted>
Gateway of last resort is not set

172.16.0.0/16 is variably subnetted, 4 subnets, 2 masks
C 172.16.5.160/28 is directly connected, FastEthernet0/0
C 172.16.5.144/28 is directly connected, FastEthernet0/1
C 172.16.5.128/28 is directly connected, FastEthernet1/0
D 172.16.0.0/16 is a summary, 00:00:03, Null0
 10.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
D 10.0.0.0/8 is a summary, 00:00:04, Null0
C 10.1.1.0/30 is directly connected, Serial0/0
RouterB#
```

- A. EIGRP does not support VLSM.
- B. The EIGRP network statements are incorrectly configured.
- C. The IP addressing on the serial interface of RouterA is incorrect.
- D. The routing protocol has summarized on the classful boundary.
- E. EIGRP has been configured with an invalid autonomous system number.

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 90**

What are three characteristics of the OSPF routing protocol? (Choose three.)

- A. It converges quickly.
- B. OSPF is a classful routing protocol.
- C. It uses cost to determine the best route.
- D. It uses the DUAL algorithm to determine the best route.
- E. OSPF routers send the complete routing table to all directly attached routers.
- F. OSPF routers discover neighbors before exchanging routing information.

**Correct Answer:** ACF

**Section:** (none)

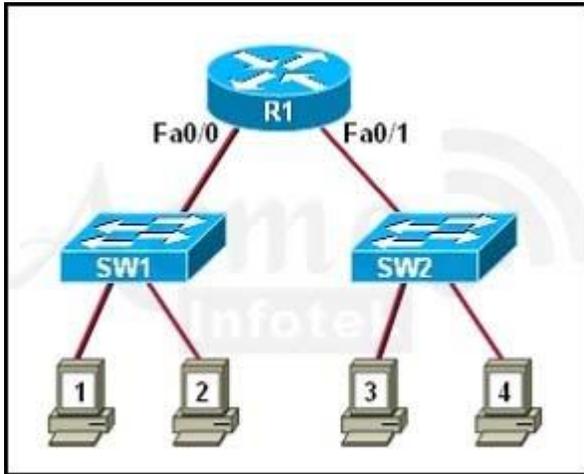
**Explanation**

**Explanation/Reference:**

**QUESTION 91**

Refer to the exhibit.

SW1 and SW2 have default configurations. What will happen if host 1 sends a broadcast?



- A. Hosts 2, 3, and 4 will receive the broadcast.
- B. Hosts 1, 2, 3, and 4 will receive the broadcast.
- C. Host 2 and the Fa0/0 interface of R1 will receive the broadcast.
- D. Hosts 1, 2 and the Fa0/0 interface of R1 will receive the broadcast.
- E. Hosts 1, 2, 3, 4 and interface Fa0/0 of R1 will receive the broadcast.
- F. Hosts 2, 3, 4, and interfaces Fa0/0 and Fa0/1 of R1 will receive the broadcast.

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 92

A router has learned three possible routes that could be used to reach a destination network. One route is from EIGRP and has a composite metric of 20514560.

Another route is from OSPF with a metric of 782. The last is from RIPv2 and has a metric of 4. Which route or routes will the router install in the routing table?

- A. the OSPF route
- B. the EIGRP route
- C. the RIPv2 route
- D. all three routes

E. the OSPF and RIPv2 routes

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 93

For what two purposes does the Ethernet protocol use physical addresses? (Choose two.)

- A. to uniquely identify devices at Layer 2
- B. to allow communication with devices on a different network
- C. to differentiate a Layer 2 frame from a Layer 3 packet
- D. to establish a priority system to determine which device gets to transmit first
- E. to allow communication between different devices on the same network
- F. to allow detection of a remote device when its physical address is unknown

**Correct Answer:** AE

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 94

As a frame leaves a Layer 3 device, the Layer 2 encapsulation information is changed from what it was when it entered the device. For what two reasons can this happen? (Choose two.)

- A. The data is moving from 10BASE-TX to 100BASE-TX.
- B. The WAN encapsulation type has changed.
- C. The data format has changed from analog to digital.
- D. The source and destination hosts are in the same subnet.
- E. The source and destination MAC addresses have changed.

**Correct Answer:** BE

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 95**

Which two statements are true regarding EIGRP? (Choose two.)

- A. Passive routes are in the process of being calculated by DUAL
- B. EIGRP supports VLSM, route summarization, and routing update authentication.
- C. EIGRP exchanges full routing table information with neighboring routers with every update.
- D. If the feasible successor has a higher advertised distance than the successor route, it becomes the primary route.
- E. A query process is used to discover a replacement for a failed route if a feasible successor is not identified from the current routing information.

**Correct Answer:** BE

**Section:** (none)

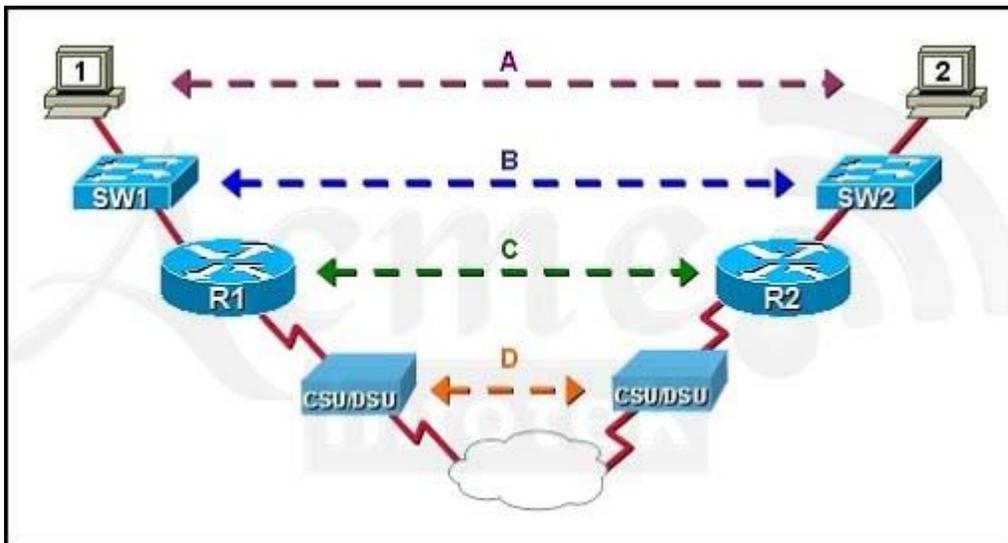
**Explanation**

**Explanation/Reference:**

**QUESTION 96**

Refer to the exhibit.

In the communication between host 1 and host 2 over the point-to-point WAN, which protocol or technology is represented by dashed line A?



- A. IP
- B. T1
- C. ppp
- D. IEEE 802.3

**Correct Answer:** A

**Section:** (none)

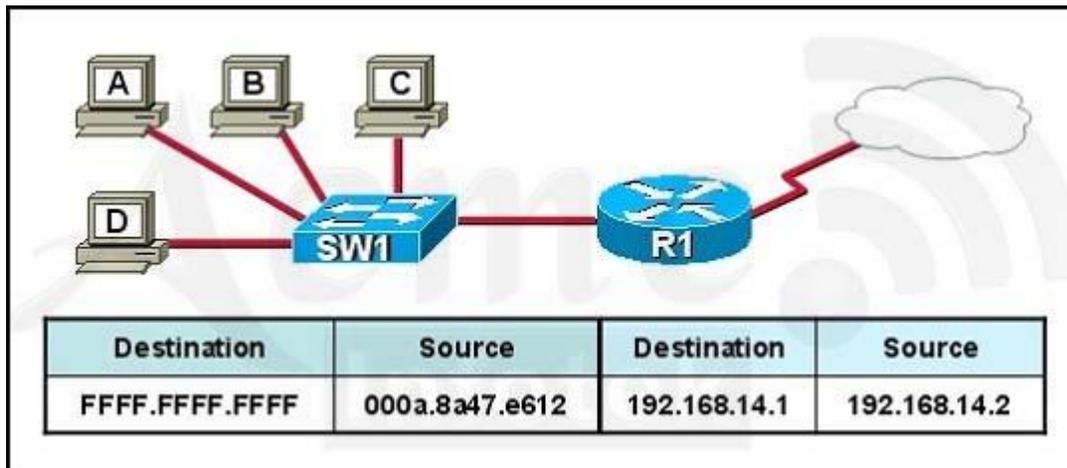
**Explanation**

**Explanation/Reference:**

**QUESTION 97**

Refer to the exhibit.

The switch in the graphic has a default configuration and the MAC table is fully populated. In addition, this network is operating properly. The graphic represents selected header information in a frame leaving host A. What can be concluded from this information?



- A. The MAC address of host A is FFFF.FFFF.FFFF.
- B. The router will forward the packet in this frame to the Internet.
- C. The switch will only forward this frame to the attached router interface.
- D. All devices in this LAN except host A will pass the packet to Layer 3.

**Correct Answer:** D

**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 98**

What is an appropriate use of a default route?

- A. to provide routing to a local web server
- B. to provide routing from an ISP to a stub network
- C. to provide routing that will override the configured dynamic routing protocol
- D. to provide routing to a destination that is not specified in the routing table and which is outside the local network

**Correct Answer: D**

**Section: (none)**

**Explanation**

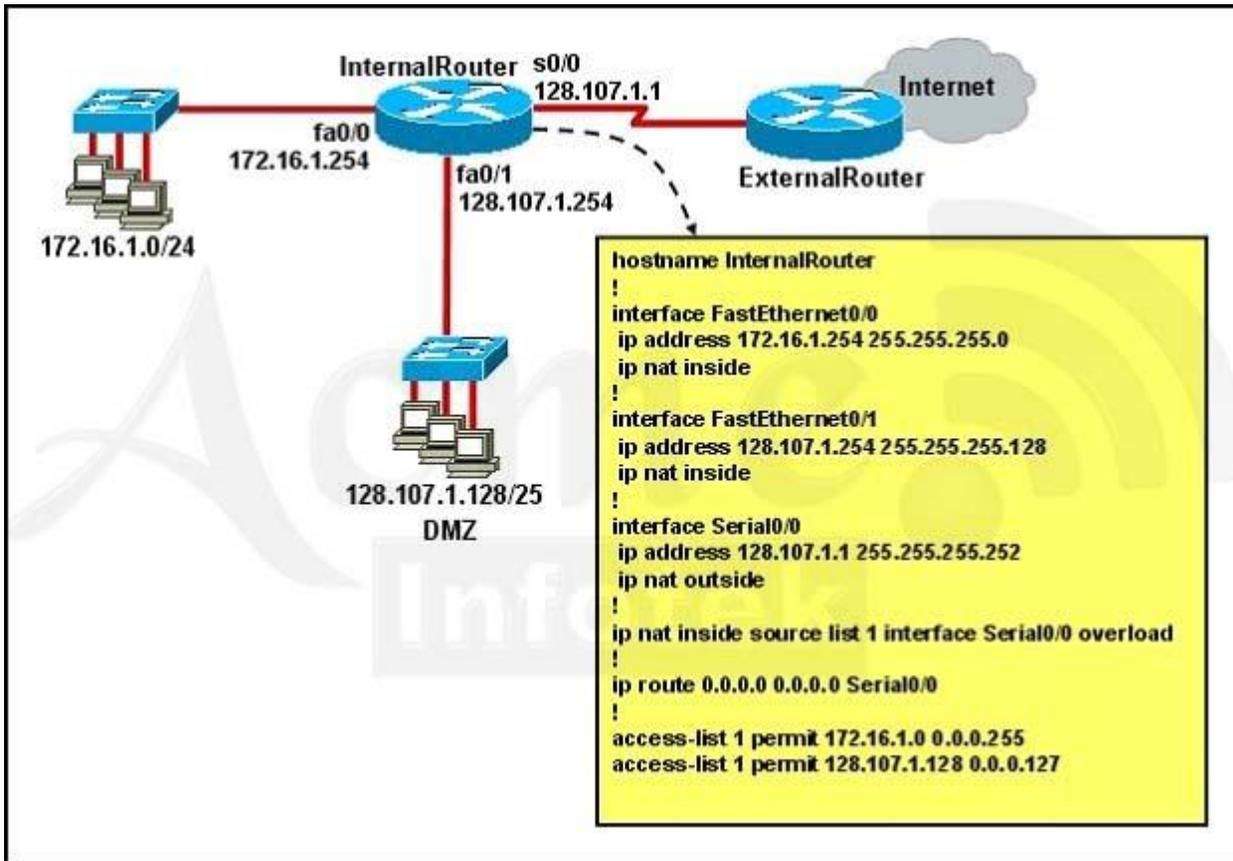
**Explanation/Reference:**

**QUESTION 99**

Refer to the exhibit.

A junior network engineer has prepared the exhibited configuration file.

What two statements are true of the planned configuration for interface fa0/1? (Choose two.)



- A. The two FastEthernet interfaces will require NAT configured on two outside serial interfaces.
- B. Address translation on fa0/1 is not required for DMZ Devices to access the Internet.
- C. The fa0/1 IP address overlaps with the space used by s0/0.
- D. The fa0/1 IP address is invalid for the IP subnet on which it resides.
- E. Internet hosts may not initiate connections to DMZ Devices through the configuration that is shown.

**Correct Answer:** BE

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 100**

Refer to the exhibit.

Two routers have just been configured by a new technician.

All interfaces are up. However, the routers are not sharing their routing tables.

What is the problem?

```
Router2# debug ip rip
RIP protocol debugging is on
Router2#RIP: sending v1 update to 255.255.255.255 via serial0/0 (192.168.2.2)
RIP: build update entries
 network 192.168.3.0 metric 1
RIP: sending v1 update to 255.255.255.255 via FastEthernet0/0 (192.168.3.1)
RIP: build update entries
 network 192.168.2.0 metric 1
RIP: ignored v2 packet from 192.168.2.1 (illegal version)

Router2#
```

- A. Split horizon is preventing Router2 from receiving routing information from Router1.
- B. Router1 is configured for RIP version 2, and Router2 is configured for RIP version 1.
- C. Router1 has an ACL that is blocking RIP version 2.
- D. There is a physical connectivity problem between Router1 and Router2.
- E. Router1 is using authentication and Router2 is not.

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

## Exam

### QUESTION 1

A medium-sized company has a Class C IP address. It has two Cisco routers and one non-Cisco router. All three routers are using RIP version 1. The company network is using the block of 198.133.219.0/24. The company has decided it would be a good idea to split the network into three smaller subnets and create the option of conserving addresses with VLSM. What is the best course of action if the company wants to have 40 hosts in each of the three subnets?

- A. Convert all the routers to EIGRP and use 198.133.219.32/27, 198.133.219.64/27, and 198.133.219.92/27 as the new subnetworks.
- B. Maintain the use of RIP version 1 and use 198.133.219.32/27, 198.133.219.64/27, and 198.133.219.92/27 as the new subnetworks.
- C. Convert all the routers to EIGRP and use 198.133.219.64/26, 198.133.219.128/26, and 198.133.219.192/26 as the new subnetworks.
- D. Convert all the routers to RIP version 2 and use 198.133.219.64/26, 198.133.219.128/26, and 198.133.219.192/26 as the new subnetworks.
- E. Convert all the routers to OSPF and use 198.133.219.16/28, 198.133.219.32/28, and 198.133.219.48/28 as the new subnetworks.
- F. Convert all the routers to static routes and use 198.133.219.16/28, 198.133.219.32/28, and 198.133.219.48/28 as the new subnetworks.

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 2

Refer to the exhibit. Why has this switch not been elected the root bridge for VLAN1?

```

Switch# show spanning-tree vlan 1
VLAN0001
 Spanning tree enabled protocol rstp
 Root ID Priority 20481
 Address 0008.217a.5800
 Cost 38
 Port 1 (FastEthernet0/1)
 Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec

 Bridge ID Priority 32769 (priority 32768 sys-id-ext 1)
 Address 0008.205e.6600
 Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec
 Aging Time 300

Interface Role Sts Cost Prio.Nbr Type

Fa0/1 Root FWD 19 128.1 P2p
Fa0/4 Desg FWD 38 128.1 P2p
Fa0/11 Altn BLK 57 128.1 P2p
Fa0/13 Desg FWD 38 128.1 P2p

```

- A. It has more than one interface that is connected to the root network segment.
- B. It is running RSTP while the elected root bridge is running 802.1 d spanning tree.
- C. It has a higher MAC address than the elected root bridge.
- D. It has a higher bridge ID than the elected root bridge.

**Correct Answer:** D

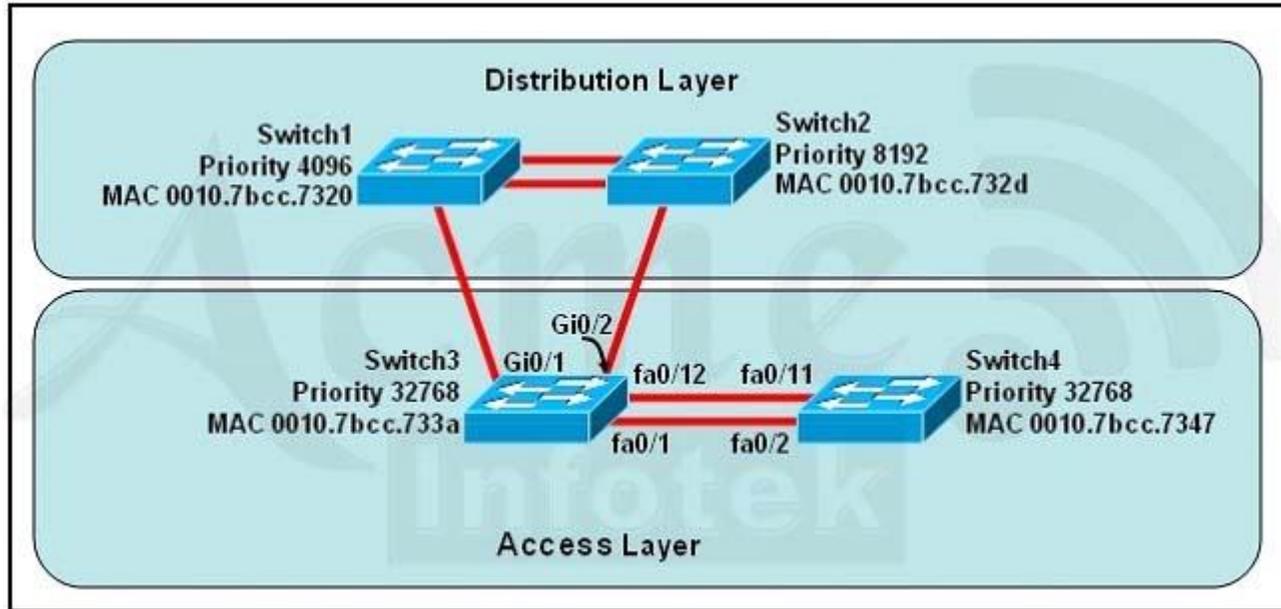
**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 3**

Refer to the exhibit. At the end of an RSTP election process, which access layer switch port will assume the discarding role?



- A. Switch3, port fa0/1
- B. Switch3, port fa0/12
- C. Switch4, port fa0/11
- D. Switch4, port fa0/2
- E. Switch3, port Gi0/1
- F. Switch3, port Gi0/2

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

In this question, we only care about the Access Layer switches (Switch3 & 4).

Switch 3 has a lower bridge ID than Switch 4 (because the MAC of Switch3 is smaller than that of Switch4) so both ports of Switch3 will be in forwarding state.

The alternative port will surely belong to Switch4.

Switch4 will need to block one of its ports to avoid a bridging loop between the two switches.

But how does Switch4 select its blocked port? Well, the answer is based on the BPDUs it receives from Switch3.

A BPDU is superior than another if it has:

1. A lower Root Bridge ID
2. A lower path cost to the Root
3. A lower Sending Bridge ID
4. A lower Sending Port ID

These four parameters are examined in order. In this specific case, all the BPDUs sent by Switch3 have the same Root Bridge ID, the same path cost to the Root and the same Sending Bridge ID.

The only parameter left to select the best one is the Sending Port ID (Port ID = port priority + port index). In this case the port priorities are equal because they use the default value, so Switch4 will compare port index values, which are unique to each port on the switch, and because Fa0/12 is inferior to Fa0/1, Switch4 will select the port connected with Fa0/1 (of Switch3) as its root port and block the other port -> Port fa0/11 of Switch4 will be blocked (discarding role).

If you are still not sure about this question, please read my RSTP tutorial.  
<http://www.9tut.com/rapid-spanning-tree-protocol-rstp-tutorial>

#### **QUESTION 4**

Refer to the exhibit.

How many paths can the EIGRP routing process use to forward packets from HQ\_Router to a neighbor router?

```
HQ_Router# show ip protocols
Routing Protocol is "eigrp 109"
 Outgoing update filter list for all interfaces is not set
 Incoming update filter list for all interfaces is not set
 Default networks flagged in outgoing updates
 Default networks accepted from incoming updates
 EIGRP metric weight K1=1, K2=0, K3=1, K4=0, K5=0
 EIGRP maximum hopcount 100
 EIGRP maximum metric variance 3
 Redistributing: eigrp 109
 EIGRP NSF-aware route hold timer is 240s
 Automatic network summarization is not in effect
 Maximum path: 4
 Routing for Networks:
 20.10.10.0/24
 172.30.10.0/24
 192.168.1.0
 Routing Information Sources:
 Gateway Distance Last Update
 192.168.1.1 90 00:13:12
 172.16.10.2 90 01:13:06
 Distance: internal 90 external 170

HQ_Router#
```

- A. two equal-cost paths
- B. two unequal-cost paths
- C. three equal-cost paths
- D. three unequal-cost paths
- E. four equal-cost paths
- F. four unequal-cost paths

**Correct Answer:** F

**Section:** (none)

**Explanation**

**Explanation/Reference:**

## QUESTION 5

Select the action that results from executing these commands.

```
Switch(config-if)# switchport port-security
Switch(config-if)# switchport port-security mac-address sticky
```

- A. A dynamically learned MAC address is saved in the startup-configuration file.
- B. A dynamically learned MAC address is saved in the running-configuration file.
- C. A dynamically learned MAC address is saved in the VLAN database.
- D. Statically configured MAC addresses are saved in the startup-configuration file if frames from that address are received.
- E. Statically configured MAC addresses are saved in the running-configuration file if frames from that address are received.

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

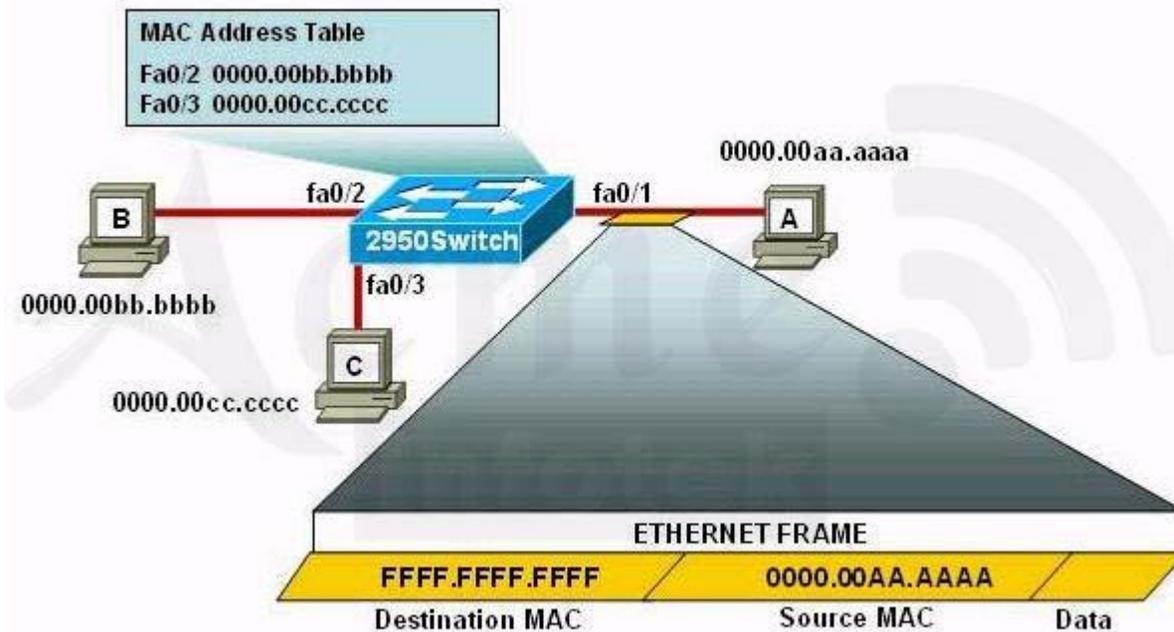
#### QUESTION 6

Refer to the exhibit.

The following commands are executed on interface fa0/1 of 2950Switch.

```
2950Switch(config-if)# switchport port-security
2950Switch(config-if)# switchport port-security mac-address sticky
2950Switch(config-if)# switchport port-security maximum 1
```

The Ethernet frame that is shown arrives on interface fa0/1.



What two functions will occur when this frame is received by 2950Switch? (Choose two.)

- A. The MAC address table will now have an additional entry of fa0/1 FFFF.FFFF.FFFF.
- B. Only host A will be allowed to transmit frames on fa0/1.
- C. This frame will be discarded when it is received by 2950Switch.
- D. All frames arriving on 2950Switch with a destination of 0000.00aa.aaaa will be forwarded out fa0/1.
- E. Hosts B and C may forward frames out fa0/1 but frames arriving from other switches will not be forwarded out fa0/1.
- F. Only frames from source 0000.00bb.bbbb, the first learned MAC address of 2950Switch, will be forwarded out fa0/1

**Correct Answer:** BD

**Section:** (none)

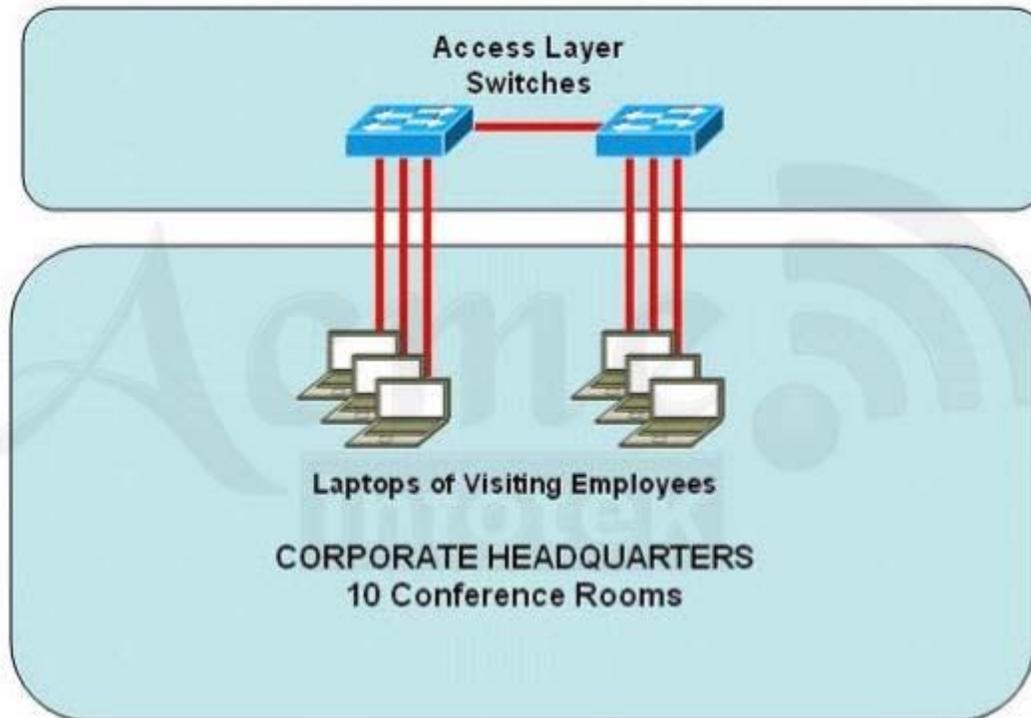
**Explanation**

**Explanation/Reference:**

#### QUESTION 7

Refer to the exhibit. Some 2950 series switches are connected to the conference area of the corporate headquarters network.

The switches provide two to three jacks per conference room to host laptop connections for employees who visit the headquarters office. When large groups of employees come from other locations, the network administrator often finds that hubs have been connected to wall jacks in the conference area although the ports on the access layer switches were not intended to support multiple workstations. What action could the network administrator take to prevent access by multiple laptops through a single switch port and still leave the switch functional for its intended use?



- A. Configure static entries in the switch MAC address table to include the range of addresses used by visiting employees.
- B. Configure an ACL to allow only a single MAC address to connect to the switch at one time.
- C. Use the `mac-address-table 1` global configuration command to limit each port to one source MAC address.
- D. Implement Port Security on all interfaces and use the `port-security maximum 1` command to limit port access to a single MAC address.
- E. Implement Port Security on all interfaces and use the `port-security mac-address sticky` command to limit access to a single MAC address.
- F. Implement Port Security at global configuration mode and use the `port-security maximum 1` command to allow each switch only one attached hub.

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 8**

Running both IPv4 and IPv6 on a router simultaneously is known as what?

- A. 4to6 routing
- B. 6to4 routing
- C. binary routing
- D. dual-stack routing
- E. NextGen routing

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 9**

What are three IPv6 transition mechanisms? (Choose three.)

- A. 6to4 tunneling
- B. VPN tunneling
- C. GRE tunneling
- D. ISATAP tunneling
- E. PPP tunneling
- F. Teredo tunneling

**Correct Answer:** ADF

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 10**

Identify the four valid IPv6 addresses. (Choose four.)

- A. ::
- B. ::192:168:0:1
- C. 2000::
- D. 2001:3452:4952:2837::
- E. 2002:c0a8:101::42
- F. 2003: deaD. beef:4dad:23:46:bB. 101

**Correct Answer:** ABEF

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 11**

Refer to the following protocols, which one can create a secure terminal connection to a remote network device?

- A. ARP
- B. SSH
- C. Telnet
- D. wep
- E. SNMPv1
- F. SNMPv2

**Correct Answer:** B

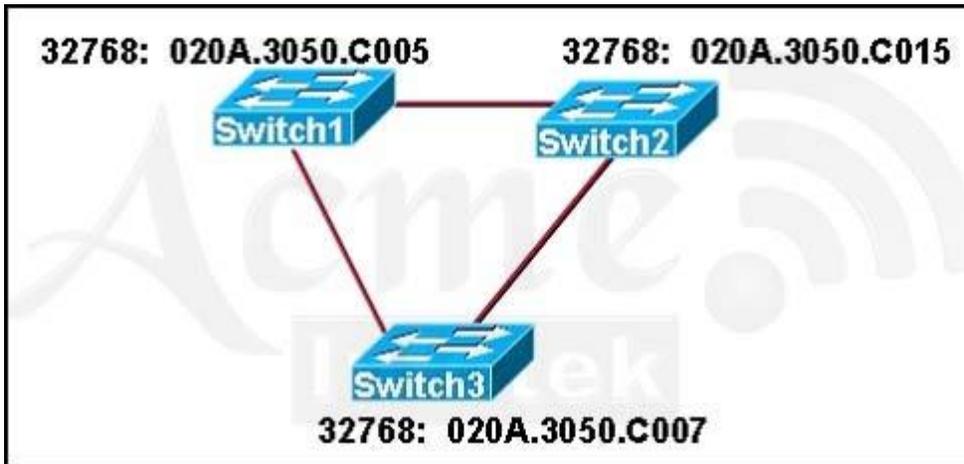
**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 12**

Refer to the exhibit. A network administrator wants Switch3 to be the root bridge.



- A. Configure the IP address on Switch3 to be higher than the IP addresses of Switch1 and Switch2.
- B. Configure the priority value on Switch3 to be higher than the priority values of Switch 1 and Switch2.
- C. Configure the BID on Switch3 to be lower than the BIDs of Switch1 and Switch2.
- D. Configure the MAC address on Switch3 to be higher than the Switch1 and Switch2 MAC addresses.
- E. Configure a loopback interface on Switch3 with an IP address lower than any IP address on Switch1 and Switch2.

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 13

What is the maximum data rate specified for IEEE 802.11b WLANs?

- A. 10Mbps
- B. 11Mbps
- C. 54Mbps
- D. 100Mbps

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 14**

How does using the service password-encryption command on a router provide additional security?

- A. by encrypting all passwords passing through the router
- B. by encrypting passwords in the plain text configuration file
- C. by requiring entry of encrypted passwords for access to the device
- D. by configuring an MD5 encrypted key to be used by routing protocols to validate routing exchanges
- E. by automatically suggesting encrypted passwords for use in configuring the router

**Correct Answer:** B

**Section:** (none)

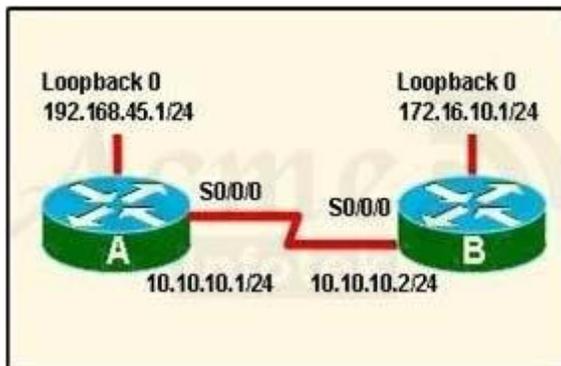
**Explanation**

**Explanation/Reference:**

**QUESTION 15**

Refer to the exhibit.

When running OSPF, What would cause router A not to form an adjacency with router B?



- A. The loopback addresses are on different subnets.
- B. The values of the dead timers on the routers are different.
- C. Route summarization is enabled on both routers.

D. The process identifier on router A is different than the process identifier on router B.

**Correct Answer:** B

**Section:** (none)

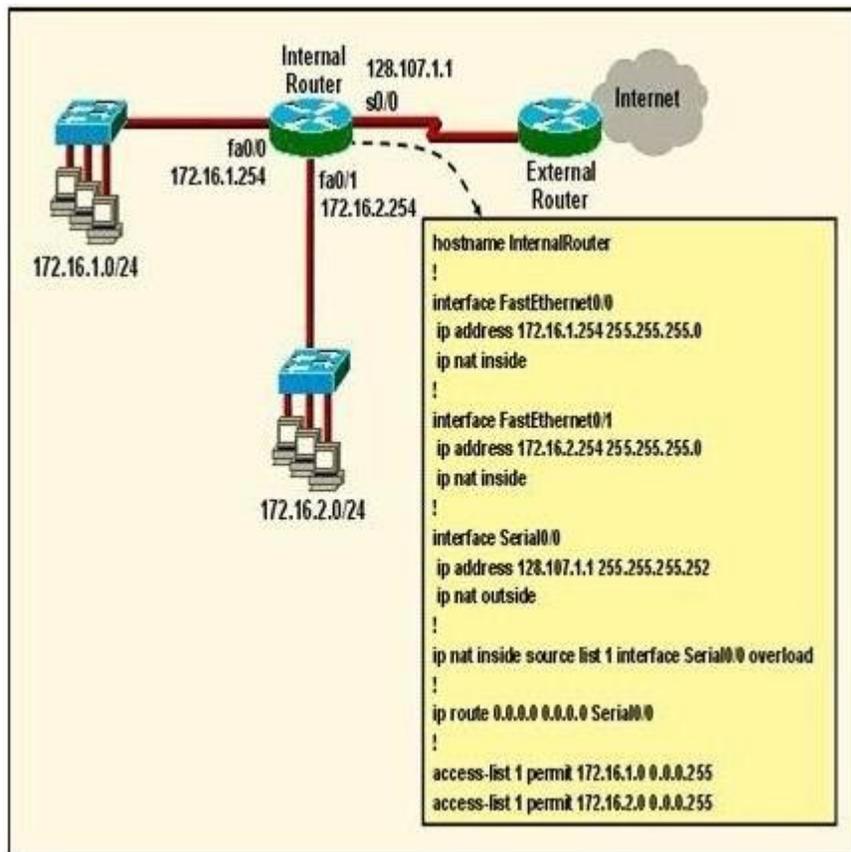
**Explanation**

**Explanation/Reference:**

To form an adjacency (become neighbor), router A & B must have the same Hello interval, Dead interval and AREA number.

### QUESTION 16

Refer to the exhibit. What statement is true of the configuration for this network?



Based on the information shown above, Which of the following correctly describe the configuration for this network?

- A. The configuration that is shown provides inadequate outside address space for translation of the number of inside addresses that are supported.
- B. Because of the addressing on interface FastEthernet0/1, the Serial0/0 interface address will not support the NAT configuration as shown.
- C. The number 1 referred to in the ip nat inside source command references access-list number1.
- D. External Router must be configured with static routes to networks 172.16.2.0/24.

**Correct Answer:** C

**Section:** (none)

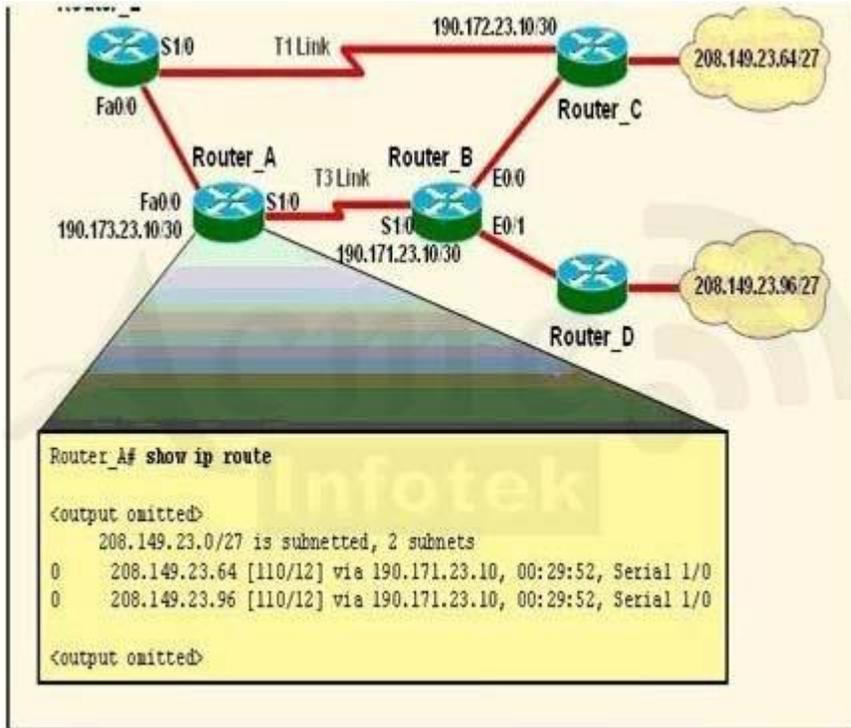
**Explanation**

**Explanation/Reference:**

#### **QUESTION 17**

Refer to the exhibit. The network is converged.

After link-state advertisements are received from Router\_A, what information will Router\_E contain in its routing table for the subnets 208.149.23.64 and 208.149.23.96?



- A. 208.149.23.64[110/13] via 190.173.23.10,00:00:07, FastEthernet0/0  
208.149.23.96[110/13] via 190.173.23.10,00:00:16, FastEthernet0/0
- B. 208.149.23.64[110/1] via 190.172.23.10,00:00:07, Serial1/0  
208.149.23.96[110/3] via 190.173.23.10,00:00:16, FastEthernet0/0
- C. 208.149.23.64[110/13] via 190.173.23.10,00:00:07, Serial1/0  
208.149.23.96[110/13] via 190.173.23.10,00:00:16, Serial1/0  
208.149.23.96[110/13] via 190.173.23.10,00:00:16, FastEthernet0/0
- D. 208.149.23.64[110/3] via 190.172.23.10,00:00:07, Serial1/0  
208.149.23.96[110/3] via 190.173.23.10,00:00:16, Serial1/0

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Router\_E learns two subnets subnets 208.149.23.64 and 208.149.23.96 via Router\_A through FastEthernet interface. The interface cost is calculated

with the formula  $108 / \text{Bandwidth}$ .

For FastEthernet it is  $108 / 100 \text{ Mbps} = 108 / 100,000,000 = 1$ . Therefore the cost is  $12$  (learned from Router\_A) +  $1 = 13$  for both subnets -> B is not correct.

The cost through T1 link is much higher than through T3 link (T1 cost =  $108 / 1.544 \text{ Mbps} = 64$ ; T3 cost =  $108 / 45 \text{ Mbps} = 2$ ) so surely OSPF will choose the path through T3 link -> Router\_E

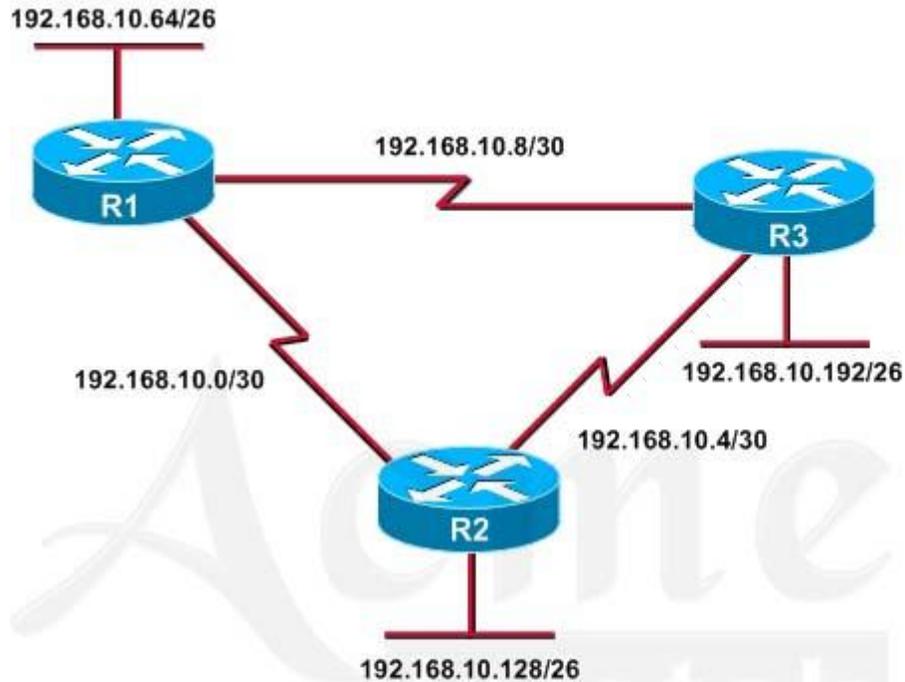
will choose the path from Router\_A through FastEthernet0/0, not Serial1/0 -> C & D are not correct.

In fact, we can quickly eliminate answers B, C and D because they contain at least one subnet learned from Serial1/0 -> they are surely incorrect.

### **QUESTION 18**

Refer to exhibit. The company uses EIGRP as the routing protocol.

What path will packets take from a host on 192.168.10.192/26 network to a host on the LAN attached to router R1?



R3# show ip route

```
Gateway of last resort is not set
192.168.10.0/24 is variably subnetted, 6 subnets, 2 masks
D 192.168.10.64/26 [90/2195456] via 192.168.10.9 00:03:31, Serial0/0
D 192.168.10.0/30 [90/2681856] via 192.168.10.9 00:03:31, Serial0/0
C 192.168.10.4/30 is directly connected, Serial 0/1
C 192.168.10.8/30 is directly connected, Serial 0/0
C 192.168.10.192/26 is directly connected, FastEthernet 0/0
D 192.168.10.128/26 [90/2195456] via 192.168.10.5 00:03:31, Serial0/1
```

- A. The path of the packets will be R3 to R2 to R1.
- B. The path of the packets will be R3 to R1 to R2.
- C. The path of the packets will be both R3 to R2 to R1 AND R3 to R1.
- D. The path of the packets will be R3 to R1.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

#### QUESTION 19

Refer to the exhibit.

Switch port FastEthernet 0/24 on ALSwitch1 will be used to create an IEEE 802.1Q-compliant trunk to another switch.

Based on the output shown, what is the reason the truck does not form, even though the proper cabling has been attached?

```
ALSwitch# show running-config
«output omitted»
Interface FastEthernet0/24 no ip address
«output omitted»
ALSwitch# show interfaces FastEthernet0/24 switchport
Name: Fa0/24
Switchport: Enabled
Administrative Mode: static access
Operation Mode: static access
Administrative Trunking Encapsulation: dot1q
Operation Trunking Encapsulation: native
Negotiation of Trunking: Off
Access Mode VLAN: 1 (default)
Trunking Native Mode VLAN: 1 (default)
Voice VLAN: none
Administrative private-vlan host-association: none
Administrative private-vlan mapping: none
Trunking VLANs Enabled: ALL
Pruning VLANs Enabled: 2-1001
Capture Mode Disabled
Capture VLANs Allowed: ALL

Protected: false

Voice VLAN: none (Inactive)
Appliance trust: none
```

A. VLANs have not been created yet.

- B. An IP address must be configured for the port.
- C. The port is currently configured for access mode.
- D. The correct encapsulation type has not been configured.
- E. The no shutdown command has not been entered for the port.

**Correct Answer:** C

**Section:** (none)

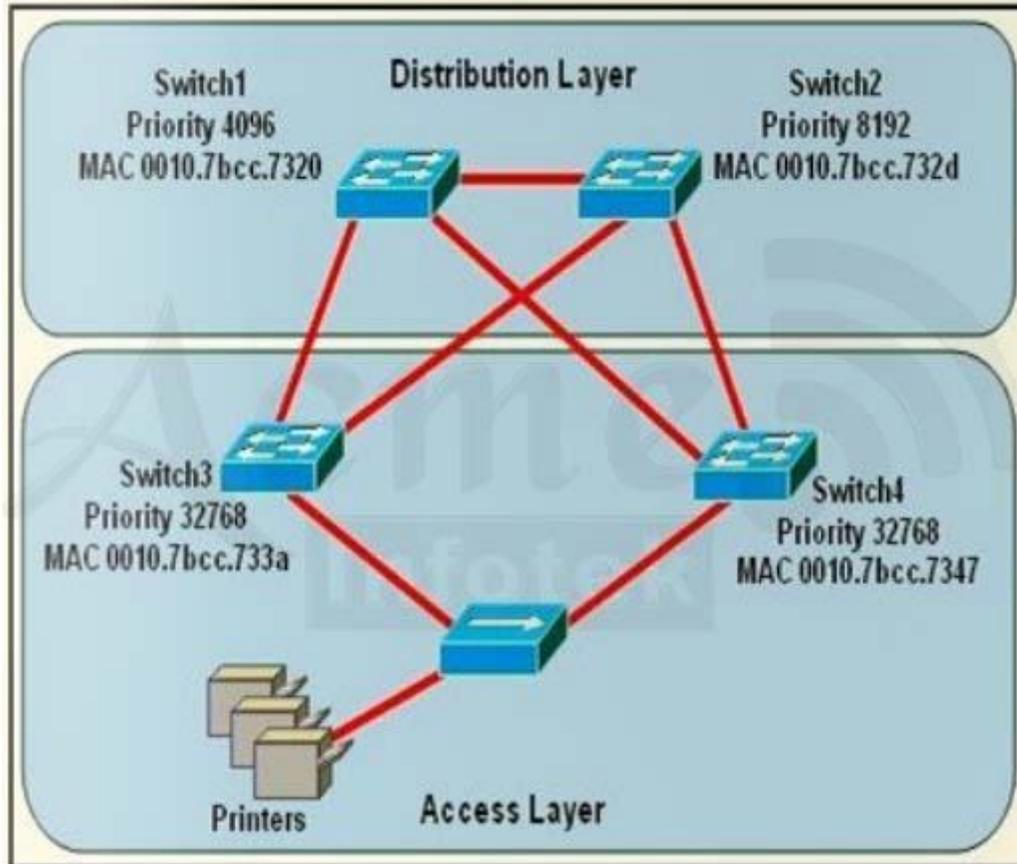
**Explanation**

**Explanation/Reference:**

#### **QUESTION 20**

Refer to the exhibit.

Which switch provides the spanning-tree designated port role for the network segment that services the printers?



- A. Switch1
- B. SWitch2
- C. Switch3
- D. Switch4

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Printers are connected by hubs. Decide the switch that provides the spanning-tree designated port role between Switch3 and Switch4.

They have the same priority 32768. Compare their MAC addresses. Switch3 with a smaller MAC address will provide a designated port for printers.

**QUESTION 21**

An administrator issues the command ping 127.0.0.1 from the command line prompt on a PC. If a reply is received, what does this confirm?

- A. The PC has connectivity with a local host.
- B. The PC has connectivity with a Layer 3 device.
- C. The PC has a default gateway correctly configured
- D. The PC has connectivity up to Layer 5 of the OSI model.
- E. The PC has the TCP/IP protocol stack correctly installed.

**Correct Answer:** E

**Section:** (none)

**Explanation**

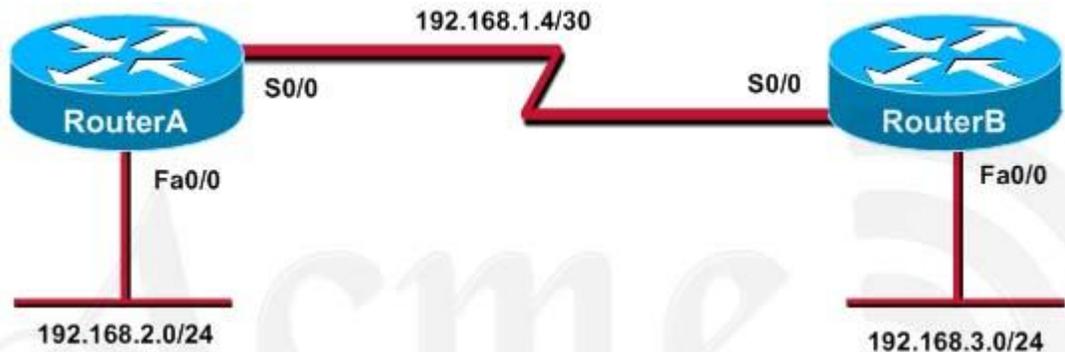
**Explanation/Reference:**

**QUESTION 22**

Refer to the exhibit.

Hosts in network 192.168.2.0 are unable to reach hosts in network 192.168.3.0.

Based on the output from RouterA, what are two possible reasons for the failure?(Choose two)



```

RouterA# show ip interface brief
Interface Ip Address OK? Method Status Protocol
FastEthernet0/0 192.168.2.1 YES manual up up
FastEthernet0/0 192.168.2.1 YES manual up down
FastEthernet0/0 192.168.2.1 YES manual administratively down down

```

- A. The cable that is connected to S0/0 on RouterA is faulty.
- B. Interface S0/0 on RouterB is administratively down.
- C. Interface S0/0 on RouterA is configured with an incorrect subnet mask.
- D. The IP address that is configured on S0/0 of RouterB is not in the correct subnet.
- E. Interface S0/0 on RouterA is not receiving a clock signal from the CSU/DSU.
- F. The encapsulation that is configured on S0/0 of RouterB does not match the encapsulation that is configured on S0/0 of RouterA.

**Correct Answer:** EF

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 23**

What is the default routing update period for RIPv2?

- A. 15 seconds

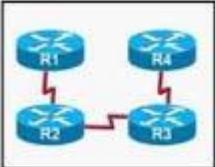
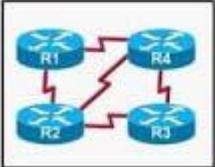
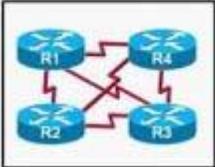
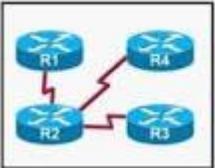
- B. 30 Seconds
- C. 180 Seconds
- D. 240 Seconds

**Correct Answer:** B  
**Section:** (none)  
**Explanation**

**Explanation/Reference:**

**QUESTION 24**

A network administrator is designing a new corporate internetwork. The corporation is concerned about downtime due to link failure and also about link costs. Which topology will provide some redundancy to increase reliability for all sites but will cost less than a fully redundant topology?

- A. 
- B. 
- C. 
- D. 

**Correct Answer:** B

**Section: (none)**  
**Explanation**

**Explanation/Reference:**

**QUESTION 25**

Which type of attack is characterized by flood of packet that are requesting a TCP connection to a server?

- A. denial of service
- B. brute force
- C. reconnaissance
- D. Trojan horse

**Correct Answer: A**

**Section: (none)**  
**Explanation**

**Explanation/Reference:**

**QUESTION 26**

Refer to the exhibit.

For what two reasons has the router loaded its IOS image from the location that is shown?(Choose two)

```
Router#show version
Cisco Internetwork Operating System Software
IOS (tm) C2600 Software (C7200-J-M), Version 11.3(19970915:164752)
[hampton-nitro-baseline 249]
Copyright (c) 1986-1997 by cisco systems, Inc.
Compiled Wed 08-Oct-97 06:39 by hampton
Image text-base: 0x60008900, data-base: 0x60b98000

ROM: System Bootstrap, Version 11.1(11855)[beta 2], INTERIM SOFTWARE
BOOTFLASH: C7200 Software (C7200-BOOT-M), Version 11.1(472), RELEASE SOFTWARE (fc1)

Router1 uptime is 23hours, 33 minutes
System restarted by abort at PC 0x6022322C at 10:50:55 PDT Tue Oct 21 1997

System image file is "tftp://172.16.1.129/hampton/nitro/c7200-j-mz"

Cisco 7206 (NPE150) processor with 57344K/8192K bytes of memory

<output omitted>

Configuration register is 0x2102
```

- A. Router1 has specific boot system commands that instruct it to load IOS from TFTP server.
- B. Router1 is acting as a TFTP server for other routers.
- C. Router1 cannot locate a valid IOS image in flash memory.
- D. Router1 defaulted to ROMMON mode and loaded the IOS image from a TFTP server.
- E. Cisco routers will first attempt to load a image from TFTP for management purposes.

**Correct Answer:** AC

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 27

What is the purpose using the traceroute command?

- A. to map all the devices on a network
- B. to display the current TCP/IP configuration values
- C. to see how a device MAC address is mapped to its IP address
- D. to see the path a packet will take when traveling to a specified destination
- E. to display the MTU values for each router in a specified network path from source to a 160 destination.

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 28

Refer to the exhibit.

Given the output from the show ip eigrp topology command, which router is the feasible successor?

```
Router#show ip eigrp topology 10.0.0.5 255.255.255.255
IP-EIGRP topology entry for 10.0.0.5/32 State is passive, Query
origin flag is 1, 1 successor(s), FD is 41152000
```

A.

```
10.1.0.1 (Serial0), from 10.1.0.1, send flag is 0x0
Composite metric is (46152000/41640000), Route is Internal
Vector metric:
 Minimum bandwidth is 64 Kbit
 Total delay is 45000 microseconds
 Reliability is 255/255
 Load is 1/255
 Minimum MTU is 1500
 Hop count is 2
```

- B. 10.0.0.2 (Serial0.1), from 10.0.0.2, Send flag is 0x0  
Composite metric is (53973248/128256), Route is Internal  
Vector metric:  
Minimum bandwidth is 48 Kbit  
Total delay is 25000 microseconds  
Reliability is 255/255  
Load is 1/255  
Minimum MTU is 1500  
Hop count is 1
- C. 10.1.0.3 (Serial0), from 10.1.0.3, Send flag is 0x0  
Composite metric is (46866176/46354176), Route is Internal  
Vector metric:  
Minimum bandwidth is 56 Kbit  
Total delay is 45000 microseconds  
Reliability is 255/255  
Load is 1/255  
Minimum MTU is 1500  
Hop count is 2
- D. 10.1.1.1 (Serial0), from 10.1.1.1, Send flag is 0x0  
Composite metric is (46763776/46251776), Route is Internal  
Vector metric:  
Minimum bandwidth is 56 Kbit  
Total delay is 41000 microseconds  
Reliability is 255/255  
Load is 1/255  
Minimum MTU is 1500  
Hop count is 2

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 29

The output of the show frame-relay pvc command shows "PVC STATUS=INACTIVE". What does this mean?

- A. The PVC is configured correctly and is operating normally, but no data packets have been detected for more than five minutes.
- B. The PVC is configured correctly, is operating normally, and is no longer actively seeking the address the remote route.
- C. The PVC is configured correctly, is operating normally, and is waiting for interesting to trigger a call to the remote router.
- D. The PVC is configured correctly on the local switch, but there is a problem on the remote end of the PVC.
- E. The PVC is not configured on the switch.

**Correct Answer:** D

**Section:** (none)

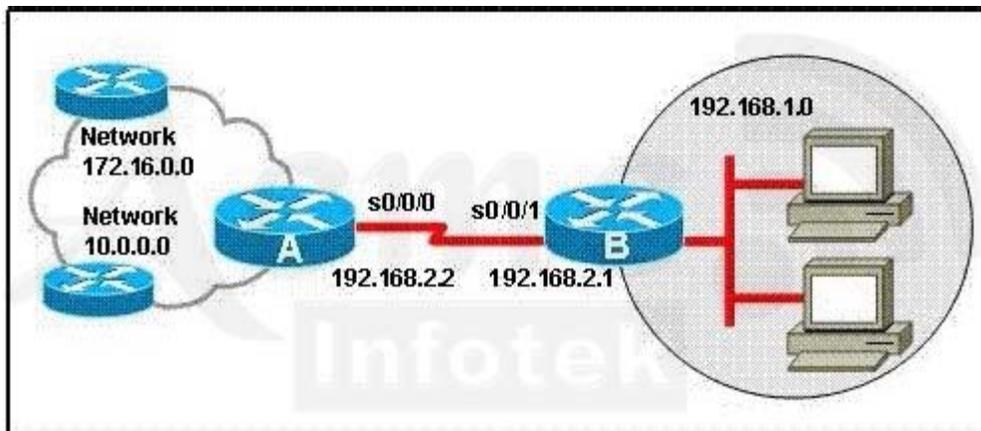
**Explanation**

**Explanation/Reference:**

### QUESTION 30

Refer to the exhibit.

Which command will create a default route on Router B to reach all networks beyond Router A?



- A. ip route 0.0.0.0 0.0.0.0 192.168.2.2
- B. ip route 192.168.1.0 255.255.255.0 192.168.2.1
- C. ip route 192.168.1.0 255.255.255.0 s0/0/0
- D. ip route 10.0.0.0 255.255.255.0 s0/0/0

E. ip route 0.0.0.0 255.255.255.0 192.168.2.2

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 31

Which of the following IP addresses can be assigned to host devices? (Choose two)

- A. 205.7.8.32/27
- B. 191.168.10.2/23
- C. 127.0.0.1
- D. 224.0.0.10
- E. 203.123.45.47/28
- F. 10.10.0.0/13

**Correct Answer:** BF

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 32

What is a valid reason for a switch to deny port access to new devices when port security is enabled?

- A. The denied MAC addresses have already been learned or configured on another secure interface in the same VLAN.
- B. The denied MAC addresses are statically configured on the port.
- C. The minimum MAC threshold has been reached.
- D. The absolute aging times for the denied MAC addresses have expired.

**Correct Answer:** A

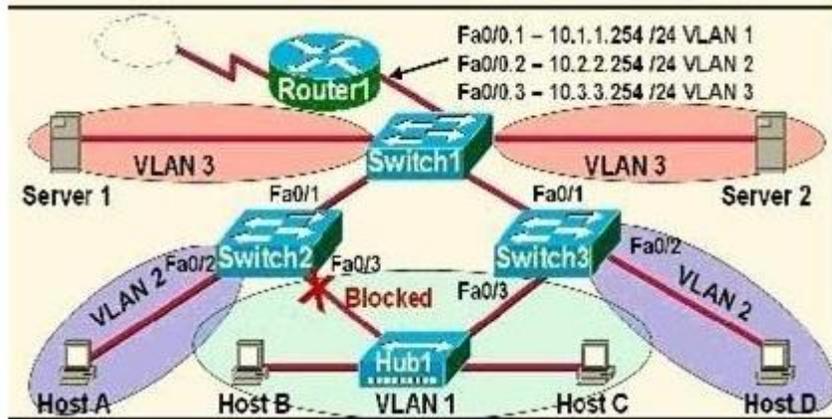
**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 33

Which statement is correct about the internetwork shown in the diagram?



- A. Switch 2 is the root bridge.
- B. Spanning Tree is not running.
- C. Host D and Server 1 are in the same network.
- D. No collisions can occur in traffic between Host B and Host C.
- E. If Fa0/0 is down on Router1, Host A cannot access Server1.
- F. If Fa0/1 is down on Switch3, Host C cannot access Server 2.

**Correct Answer:** E

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 34

Which statement is correct regarding the operation of DHCP?

- A. A DHCP client uses a ping to detect address conflicts.
- B. A DHCP server uses a gratuitous ARP to detect DHCP clients.
- C. A DHCP client uses a gratuitous ARP to detect a DHCP server.
- D. If an address conflict is detected, the address is removed from the pool and an administrator must resolve the conflict.

- E. If an address conflict is detected, the address is removed from the pool for an amount of time configurable by the administrator.
- F. If an address conflict is detected, the address is removed from the pool and will not be reused until the server is rebooted.

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 35

Refer to the diagram. What is the largest configuration file that can be stored on this router?

```
DD#show version
Cisco IOS Software, 1841 Software (C1841-IPBASE-M), Version 12.4(1A),
RELEASE SOFTWARE (fc2)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2005 by Cisco Systems, Inc.
Compiled Wed 18-Jul-07 04:52 by hqluong

ROM: System Bootstrap, Version 12.3(8r)T8, RELEASE SOFTWARE (fc1)

N-East uptime is 5 days, 49 minutes
System returned to ROM by reload at 15:17:00 UTC Thu Jun 8 2006
System image file is "flash:c1841-advipbase-mz.124-1a.bin"

Cisco 1841 (revision 5.0) with 114688K/16384K bytes of memory.
Processor board ID FTX0932W21Y
 2 FastEthernet/IEEE 802.3 interface(s)
 2 Low-speed serial(sync/async) interface(s)
191K bytes of NVRAM.
31360 bytes of ATA CompactFlash (Read/Write)

Configuration register is 0x2102

DD#
```

- A. 191K bytes

- B. 16384K bytes
- C. 31369K bytes
- D. 114688K bytes

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### **QUESTION 36**

Users have been complaining that their Frame Relay connection to the corporate site is very slow.

The network administrator suspects that the link is overloaded.

Based on the partial output of the

**Router#show frame relay pvc**

command shown in the graphic,

which output value indicates to the local router that traffic sent to the corporate site is experiencing congestion?

PVC Statistics for interface Serial0 (Frame Relay DTE)

|          | Active | Inactive | Deleted | Static |
|----------|--------|----------|---------|--------|
| Local    | 1      | 0        | 0       | 0      |
| Switched | 0      | 0        | 0       | 0      |
| Unused   | 0      | 0        | 0       | 0      |

DLCI=100, DLCI USAGE=LOCAL, PVC STATUS=ACTIVE, INTERFACE=Serial0

```

input pkts 1300 output pkts 1270 in bytes 22121000
out bytes 21802000 dropped pkts 4 out FECN pkts 147
in BECN pkts 192 out FECN pkts 259 out BECN pkts 214
in DE pkts 0 out DE pkts 0
out bcast pkts 1007 out bcast bytes 19722
Pvc create time 00:25:50, last time pvc status changed 00:25:40

```

- A. DLCI=100
- B. last time PVC status changed 00:25:40
- C. in BECN packets 192
- D. in FECN packets 147
- E. in DF packets 0

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 37**

A network interface port has collision detection and carrier sensing enabled on a shared twisted pair network. From this statement, what is known about the network interface port?

- A. This is a 10Mb/s switch port.

- B. This is a 100Mb/s switch port.
- C. This is an Ethernet port operating at half duplex.
- D. This is an Ethernet port operating at full duplex.
- E. This is a port on a network interface card in a PC.

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 38

A network administrator needs to allow only one Telnet connection to a router.

For anyone viewing the configuration and issuing the show run command, the password for Telnet access should be encrypted.

Which set of commands will accomplish this task?

- A. 

```
service password-encryption
access-list 1 permit 192.168.1.0.0.0.0.255
line vty 0 4
login
password cisco
access-class 1
```
- B. 

```
enable password secret
line vty 0
login
password cisco
```
- C. 

```
service password-encryption
line vty 1
login
password cisco
```
- D. 

```
service password-encryption
line vty 0 4
login
password cisco
```

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 39**

Refer to the exhibit. What is the meaning of the output MTU 1500 bytes?

```
Router#show interface ethernet 0
Ethernet0 is up, line protocol is up
 Hardware address is QUICC Ethernet, address is 00c0.ab73.dead (0010.7bcc.7321)
 MTU 1500 bytes, BW 100000 kbit, DLY 100 usec,
 reliability 255/255, txload 1/255, rxload 1/255
 Encapsulation ARPA, loopback not set
 Keepalive set (10 sec)
< output omitted >
```

- A. The maximum number of bytes that can traverse this interface per second is 1500.
- B. The minimum segment size that can traverse this interface is 1500 bytes.
- C. The maximum segment size that can traverse this interface is 1500 bytes.
- D. The minimum packet size that can traverse this interface is 1500 bytes.
- E. The maximum packet size that can traverse this interface is 1500 bytes.
- F. The maximum frame size that can traverse this interface is 1500 bytes.

**Correct Answer:** E

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 40**

Refer to the exhibit.

A network administrator configures a new router and enters the copy startup- config running-config command on the router.

The network administrator powers down the router and sets it up at a remote location.

When the router starts, it enters the system configuration dialog as shown. What is the cause of the problem?

```
--- System Configuration Dialog ---

would you like to enter the initial configuration dialog? [yes/no]:
% Please answer 'yes' or 'no'.
would you like to enter the initial configuration dialog? [yes/no]: n

would you like to terminal autoinstall? [yes]:

Press RETURN to get started!
```

- A. The network administrator failed to save the configuration.
- B. The configuration register is set to 0x2100.
- C. The boot system flash command is missing from the configuration.
- D. The configuration register is set to 0x2102.
- E. The router is configured with the boot system startup command.

**Correct Answer:** A

**Section:** (none)

**Explanation**

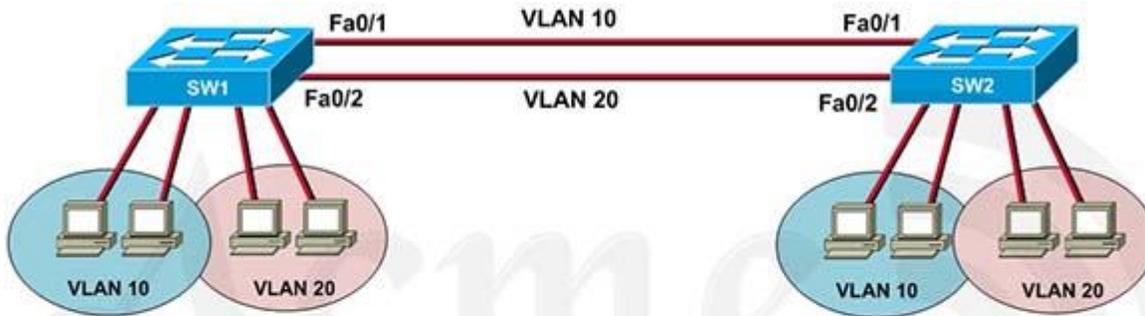
**Explanation/Reference:**

#### QUESTION 41

Refer to the exhibit. An organization connects two locations, supporting two VLANs, through two switches as shown. Inter-VLAN communication is not required. The network is working properly and there is full connectivity.

The organization needs to add additional VLANs, so it has been decided to implement VTP. Both switches are configured as VTP servers in the same VTP domain. VLANs added to Switch1 are not learned by Switch2.

Based on this information and the partial configurations in the exhibit, what is the problem?



```
Switch1# show interface fa0/1 switchport
Name: Fa0/1
Switchport: Enabled
Administrative Mode: static access
Operational Mode: static access
Administrative Trunking Encapsulation: dot1q
Negotiation of Trunking: Off
Access Mode VLAN: 10 (Sales)
Trunking Native Mode VLAN: 1 (default)
- output omitted -
```

```
Switch1# show interface fa0/2 switchport
Name: Fa0/2
Switchport: Enabled
Administrative Mode: static access
Operational Mode: static access
Administrative Trunking Encapsulation: dot1q
Negotiation of Trunking: Off
Access Mode VLAN: 20 (Accounting)
Trunking Native Mode VLAN: 1 (default)
- output omitted -
```

- A. Switch2 should be configured as a VTP client.
- B. VTP is Cisco proprietary and requires a different trunking encapsulation.
- C. A router is required to route VTP advertisements between the switches.
- D. STP has blocked one of the links between the switches, limiting connectivity.
- E. The links between the switches are access links.

**Correct Answer:** E  
**Section:** (none)  
**Explanation**

**Explanation/Reference:**

**QUESTION 42**

The administrator is unable to establish connectivity between two Cisco routers. Upon reviewing the command output of both routers, what is the most likely cause of the problem?

```
RtrA# show running-config
<some output text omitted>
enable password cisco
!
hostname RtrA
username RtrB password cisco
!
interface Serial 0/0
ip address 10.0.8.1 255.255.248.0
encapsulation ppp
ppp authentication chap
```

```
RtrB# show running-config
<some output text omitted>
enable password cisco
!
hostname RtrB
username RtrA password cisco1
!
interface Serial 0/0
ip address 10.0.15.2 255.255.248.0
encapsulation ppp
ppp authentication chap
```

- A. Authentication needs to be changed to PAP for both routers.
- B. Serial ip addresses of routers are not on the same subnet.
- C. Username/password is incorrectly configured.
- D. Router names are incorrectly configured.

**Correct Answer:** C

**Section:** (none)

**Explanation**

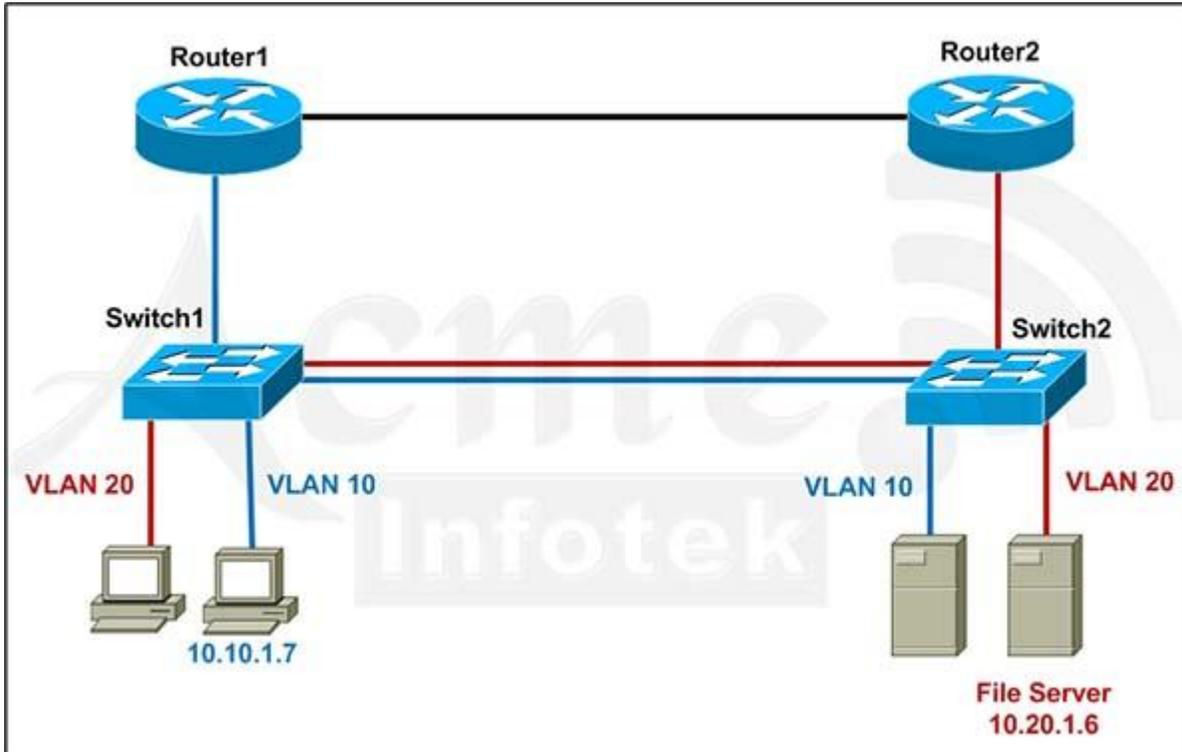
**Explanation/Reference:**

#### QUESTION 43

Refer to the exhibit.

The network manager is evaluating the efficiency of the current network design. RIPv2 is enabled on all Layer 3 devices in the network.

What network devices participate in passing traffic from the PC at 10.10.1.7 to the File Server at 10.20.1.6 in the order that they will forward traffic from source to destination?



- A. Switch1, Switch2
- B. Switch 1, Router1, Switch1, Switch2
- C. Switch1, Router1, Router2, Switch2
- D. Switch1, Switch2, Router2, Switch2

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 44**

Acknowledgements, sequencing, and flow control are characteristics of which OSI layer?

- A. Layer2
- B. Layer3
- C. Layer4
- D. Layers
- E. Layet6
- F. Layer7

**Correct Answer: C**

**Section: (none)**

**Explanation**

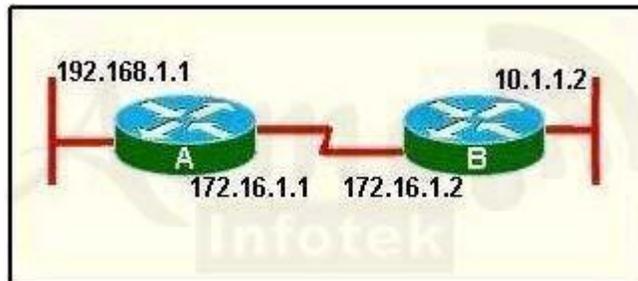
**Explanation/Reference:**

#### QUESTION 45

Refer to the exhibit.

Router A has interfaces with addresses 192.168.1.1 and 172.16.1.1.

Router B, which is connected to router A over a serial link, has interfaces with address 172.16.1.2 and 10.1.1.2.



Which sequence of commands will configure RIPv2 on router B?

- A. B( config)# router rip  
B(config-router)#version 2  
B(config-router)# network 172.16.0.0  
B(config-router)# network 10.0.0.0  
B(config-router)# end
- B. B(config)# router rip 2  
B(config-router)# network 172.16.0.0  
B(config-router)# network 10.0.0.0  
B(config-router)# end

- C. B(config)# router rip  
B(config-router)#version 2  
B(config-router)# network 172.16.0.0  
B(config-router)#network 192.168.1.0  
B(config-router)#end
- D. B(config)# router rip version 2  
B(config-router)# network 172.16.0.0  
B(config-router)# network 10.0.0.0  
B(config-router)#end

**Correct Answer:** A

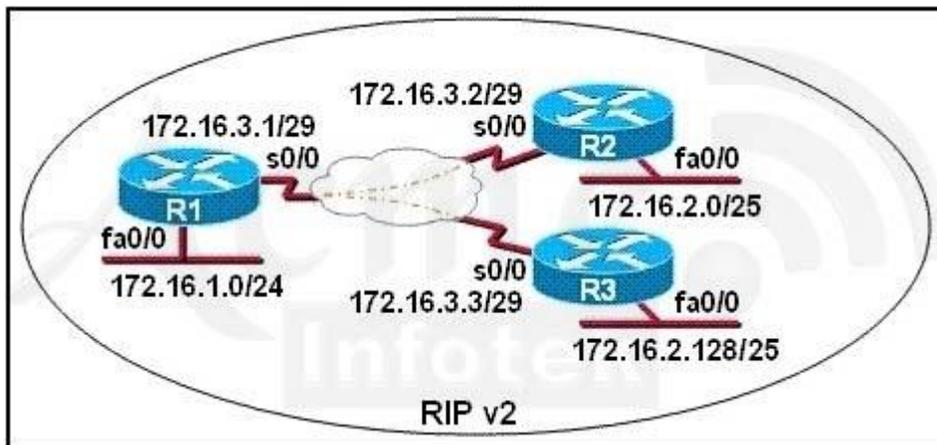
**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 46

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. The RIP v2 dynamic routing protocol cannot be used across a Frame Relay network.
- B. The ip subnet-zero command has been issued on the R1 router.
- C. Split horizon is preventing R2 from learning about the R3 networks and R3 from learning about the R2 networks.

- D. The 172.16.3.0/29 network used on the Frame Relay links is creating a discontinuous network between the R2 and R3 router subnetworks.
- 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.

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 47**

A network administrator is verifying the configuration of a newly installed host by establishing an FTP connection to a remote server. What is the highest layer of the protocol stack that the network administrator is using for this operation?

- A. application
- B. presentation
- C. session
- D. transport
- E. internet
- F. data link

**Correct Answer:** A

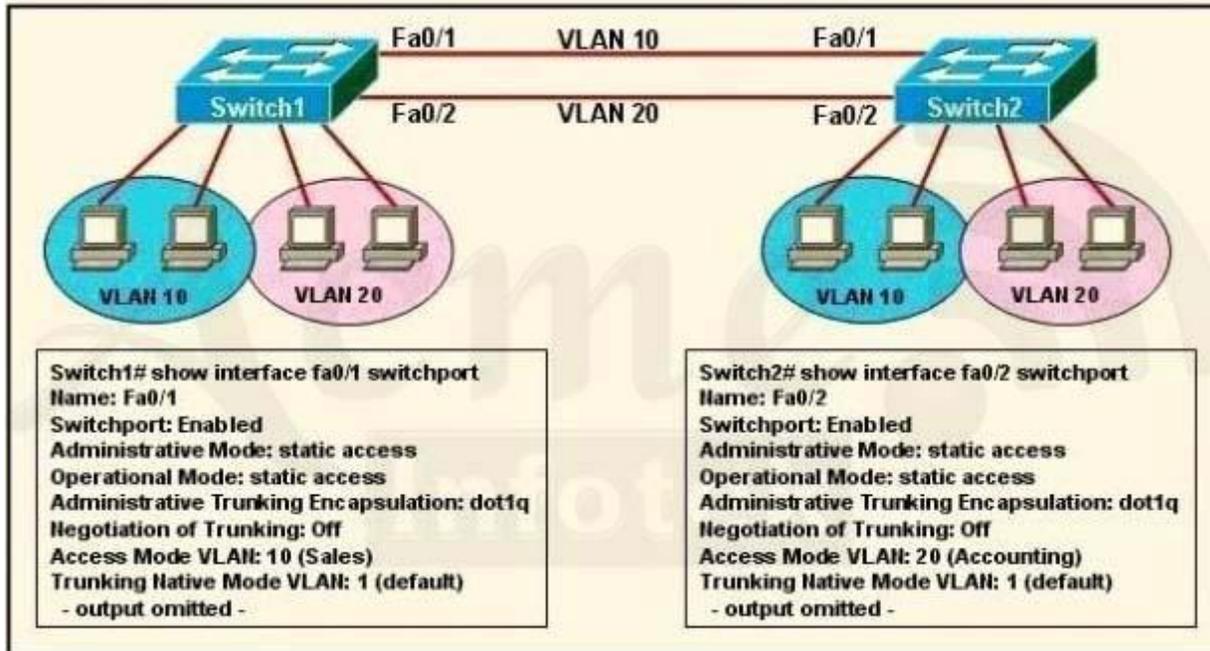
**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 48**

Refer to the topology and router output shown in the exhibit. A technician is troubleshooting host connectivity issues on the switches. The hosts in VLANs 10 and 15 on Sw11 are unable to communicate with hosts in the same VLANs on Sw12. Hosts in the Admin VLAN are able to communicate. The port-to-VLAN assignments are identical on the two switches. What could be the problem?



- A. The Fa0/1 port is not operational on one of the switches.
- B. The link connecting the switches has not been configured as a trunk.
- C. At least one port needs to be configured in VLAN 1 for VLANs 10 and 15 to be able to communicate.
- D. Port FastEthernet 0/1 needs to be configured as an access link on both switches.
- E. A router is required for hosts on SW11 in VLANs 10 and 15 to communicate with hosts in the same VLAN on Sw1 2.

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 49

You have finished physically installing an access point on the ceiling at your office.

At a minimum, which parameter must be configured on the access point in order to allow a wireless client to operate on it?

- A. AES

- B. PSK
- C. SSID
- D. tkip
- E. wep

**Correct Answer:** C

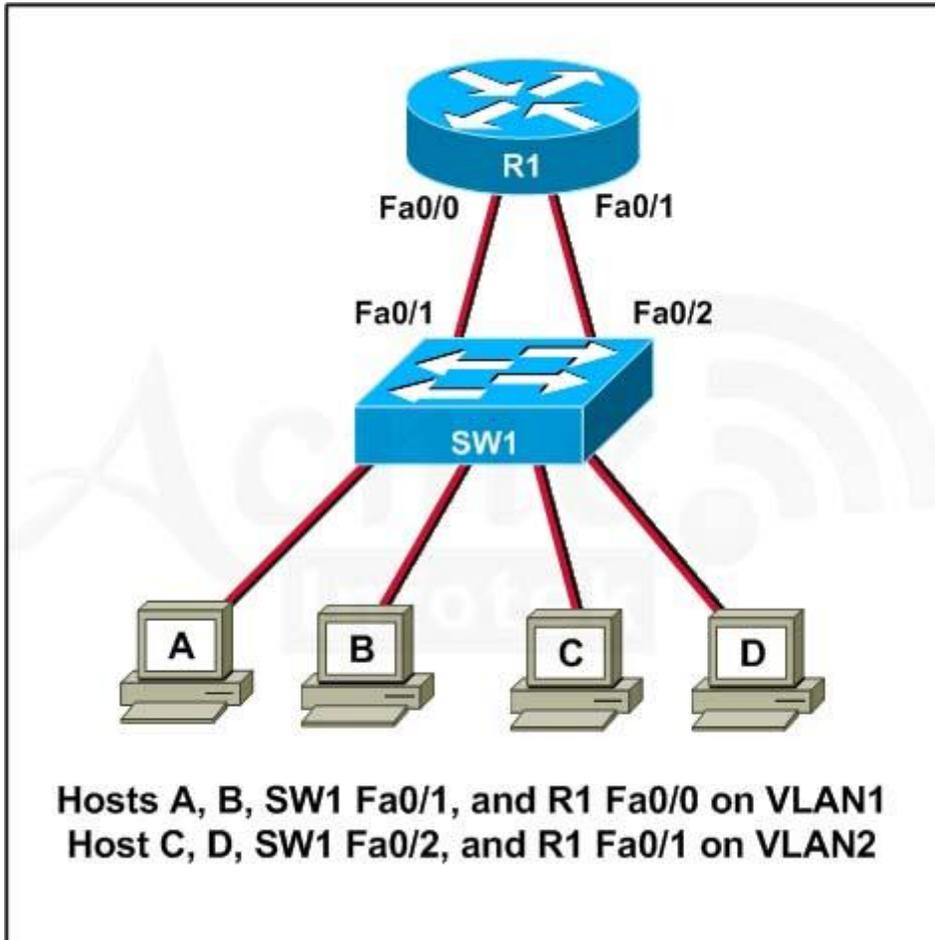
**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 50**

Refer to the exhibit. A network administrator needs to add a new VLAN, named VLAN3, to the network shown. Unfortunately, there is not another FastEthernet interface on R1 to connect to the new VLAN3. Which approach is the most cost effective solution for this problem?



- A. Purchase a new FastEthernet module and install it on R1.
- B. Replace R1 with a new router that has at least three FastEthernet interfaces.
- C. Configure a second switch to support VLAN3 with a VLAN trunk between SW1 and the new switch.
- D. Configure a single VLAN trunk between R1 and SW1 and configure a subinterface on the R1 interface for each VLAN.
- E. Connect another router to a serial interface of R1. Use a FastEthernet interface on the new router for VLAN3.

**Correct Answer:** D

**Section:** (none)

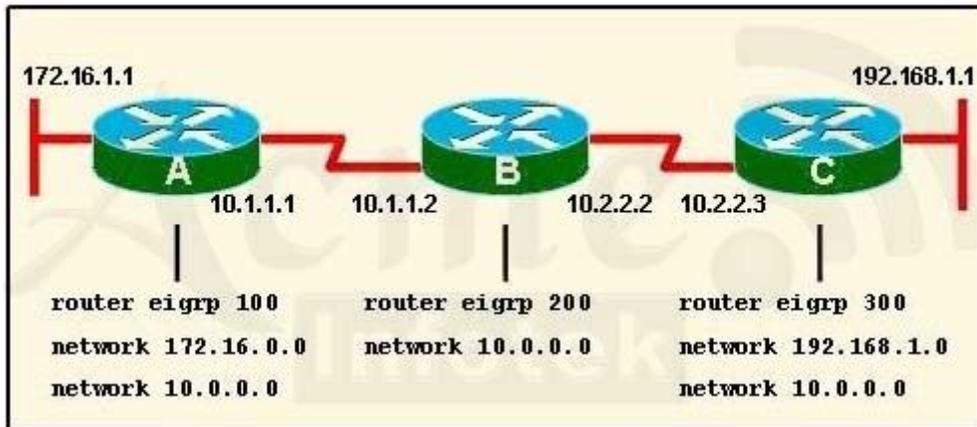
**Explanation**

Explanation/Reference:

### QUESTION 51

Refer to the exhibit.

When running EIGRP, what is required for RouterA to exchange routing updates with RouterC?



- A. As numbers must be changed to match on all the routers
- B. Loopback interfaces must be configured so a DR is elected
- C. The no auto-summary command is needed on Router A and Router C
- D. Router B needs to have two network statements, one for each connected network

**Correct Answer:** A

**Section:** (none)

**Explanation**

Explanation/Reference:

### QUESTION 52

Refer to the exhibit.

The two exhibit devices are the only Cisco devices on the network. The serial network between the two devices has a mask of 255.255.255.252. Given the output that is shown, what three statements are true of these devices? (Choose three.)

**Manchester**
**London**



```

Manchester# sh cdp entry *

Device ID: London
Entry address(es):
 IP address: 10.1.1.2
Platform: cisco 2610, Capabilities: Router
Interface: Serial10/0, Port ID (outgoing port): Serial0/1
Holdtime : 125 sec

<output omitted>

```

- A. The Manchester serial address is 10.1.1.1.
- B. The Manchester serial address is 10.1.1.2.
- C. The London router is a Cisco 2610.
- D. The Manchester router is a Cisco 2610.
- E. The CDP information was received on port Serial0/0 of the Manchester router.
- F. The CDP information was sent by port Serial0/0 of the London router.

**Correct Answer:** ACE

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 53

How is an EUI-64 format interface ID created from a 48-bit MAC address?

- A. by appending 0xFF to the MAC address
- B. by prefixing the MAC address with 0xFFEE
- C. by prefixing the MAC address with 0xFF and appending 0xFF to it

- D. by inserting 0xFFFFE between the upper three bytes and the lower three bytes of the MAC address
- E. by prefixing the MAC address with 0xF and inserting 0xF after each of its first three bytes

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 54

Refer to the exhibit.

After a RIP route is marked invalid on Router\_1, how much time will elapse before that route is removed from the routing table?

```
Router_1# show ip protocols
Routing Protocol is "rip"
 Sending updates every 30 seconds, next due in 8 seconds
 Invalid after 180 seconds, hold down 180, flushed after 240
 Outgoing update filter list for all interfaces is not set
 Incoming update filter list for all interfaces is not set
 <output omitted>

Router_1#
```

- A. 30 seconds
- B. 60 seconds
- C. 90 seconds
- D. 180 seconds
- E. 240 seconds

**Correct Answer:** B

**Section:** (none)

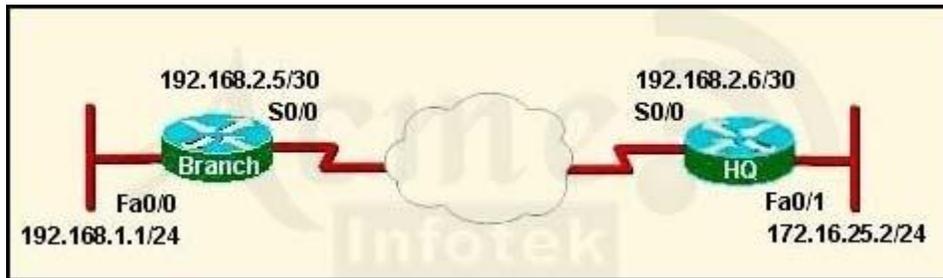
**Explanation**

**Explanation/Reference:**

#### QUESTION 55

Refer to the exhibit.

A network associate has configured the internetwork that is shown in the exhibit, but has failed to configure routing properly. Which configuration will allow the hosts on the Branch LAN to access resources on the HQ LAN with the least impact on router processing and WAN bandwidth?



- A. HQ(config)# router rip  
 HQ(config-router)# network 192.168.2.0  
 HQ(config-router)# network 172.16.0.0  
 Branch(config)# router rip  
 Branch (config-router)# network 192.168.1.0  
 Branch (config-router)# network 192.168.2.0
- B. HQ(config)# router eigrp 56  
 HQ(config-router)# network 192.168.2.4  
 HQ(config-router)# network 172.16.25.0  
 Branch(config)# router eigrp 56  
 Branch (config-router)# network 192.168.1.0  
 Branch (config-router)# network 192.168.2.4
- C. HQ(config)# router ospf 1  
 HQ(config-router)# network 192.168.2.4 0.0.0.3 area 0  
 HQ(config-router)# network 172.16.25.0 0.0.0.255 area 0  
 Branch(config)# router ospf 1  
 Branch (config-router)# network 192.168.1.0 0.0.0.255 area 0  
 Branch (config-router)# network 192.168.2.4 0.0.0.3 area 0
- D. HQ(config)# ip route 192.168.1.0 255.255.255.0 192.168.2.5  
 Branch(config)# ip route 172.16.25.0 255.255.255.0 192.168.2.6

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Static routes can be used to allow Branch LAN to access resources on the HQ LAN with the least impact on router processing and WAN bandwidth.

Compared with dynamic routes, static routes have the following advantages:

1. Control
2. Easy configuration
3. Less WAN bandwidth

**QUESTION 56**

Which additional configuration step is necessary in order to connect to an access point that has SSID broadcasting disabled?

- A. Set the SSID value in the client software to public.
- B. Configure open authentication on the AP and the client.
- C. Set the SSID value on the client to the SSID configured on the AP.
- D. Configure MAC address filtering to permit the client to connect to the AP.

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 57**

What is one reason that WPA encryption is preferred over WEP?

- A. A WPA key is longer and requires more special characters than the WEP key.
- B. The access point and the client are manually configured with different WPA key values.
- C. WPA key values remain the same until the client configuration is changed.
- D. The values of WPA keys can change dynamically while the system is used.

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 58**

A network administrator is troubleshooting an EIGRP problem on a router and needs to confirm the IP addresses of the devices with which the router has established adjacency.

The retransmit interval and the queue counts for the adjacent routers also need to be checked.

What command will display the required information?

- A. Router# show ip eigrp adjacency

- B. Router# show ip eigrp topology
- C. Router#show ip eigrp interfaces
- D. Router# show ip eigrp neighbors

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 59**

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

**Correct Answer:** C

**Section:** (none)

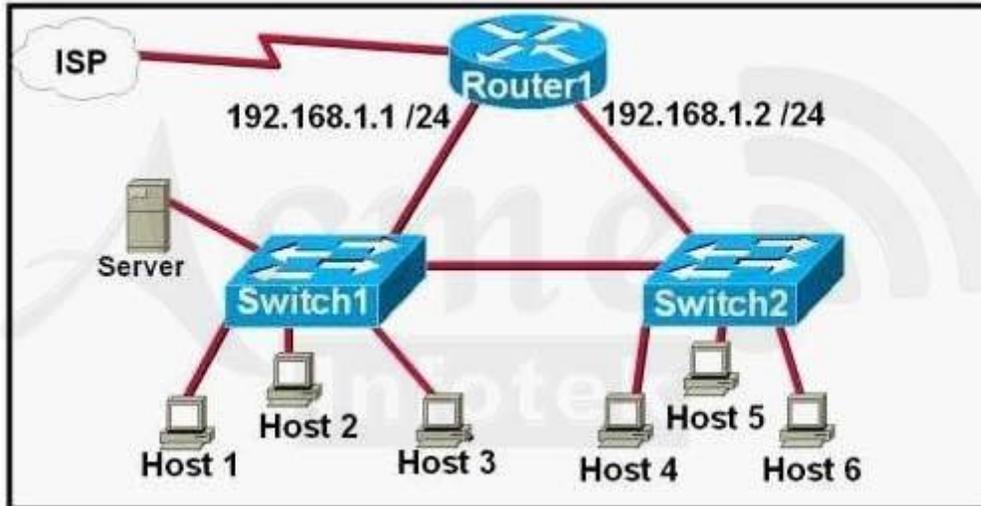
**Explanation**

**Explanation/Reference:**

#### **QUESTION 60**

Refer to the exhibit.

A network technician is asked to design a small network with redundancy.  
The exhibit represents this design, with all hosts configured in the same VLAN.  
What conclusions can be made about this design?



- A. This design will function as intended.
- B. Spanning-tree will need to be used.
- C. The router will not accept the addressing scheme.
- D. The connection between switches should be a trunk.
- E. The router interfaces must be encapsulated with the 802.1Q protocol

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 61**

What can a network administrator utilize by using PPP Layer 2 encapsulation? (choose three)

- A. quality of service
- B. compression
- C. authentication
- D. VLAN support
- E. multilink support
- F. Quality of service

**Correct Answer:** BCE

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 62

Refer to the exhibit.

A router boots to the prompt shown in the exhibit. What does this signify .and how should the network administrator respond?



- A. This prompt signifies that the configuration file was not found in NVRAM. The network administrator should follow the prompts to enter a basic configuration.
- B. This prompt signifies that the configuration file was not found in flash memory. The network administrator should use TFTP to transfer a configuration file to the router.
- C. This prompt signifies that the IOS image in flash memory is invalid or corrupt. The network administrator should use TFTP to transfer an IOS image to the router.
- D. This prompt signifies that the router could not authenticate the user. The network administrator should modify the IOS mage and reboot the router.

**Correct Answer:** C

**Section:** (none)

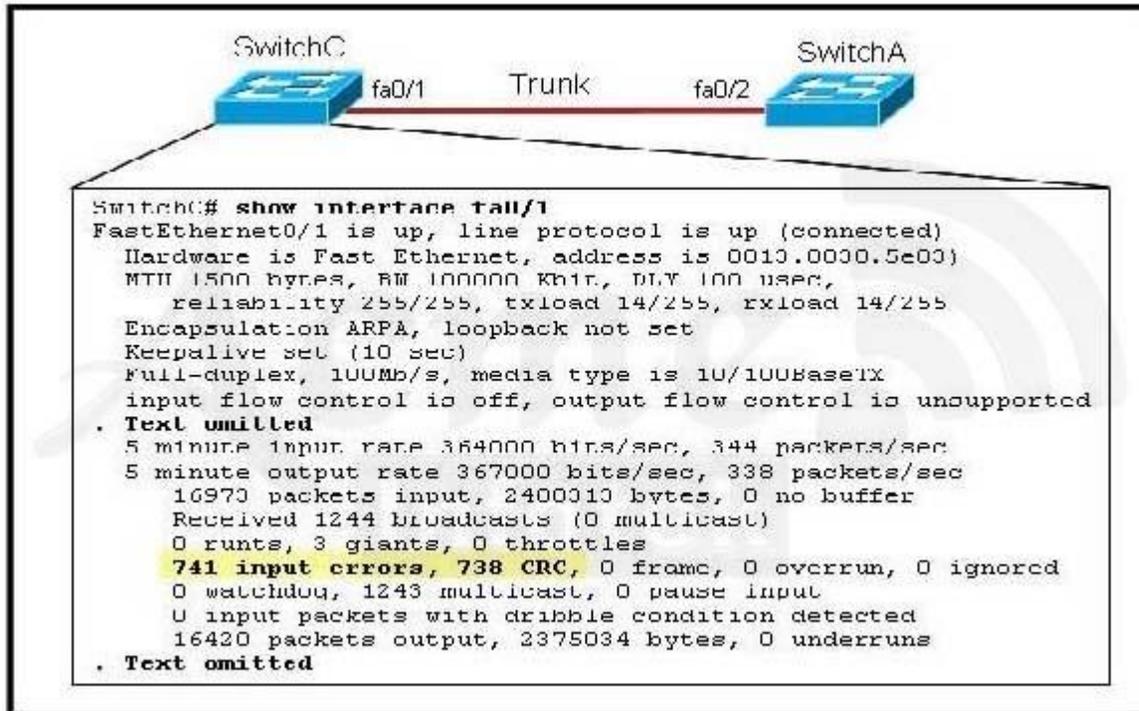
**Explanation**

**Explanation/Reference:**

#### QUESTION 63

Refer to the exhibit.

Given this output for SWITCHC, what should the network administrator's next action be?



- A. Check the trunk encapsulation mode for SWITCHC's fa0/1 port.
- B. Check the trunk encapsulation mode for SWITCHA's fa0/2 port.
- C. Check the duplex mode for SWITCHC's fa0/1 port.
- D. Check the duplex mode for SWITCHA's fa0/2 port.

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 64

Refer to the exhibit.

Which of these statements correctly describes the state of the switch once the boot process has been completed?

```
00:00:39: %LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to down
00:00:40: %SPAN TREE-5-EXTENDED_SYSID: Extended Sysid enabled for type vlan
00:00:42: %SYS-5-CONFIG_I: Configured from memory by console
00:00:42: %SYS-5-RESTART: System restarted --
Cisco IOS Software, C2960 Software (C2960-LANBASEK9-M), Version 12.2(25)SEE2, RELEASE SOFTWARE (fc1)
Copyright (c) 1986-2006 by Cisco Systems, Inc.
Compiled Fri 28-Jul-06 11:57 by yenanh
00:00:44: %LINK-5-CHANGED: Interface Vlan1, changed state to administratively down
00:00:44: %LINK-3-UPDOWN: Interface FastEthernet0/1, changed state to up
00:00:44: %LINK-3-UPDOWN: Interface FastEthernet0/2, changed state to up
00:00:44: %LINK-3-UPDOWN: Interface FastEthernet0/11, changed state to up
00:00:45: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up
00:00:45: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/2, changed state to up
00:00:45: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/11, changed state to up
00:00:48: %LINK-3-UPDOWN: Interface FastEthernet0/12, changed state to up
00:00:49: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/12, changed state to up
```

- A. As FastEthernet0/12 will be the last to come up, it will not be blocked by STP.
- B. Remote access management of this switch will not be possible without configuration change.
- C. More VLANs will need to be created for this switch.
- D. The switch will need a different IOS code in order to support VLANs and STP.

**Correct Answer:** B

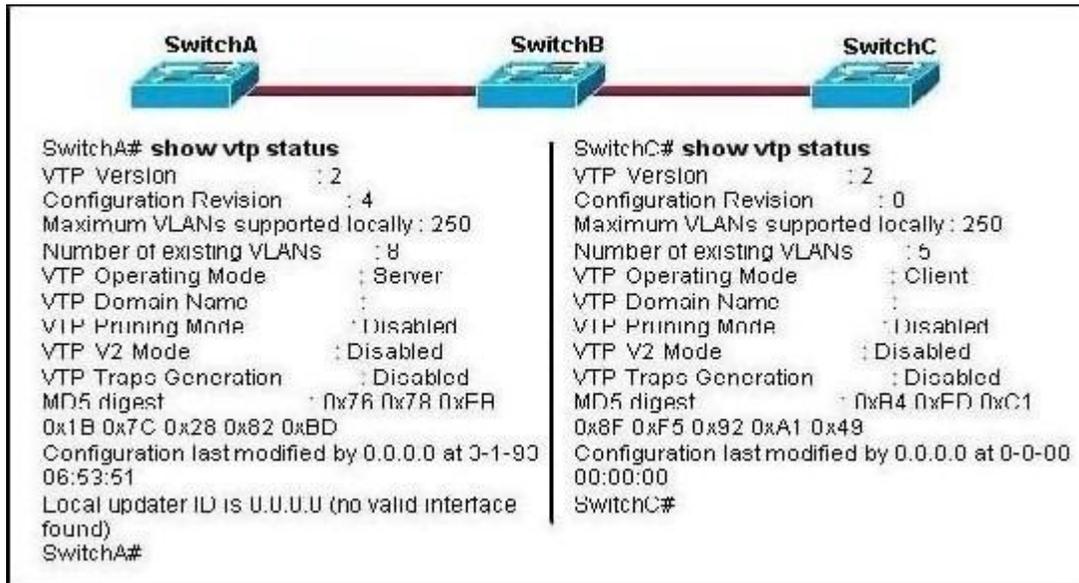
**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 65

Refer to the exhibit. The three Catalyst 2950 switches have been configured for VTP. Trunking is properly configured and operational on all three switches. The show vlan command issued on SwitchC displays only the default VLANs.



Based on the output from the show vtp status commands shown in the exhibit, why is this true?

- A. Only the default VLANs are configured on SwitchA.
- B. SwitchA does not have a VTP domain name configured.
- C. VTP pruning needs to be enabled on SwitchA.
- D. SwitchC needs to have the VTP domain name configured.
- E. SwitchB is in transparent mode.

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 66

How many hosts and subnets in 172.16.0.0/23 subnetted /27

- A. 8 subnets 32 hosts
- B. 8 subnets 31 hosts
- C. 16 subnets 30 hosts
- D. 16 subnets 32 hosts

**Correct Answer:** C

**Section:** (none)

**Explanation**

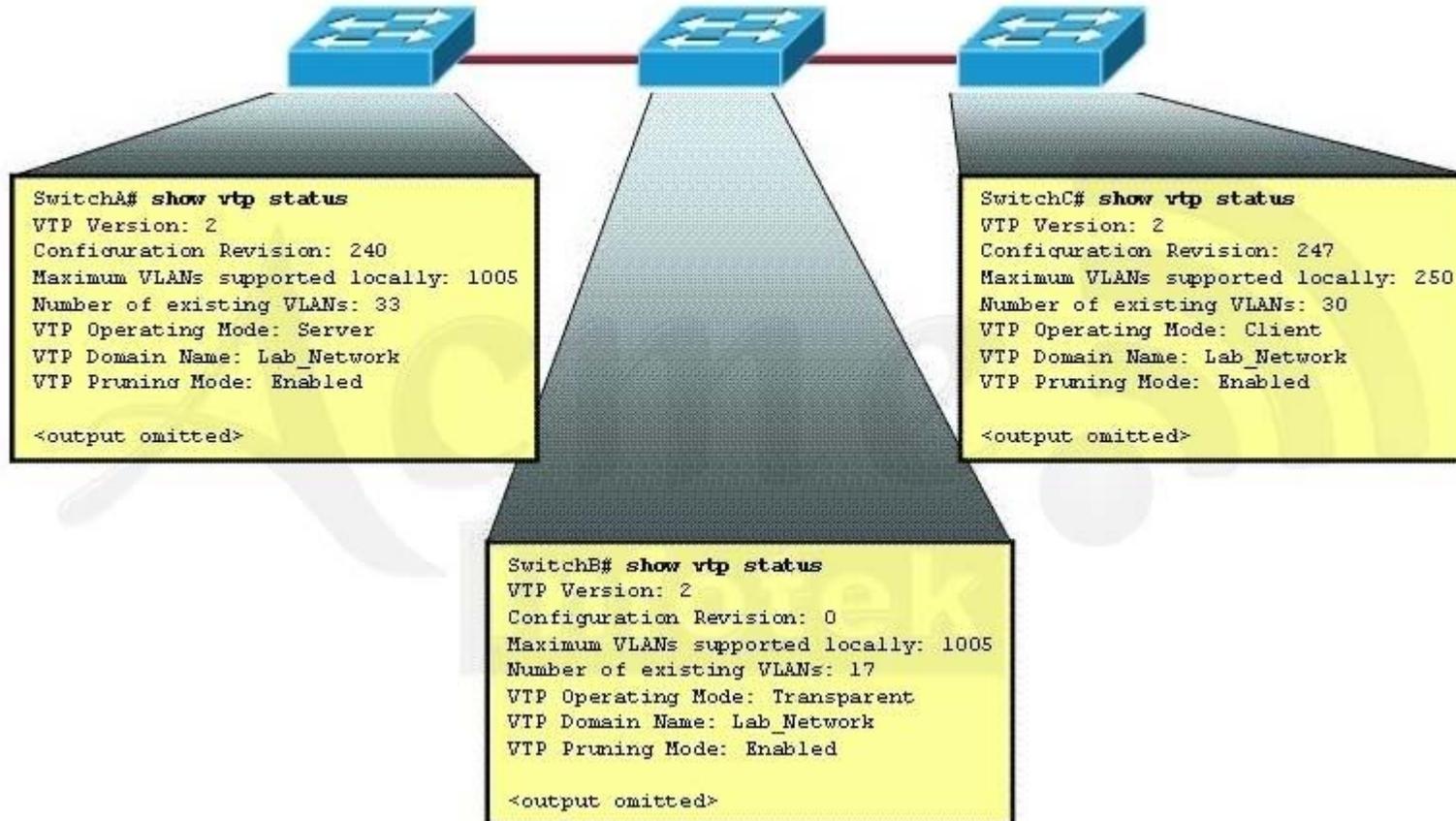
**Explanation/Reference:**

#### **QUESTION 67**

Refer to the exhibit.

The network administrator has discovered that the VLAN configuration of SwitchC is not synchronized with the rest of the switched network.

Why is SwitchC not receiving VTP updates?



- A. SwitchA supports a greater number of VLANs than does SwitchC.
- B. SwitchC has fewer existing VLANs than does SwitchA.
- C. SwitchC has a revision number higher than that being advertised.
- D. SwitchC should be operating in VTP server mode to receive VTP updates.
- E. SwitchB is not relaying VTP advertisements to SwitchC.
- F. SwitchB should be operating in VTP server or client mode to relay VTP updates.

**Correct Answer: C**

**Section: (none)**

### Explanation

### Explanation/Reference:

#### QUESTION 68

How many subnets can be gained by subnetting 172.17.32.0/23 into a /27 mask, and how many usable host addresses will there be per subnet?

- A. 8 subnets, 31 hosts
- B. 8 subnets, 32 hosts
- C. 16 subnets, 30 hosts
- D. 16 subnets, 32 hosts
- E. A Class B address can't be subnetted into the fourth octet.

**Correct Answer:** C

**Section:** (none)

### Explanation

### Explanation/Reference:

#### QUESTION 69

Why is flash memory erased prior to upgrading the IOS image from the TFTP server?

- A. In order for the router to use the new image as the default, it must be the only IOS image in flash.
- B. Flash memory on Cisco routers can contain only a single IOS image.
- C. Erasing current flash content is requested during the copy dialog.
- D. The router cannot verify that the Cisco IOS image currently in flash is valid.

**Correct Answer:** C

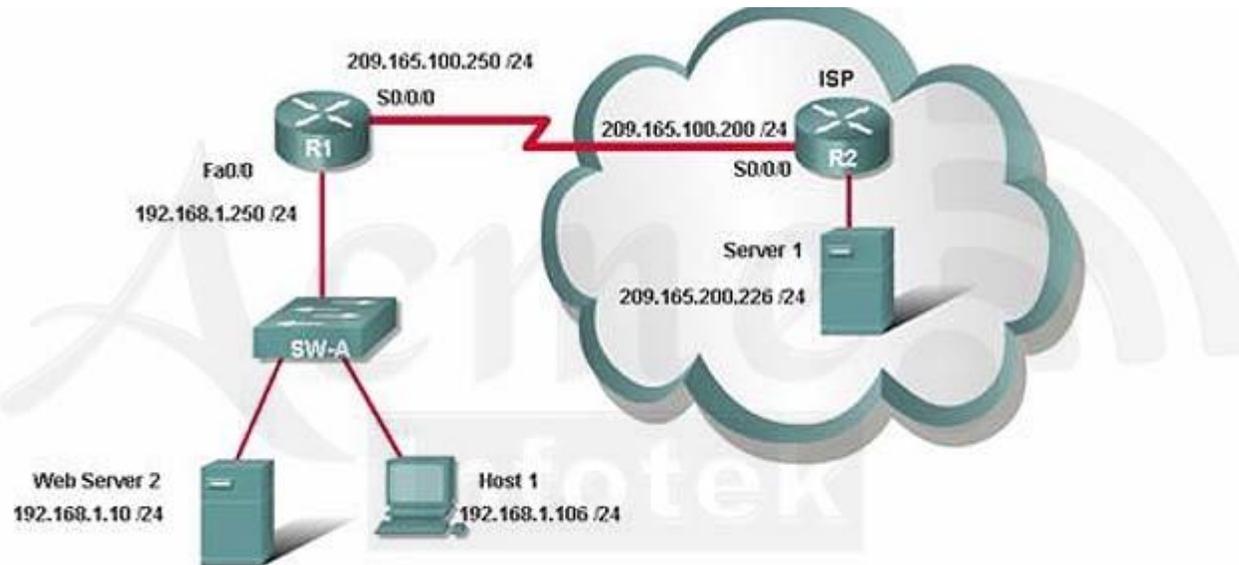
**Section:** (none)

### Explanation

### Explanation/Reference:

#### QUESTION 70

If the router R1 has a packet with a destination address 192.168.1.255, what describes the operation of the network?



- A. R1 will forward the packet out all interfaces.
- B. R1 will drop this packet because this is not a valid IP address.
- C. As R1 forwards the frame containing this packet, Sw-A will add 192.168.1. 255 to its MAC table.
- D. R1 will encapsulate the packet in a frame with a destination MAC address of FF-FF-FF-FF-FF- FF.
- E. As R1 forwards the frame containing this packet, Sw-A will forward it to the device assigned the IP address of 192.168.1. 255

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 71

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 Serial0/0 interface is passing traffic.
- B. The DLCI100 was dynamically allocated by the router.
- C. The Serial0/0 interface acquired the IP address of 172.16.3.1 from a DHCP server.
- D. The DLCI100 will be dynamically changed as required to adapt to changes in the Frame Relay cloud.
- E. The mapping between DLCI 100 and the end station IP address 172.16.3.1 was learned through inverse ARP.

**Correct Answer:** E

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 72

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

- A. Administratively shut down the interface.
- B. Physical secure the interface
- C. Create an access list and apply to the virtual terminal interfaces with the access-group command
- D. Configure a virtual terminal password and login process.
- E. Enter an access list and apply it to the virtual terminal interfaces using the access-class command.

**Correct Answer:** DE

**Section:** (none)

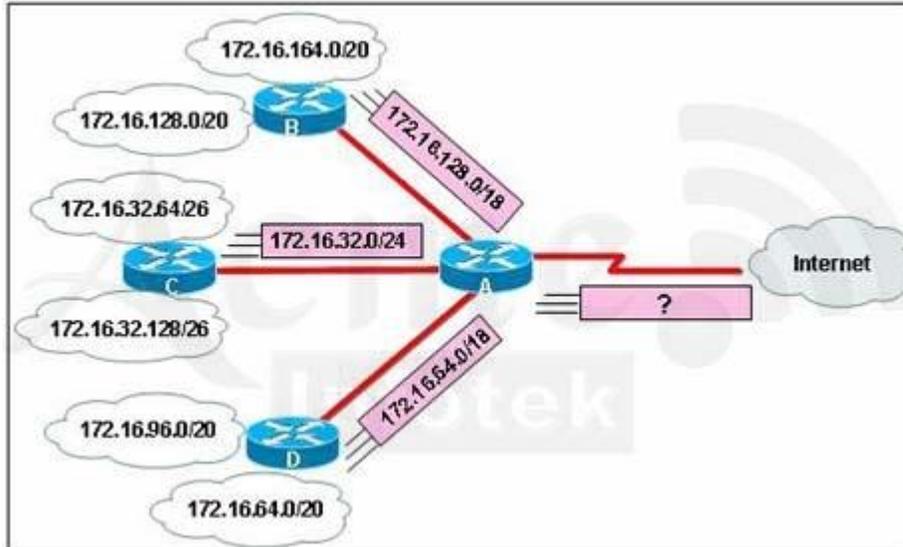
**Explanation**

**Explanation/Reference:**

#### QUESTION 73

Refer to the exhibit.

In this VLSM addressing scheme, what summary address would be sent from router A?



- A. 172.16.0.0/16
- B. 172.16.0.0/20
- C. 172.16.0.0/24
- D. 172.32.0.0/16
- E. 172.32.0.0/17
- F. 172.64.0.0/16

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 74

Refer to the exhibit.

The show vtp status command is executed at a switch that is generating the exhibited output. Which statement is true for this switch?

```
Switch# show vtp status
VTP Version : 2
Configuration Revision : 0
Maximum VLANs supported locally : 64
Number of existing VLANs : 17
VTP Operation Mode : Transparent
VTP Domain Name : ICND
VTP Pruning Mode : Disabled
VTP V2 Mode : Disabled
VTP Traps Generation : Disabled

<output omitted>
```

- A. The switch forwards its VLAN database to other switches in the ICND VTP domain.
- B. The configuration revision number increments each time the VLAN database is updated.
- C. The switch forwards VTP updates that are sent by other switches in the ICND domain,
- D. The VIAN database is updated when VTP information is received from other switches.

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Switches in transparent mode don't participate in the VTP domain or share its VLAN database, but they'll still forward VTP advertisements through any configured trunk links.

VTP is organized into management domains or areas with common VLAN requirements. A switch can belong to only one VTP domain. Switches in different VTP domains do not share VTP information. Switches in a VTP domain advertise several attributes to their domain neighbors. Each advertisement contains information about the VTP management domain, VTP configuration revision number, known VLANs, and specific VLAN parameters. From the output of the command `show vtp status` provided in the exhibit, we know that the VTP mode of the switch is the transparent mode. Transparent mode does not allow the switch to participate in VTP negotiations. Thus, a switch does not advertise its own VLAN configuration, and a switch does not synchronize its VLAN database with received advertisements. VLANs can still be created, deleted, and renamed on the transparent switch. However, they will not be advertised to other neighboring switches. VTP advertisements received by a transparent switch will be forwarded on to other switches on trunk links.

**QUESTION 75**

Refer to the exhibit.

Given the output for this command, if the router ID has not been manually set, what router ID will OSPF use for this router?

```
RouterD# show ip interface brief
Interface IP-Address OK? Method Status Protocol
FastEthernet0/0 192.168.5.3 YES manual up up
FastEthernet0/1 10.1.1.2 YES manual up up
Loopback0 172.16.5.1 YES NVRAM up up
Loopback1 10.154.154.1 YES NVRAM up up
```

- A. 10.11.2
- B. 10.154.154.1
- C. 172.16.5.1
- D. 192.168.5.3

**Correct Answer: C**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

#### **QUESTION 76**

Which spread spectrum technology does the 802.11b standard define for operation?

- A. IR
- B. DSSS
- C. FHSS
- D. DSSS and FHSS
- E. IR, FHSS, and DSSS

**Correct Answer: B**

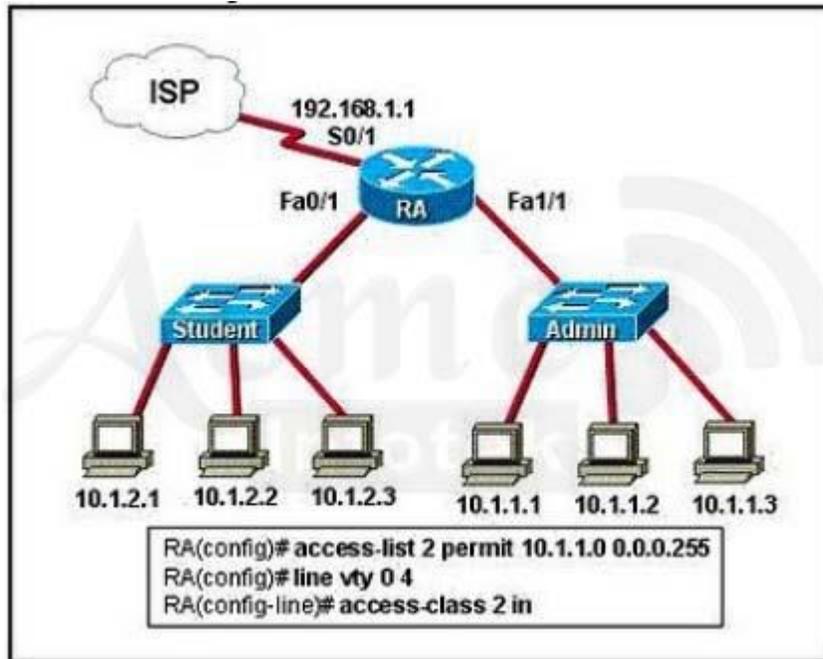
**Section: (none)**

**Explanation**

**Explanation/Reference:**

#### **QUESTION 77**

Why would the network administrator configure RA in this manner?



- A. To give students access to the Internet
- B. To prevent students from accessing the command prompt of RA
- C. To prevent administrators from accessing the console of RA
- D. To give administrators access to the Internet
- E. To prevent students from accessing the Internet
- F. To prevent students from accessing the Admin network

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 78

What is the purpose of the Cisco VLAN Trunking Protocol?

- A. To allow traffic to be carried from multiple VLANs over a single link between switches
- B. To allow native VLAN information to be carried over a trunk link
- C. To allow for managing the additions, deletions, and changes of VLANs between switches
- D. To provide a mechanism to manually assign VLAN membership to switch ports
- E. To provide a mechanism to dynamically assign VLAN membership to switch ports

**Correct Answer: C**

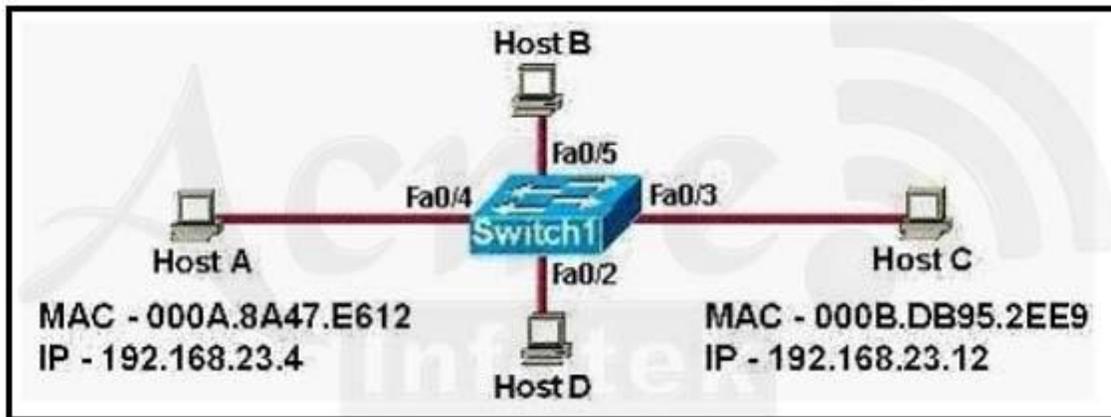
**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 79**

Refer to the exhibit.



Switch1 has just been restarted and has passed the POST routine. Host A sends its initial frame to Host C. What is the first thing the switch will do as regards populating the switching table?

- A. Switch1 will add 192.168.23.4 to the switching table.
- B. Switch1 will add 192.168.23.12 to the switching table.
- C. Switch1 will add 000A.8A47.E612 to the switching table.
- D. Switch1 will add 000B. DB95.2EE9 to the switching table.

**Correct Answer: C**

**Section: (none)**

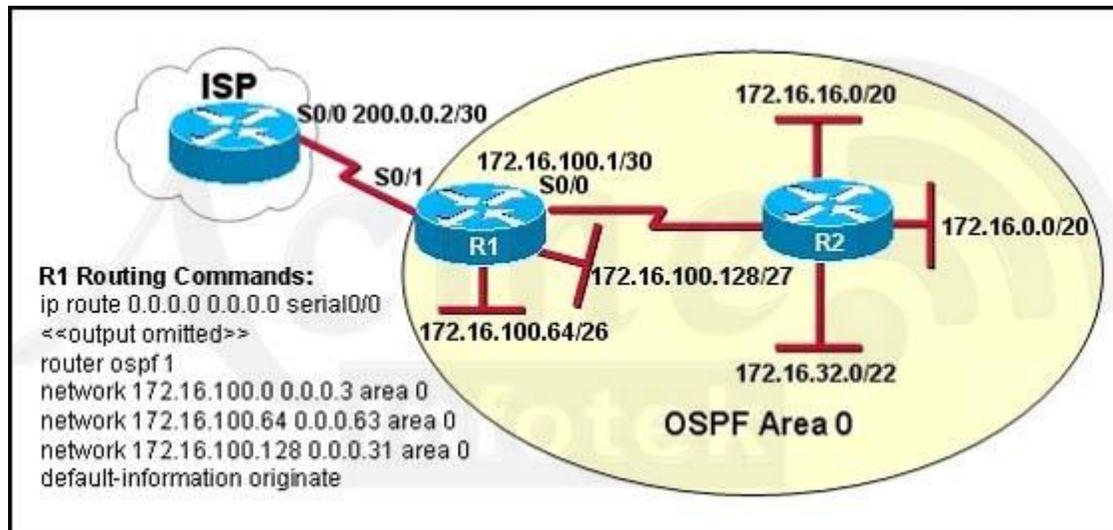
## Explanation

### Explanation/Reference:

#### QUESTION 80

Refer to the exhibit.

Assume that all router interfaces are operational and correctly configured. In addition, assume that OSPF has been correctly configured on router R2. How will the default route configured on R1 affect the operation of R2?



- A. Any packet destined for a network that is not directly connected to router R2 will be dropped immediately.
- B. Any packet destined for a network that is not referenced in the routing table of router R2 will be directed to R1. R1 will then send that packet back to R2 and a routing loop will occur.
- C. Any packet destined for a network that is not directly connected to router R1 will be dropped.
- D. The networks directly connected to router R2 will not be able to communicate with the 172.16.100.0, 172.16.100.128, and 172.16.100.64 subnetworks.
- E. Any packet destined for a network that is not directly connected to router R2 will be dropped immediately because of the lack of a gateway on R1.

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 81**

Which two passwords must be supplied in order to connect by Telnet to a properly secured Cisco switch and make changes to the device configuration? (Choose two.)

- A. tty password
- B. enable secret password
- C. vty password
- D. aux password
- E. console password
- F. username password

**Correct Answer:** BC

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 82**

A default Frame Relay WAN is classified as what type of physical network?

- A. Point-to-point
- B. Broadcast multi-access
- C. Nonbroadcast multi-access
- D. Nonbroadcast multipoint
- E. Broadcast point-to-multipoint

**Correct Answer:** C

**Section:** (none)

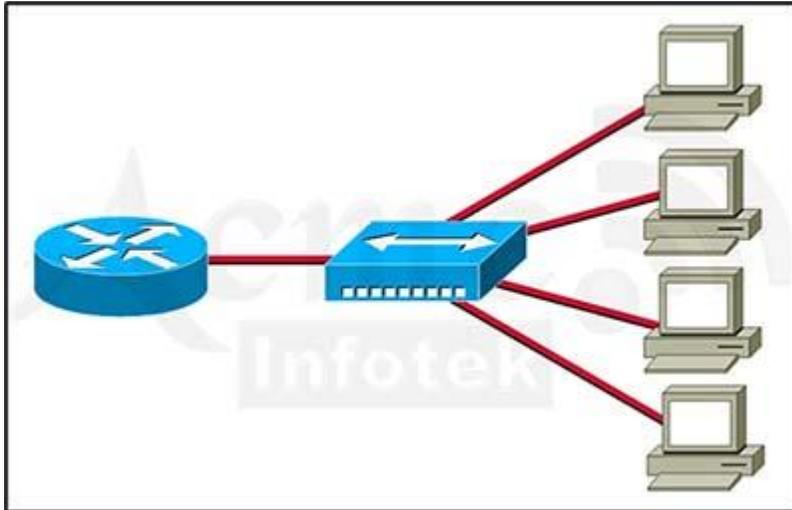
**Explanation**

**Explanation/Reference:**

**QUESTION 83**

Refer to the exhibit.

What two results would occur if the hub were to be replaced with a switch that is configured with one Ethernet VLAN? (Choose two.)



- A. The number of broadcast domains would remain the same.
- B. The number of collision domains would increase.
- C. The number of collision domains would decrease.
- D. The number of broadcast domains would decrease.
- E. The number of collision domains would remain the same.
- F. The number of broadcast domains would increase.

**Correct Answer:** AB

**Section:** (none)

**Explanation**

**Explanation/Reference:**

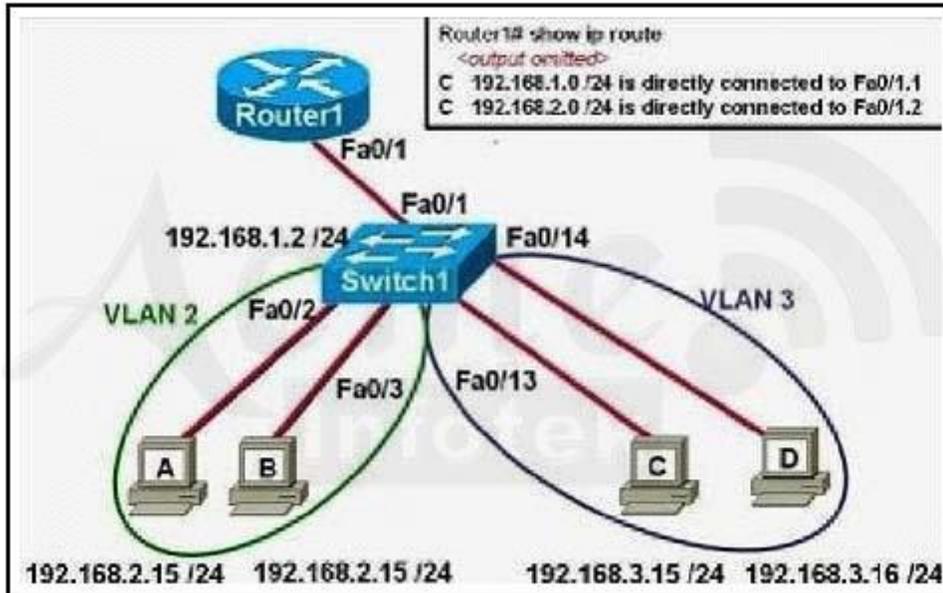
**QUESTION 84**

Refer to the exhibit. The network administrator has created a new VLAN on Switch1 and added host C and host D.

The administrator has properly configured switch interfaces FastEthernet0/13 through FastEthernet0/24 to be members of the new VLAN.

However, after the network administrator completed the configuration, host A could communicate with host B, but host A could not communicate with host C or host D.

Which commands are required to resolve this problem?



- A. Switch1# vlan database  
 Switch1(vlan)# vtp v2-mode  
 Switch1(vlan)# vtp domain cisco  
 Switch1(vlan)# vtp server
- B. Router(config)# router rip  
 Router(config-router)# network 192.168.1.0  
 Router(config-router)# network 192.168.2.0  
 Router(config-router)# network 192.168.3.0
- C. Switch1(config)# interface fastethernet 0/1  
 Switch1(config-if)# switchport mode trunk  
 Switch1(config-if)# switchport trunk encapsulation isl
- D. Router(config)# interface fastethernet 0/1.3  
 Router(config-if)# encapsulation dot1q 3  
 Router(config-if)# ip address 192.168.3.1 255.255.255.0

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 85**

What is the purpose of Spanning Tree Protocol?

- A. to provide multiple gateways for hosts
- B. to maintain a loop-free Layer 2 network topology
- C. to prevent routing loops
- D. to create a default route

**Correct Answer:** B

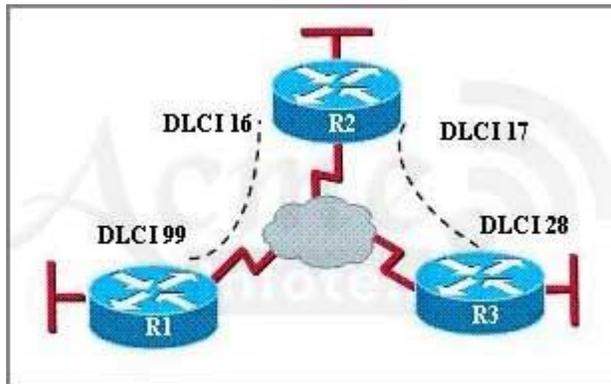
**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 86**

Refer to the exhibit. Which statement describes DLCI 17?



- A. DLCI 17 is the Layer 2 address used by R2 to describe a PVC to R3.
- B. DLCI 17 describes a PVC on R2. It cannot be used on R3 or R1.
- C. DLCI 17 describes the dial-up circuit from R2 and R3 to the service provider.
- D. DLCI 17 describes the ISDN circuit between R2 and R3.

**Correct Answer:** A

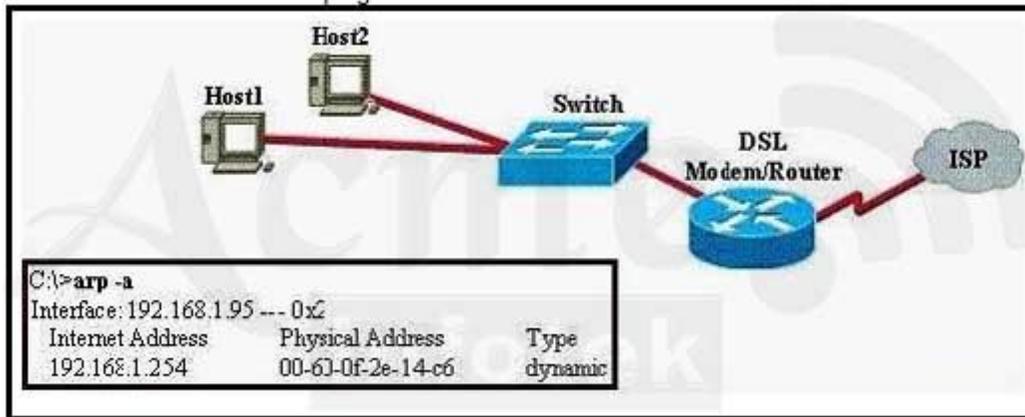
**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 87**

The user of Host1 wants to ping the DSL modem/router at 192.168.1.254. Based on the Host1 ARP table that is shown in the exhibit, what will Host1 do?



- A. send a unicast ARP packet to the DSL modem/router
- B. send a Layer 2 broadcast that is received by Host2, the switch, and the DSL modem/router
- C. send Layer 3 broadcast packets to which the DSL modem/router responds
- D. send unicast ICMP packets to the DSL modem/router

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 88**

On point-to-point networks, OSPF hello packets are addressed to which address?

- A. 127.0.0.1
- B. 172.16.0.1
- C. 192.168.0.5

- D. 223.0.0.1
- E. 224.0.0.5
- F. 254.255.255.255

**Correct Answer:** E

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 89

A network administrator has configured two switches, named London and Madrid, to use VTP. However, the switches are not sharing VTP messages. Given the command output shown in the graphic

<pre>London# show vtp status VTP Version                : 2 Configuration Revision     : 0 Maximum VLANs supported locally : 64 Number of existing VLANs   : 5 VTP Operation Mode        : Server VTP Domain Name           : London VTP Pruning Mode          : Disabled VTP V2 Mode               : Disabled VTP Traps Generation      : Disabled</pre>	<pre>Mandrid# show vtp status VTP Version                : 2 Configuration Revision     : 0 Maximum VLANs supported locally : 64 Number of existing VLANs   : 5 VTP Operation Mode        : Server VTP Domain Name           : Mandrid VTP Pruning Mode          : Disabled VTP V2 Mode               : Disabled VTP Traps Generation      : Disabled</pre>
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Why are these switches not sharing VTP messages?

- A. The VTP version is not correctly configured.
- B. The VTP operating mode is not correctly configured.
- C. The VTP domain name is not correctly configured.
- D. VTP pruning mode is disabled.
- E. VTP V2 mode is disabled.
- F. VTP traps generation is disabled.

**Correct Answer:** C

**Section: (none)**  
**Explanation**

**Explanation/Reference:**

**QUESTION 90**

While troubleshooting a network connectivity problem, a technician observes steady link lights on both the workstation NIC and the switch port to which the workstation is connected.

However, when the ping command is issued from the workstation, the output message "Request timed out." is displayed. At which layer of the OSI model does the problem most likely exist?

- A. The session layer
- B. The protocol layer
- C. The data link layer
- D. The access layer
- E. The network layer
- F. The application layer

**Correct Answer: E**  
**Section: (none)**  
**Explanation**

**Explanation/Reference:**

**QUESTION 91**

The corporate head office has a teleconferencing system that uses VOIP(voice over IP) technology.

This system uses UDP as the transport for the data transmissions.

If these UDP datagrams arrive at their destination out of sequence, what will happen?

- A. UDP will send an ICMP information Request to the source host.
- B. UDP will pass the information in the datagrams up to the next OSI layer in the order that they arrive.
- C. UDP will drop the datagrams.
- D. UDP will use the sequence numbers in the datagram headers to reassemble the data in the correct order.

**Correct Answer: B**  
**Section: (none)**  
**Explanation**

**Explanation/Reference:**

### QUESTION 92

While troubleshooting a connectivity problem, a network administrator notices that a port status LED on a Cisco Catalyst series switch is alternating green and amber. Which condition could this indicate?

- A. The port is experiencing errors.
- B. The port is administratively disabled.
- C. The port is blocked by spanning tree.
- D. The port has an active link with normal traffic activity.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 93

Refer to the exhibit.

Switch-1 needs to send data to a host with a MAC address of 00b0.d056.efa4.

What will Switch-1 do with this data?

```
Switch-1# show mac address-table
```

Dynamic Addresses Count:			3
Secure Addresses (User-defined) Count:			0
Static Addresses (User-defined) Count:			0
System Self Addresses Count:			41
Total Mac addresses:			50
Non-static Address Table:			
Destination Address	Address Type	VLAN	Destination Port
0010.0de0.e289	Dynamic	1	FastEthernet0/1
0010.7b00.1540	Dynamic	2	FastEthernet0/3
0010.7b00.1545	Dynamic	2	FastEthernet0/2

- A. Switch-1 will drop the data because it does not have an entry for that MAC address.

- B. Switch-1 will forward the data to its default gateway.
- C. Switch-1 will flood the data out all of its ports except the port from which the data originated.
- D. Switch-1 will send an ARP request out all its ports except the port from which the data originated.

**Correct Answer:** C

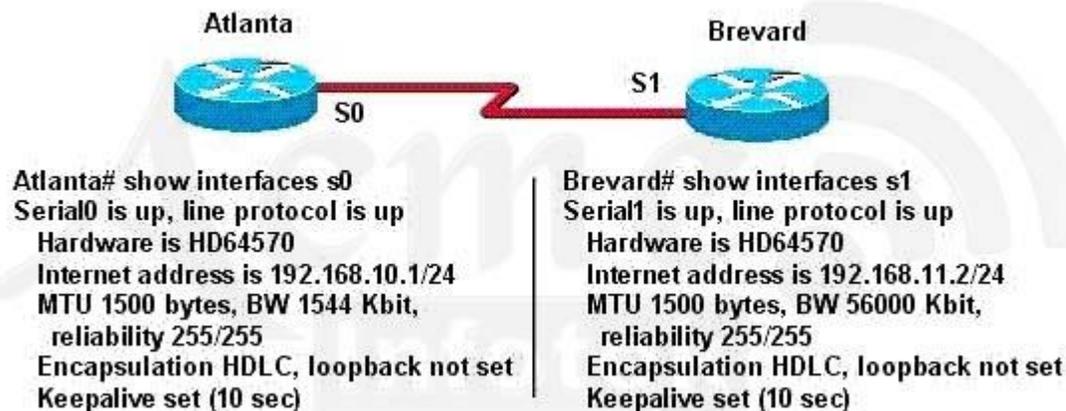
**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 94

Two routers named Atlanta and Brevard are connected by their serial interfaces as shown in the exhibit, but there is no data connectivity between them. The Atlanta router is known to have a correct configuration. Given the partial configurations shown in the exhibit, what is the problem on the Brevard router that is causing the lack of connectivity?



- A. The serial line encapsulations are incompatible.
- B. The subnet mask is incorrect.
- C. The bandwidth setting is incompatible with the connected interface.
- D. The maximum transmission unit (MTU) size is too large.
- E. The IP address is incorrect.
- F. A loopback is not set.

**Correct Answer:** E

**Section: (none)**

**Explanation**

**Explanation/Reference:**

The IP address of the S0 interface of Atlanta is 192.168.10.0/24, and the IP address of the S1 interface of Breavard is 192.168.11.0/24. Change the IP address of the S1 interface to 192.168.10.0/24, the same as that of the S0 interface.

**QUESTION 95**

Which two statements best describe the wireless security standard that is defined by WPA? (Choose two.)

- A. It specifies the use of dynamic encryption keys that change each time a client establishes a connection.
- B. It specifies use of a static encryption key that must be changed frequently to enhance security.
- C. It includes authentication by PSK.
- D. It requires that all access points and wireless devices use the same encryption key.
- E. It requires use of an open authentication method.

**Correct Answer: AC**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

## Exam

### QUESTION 1

Which wireless LAN design ensures that a mobile wireless client will not lose connectivity when moving from one access point to another?

- A. utilizing MAC address filtering to allow the client MAC address to authenticate with the surrounding APs
- B. using adapters and access points manufactured by the same company
- C. overlapping the wireless cell coverage by at least 10%
- D. configuring all access points to use the same channel

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 2

Refer to the exhibit.

The network shown in the exhibit is running the RIPv2 routing protocol. The network has converged, and the routers in this network are functioning properly.

The FastEthernet0/0 interface on R1 goes down. In which two ways will the routers in this network respond to this change? (Choose two.)



- A. R1 will send LSAs to R2 and R3 informing them of this change, and then all routers will send periodic updates at an increased rate until the network again converges.
- B. Because of the split-horizon rule, router R2 will be prevented from sending erroneous information to R1 about connectivity to the 192.168.1.0 network.
- C. When router R2 learns from R1 that the link to the 192.168.1.0 network has been lost, R2 will respond by sending a route back to R1 with an infinite metric to the 192.168.1.0 network.
- D. Routers R2 and R3 mark the route as inaccessible and will not accept any further routing updates from R1 until their hold-down timers expire.
- E. All routers will reference their topology database to determine if any backup routes to the 192.168.1.0 network are known.

**Correct Answer:** BC

**Section:** (none)

### Explanation

### Explanation/Reference:

#### QUESTION 3

Which routing protocol by default uses bandwidth and delay as metrics?

- A. RIP
- B. BGP
- C. OSPF
- D. EIGRP

**Correct Answer:** D

**Section:** (none)

### Explanation

### Explanation/Reference:

#### QUESTION 4

Refer to the exhibit. The technician wants to upload a new IOS in the router while keeping the existing IOS.

```
Router#show flash
```

```
System flash directory:
```

```
File Length Name/status
```

```
1 3802992 c827v-y6-mz.121-1.XB
```

```
[3803056 bytes used, 4585552 available, 8388608 total]
```

```
8192K bytes of processor board System flash (Read/write)
```

What is the maximum size of an IOS file that could be loaded if the original IOS is also kept in flash?

- A. 3MB
- B. 5MB
- C. 7MB
- D. 4MB

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 5**

According to capabilities of WPA security, which encryption type does WPA2 use?

- A. AES-CCMP
- B. PSK
- C. TKIP/MIC
- D. PPKviaIV

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 6**

How should a router that is being used in a Frame Relay network be configured to avoid split horizon issues from preventing routing updates?

- A. Configure a separate sub-interface for each PVC with a unique DLCI and subnet assigned to the sub-interface.
- B. Configure each Frame Relay circuit as a point-to-point line to support multicast and broadcast traffic.
- C. Configure many sub-interfaces on the same subnet.
- D. Configure a single sub-interface to establish multiple PVC connections to multiple remote router interfaces.

**Correct Answer:** A

**Section:** (none)

**Explanation**

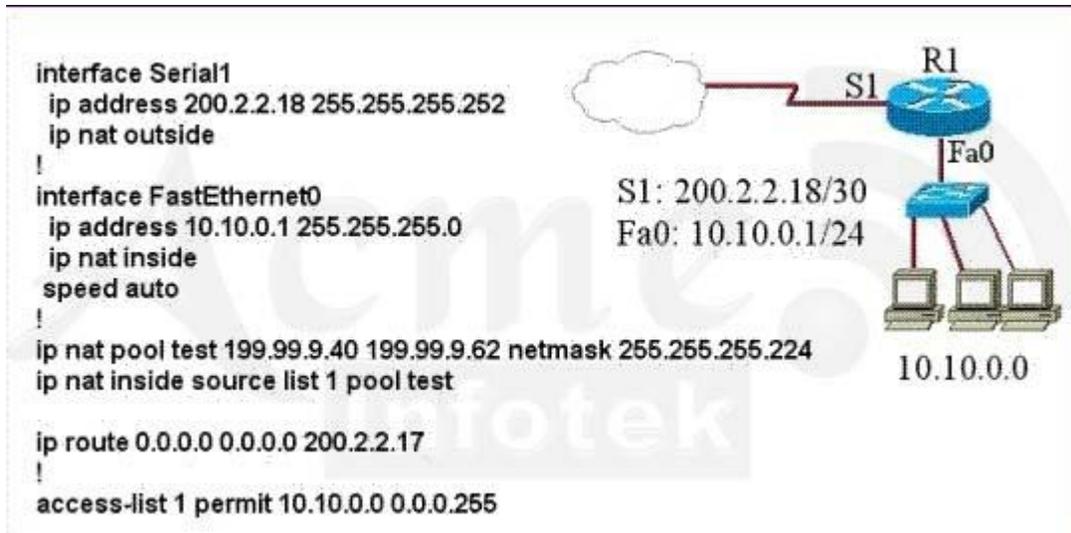
**Explanation/Reference:**

#### **QUESTION 7**

Refer to the topology and router configuration shown in the graphic.

A host on the LAN is accessing an FTP server across the Internet.

Which of the following addresses could appear as a source address for the packets forwarded by the router to the destination server?



- A. 10.10.0.1
- B. 10.10.0.2
- C. 199.99.9.33
- D. 199.99.9.57
- E. 200.2.2.17
- F. 200.2.2.18

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Using NAT we can translate the Source or Destination Address. In our example all source address from the 10.10.0.0/24 network will be translated to an IP address from the 199.99.9.40-62 pool, making 199.99.9.57 correct.

### QUESTION 8

Which of the following data network would you implement if you wanted a wireless network that had a relatively high data rate, but was limited to very short distances?

- A. Broadband personal comm. Service (PCS)
- B. Broadband circuit
- C. Infrared
- D. Spread spectrum
- E. Cable

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 9**

Which of the following are associated with the application layer of the OSI model? (Choose two.)

- A. Ping
- B. Telnet
- C. FTP
- D. TCP
- E. IP

**Correct Answer:** BC

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 10**

When are packets processed by an inbound access list?

- A. Before they are routed to an outbound interface
- B. After they are routed to an outbound interface
- C. Before and after they are routed to an outbound interface
- D. After they are routed to an outbound interface but before being placed in the outbound queue

**Correct Answer:** A

**Section:** (none)

### Explanation

### Explanation/Reference:

#### QUESTION 11

In addition to assigning an IP address, Which of the following correctly describe regarding TCP/IP stack configuration features can DHCP provide? (Choose three.)

- A. Default gateway
- B. DNS servers
- C. FTP server
- D. Helper address
- E. Subnet mask
- F. TFTP server

**Correct Answer:** ABE

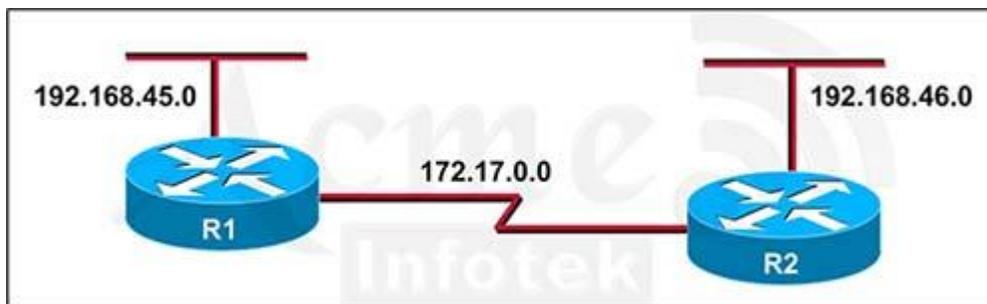
**Section:** (none)

### Explanation

### Explanation/Reference:

#### QUESTION 12

As the network administrator, you have been instructed to prevent all traffic originating on the Router 1 LAN from entering the router2. Which the following command would implement the access list on the interface of router2?



- A. access-list 101 out
- B. ip access-group 101 out
- C. access-list 101 in

D. ip access-group 101 in

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 13

The command frame-relay map ip 10.121.16.8 102 broadcast was entered on the router. Which of the following statements is true concerning this command?

- A. This command should be executed from the global configuration mode.
- B. The IP address 10.121.16. 8 is the local router port used to forward data.
- C. 102 is the remote DLCI that will receive the information.
- D. This command is required for all Frame Relay configurations.
- E. The broadcast option allows packets, such as RIP updates, to be forwarded across the PVC.

**Correct Answer:** E

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 14

You just entered the following command

```
Router(config)# line console 0
```

Which operation is most likely to follow?

- A. Configure the terminal type.
- B. Enter protocol parameters for a serial line.
- C. Create a password on the console terminal line.
- D. Establish a terminal type 4 connection to a remote host.

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 15**

The Company WAN is migrating from RIPv1 to RIPv2. Which three statements are correct about RIP version 2? (Choose three)

- A. It has the same maximum hop count as version 1.
- B. It uses broadcasts for its routing updates.
- C. It is a classless routing protocol.
- D. It has a lower default administrative distance than RIP version 1.
- E. It supports authentication.
- F. It does not send the subnet mask in updates.

**Correct Answer:** ACE

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 16**

Three access points have been installed and configured to cover a small office. What term defines the wireless topology?

- A. BSS
- B. IBSS
- C. ESS
- D. SSID

**Correct Answer:** C

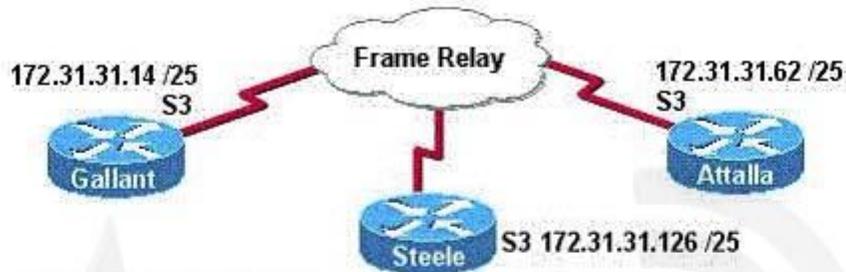
**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 17**

The Frame Relay network in the diagram is not functioning properly. What is the cause of the problem?



<pre>Gallant#show frame-relay map Serial3 (up): ip 172.31.31.126 dlci 205 (0xCD,0x30D0), static, broadcast, CISCO, status defined, active</pre>
<pre>Steele#show frame-relay map Serial3 (up): ip 172.31.31.126 dlci 605 (0x25D,0x94D0), static, broadcast, CISCO, status defined, active</pre>
<pre>Attalla#show frame-relay map Serial3 (up): ip 172.31.31.62 dlci 509(0x1FD,0x7CD0), static, broadcast, CISCO, status deleted Serial3 (up): ip 172.31.31.14 dlci 502(0x1F6,0x7C60), static, broadcast, CISCO, status defined, active</pre>

- A. The Gallant router has the wrong LMI type configured.
- B. The IP address on the serial interface of the Attalla router is configured incorrectly.
- C. The frame-relay map statement in the Attalla router for the PVC to Steele is not correct.
- D. The S3 interface of the Steele router has been configured with the frame-relay encapsulation ietf command.
- E. Inverse ARP is providing the wrong PVC information to the Gallant router.

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 18

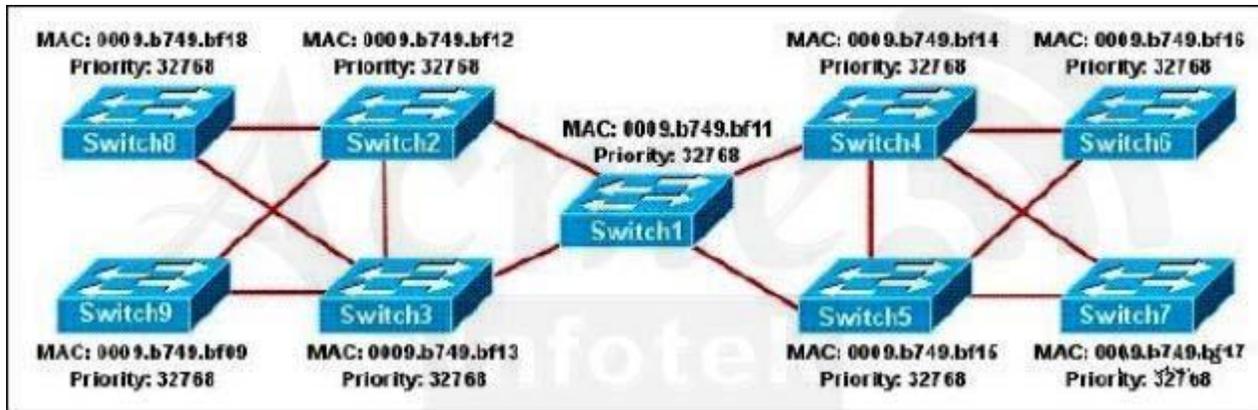
Refer to the exhibit.

The switches on a campus network have been interconnected as shown.

All of the switches are running Spanning Tree Protocol with its default settings.

Unusual traffic patterns are observed and it is discovered that Switch9 is the root bridge.

Which change will ensure that Switch1 will be selected as the root bridge instead of Switch9?



- A. Raise the bridge priority on Switch1.
- B. Lower the bridge priority on Switch9.
- C. Raise the bridge priority on Switch9.
- D. Physically replace Switch9 with Switch1 in the topology.
- E. Disable spanning tree on Switch9.
- F. Lower the bridge priority on Switch1.

**Correct Answer:** F

**Section:** (none)

**Explanation**

**Explanation/Reference:**

The root bridge is the bridge or switch that is the root of the Spanning Tree, with the branches being loop-free paths to the other switches in the system. The Root is the switch with the lowest Bridge ID; the ID is determined by a combination of an administrative Priority and the MAC address of the switch. The Priority is set to 32,768 (8000 hex) by default; if we leave the Priority at the default, whatever switch has the lowest MAC will be the Root. So to elect the Switch1 switch as a root bridge need to set the lowest priority.

#### QUESTION 19

What are two recommended ways of protecting network device configuration files from outside network security threats? (Choose two.)

- A. Allow unrestricted access to the console or VTY ports.
- B. Use a firewall to restrict access from the outside to the network devices.
- C. Always use Telnet to access the device command line because its data is automatically encrypted.
- D. Use SSH or another encrypted and authenticated transport to access device configurations.

E. Prevent the loss of passwords by disabling password encryption.

**Correct Answer:** BD

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 20**

What should be part of a comprehensive network security plan?

- A. Allow users to develop their own approach to network security.
- B. Physically secure network equipment from potential access by unauthorized individuals.
- C. Encourage users to use personal information in their passwords to minimize the likelihood of passwords being forgotten.
- D. Delay deployment of software patches and updates until their effect on end-user equipment is well known and widely reported
- E. Minimize network overhead by deactivating automatic antivirus client updates.

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 21**

Refer to the exhibit.

Which two statements are true based the output of the show frame-relay lmi command issued on the Branch router? (Choose two.)

```
Branch# show frame-relay lmi

LMI Statistics for interface Serial0/0 (Frame Relay DTE) LMI TYPE = ANSI
Invalid Unnumbered info 0 Invalid Prot Disc 0
Invalid dummy Call Ref 0 Invalid Msg Type 0
Invalid Status Message 0 Invalid Lock Shift 0
Invalid Information ID 0 Invalid Report IE Len 0
Invalid Report Request 0 Invalid Keep IE Len 0
Num Status Enq. Sent 61 Num Status msgs Rcvd 0
Num Update Status Rcvd 0 Num Status Timeouts 60
Branch#
```

- A. LMI messages are being sent on DLCI 1023.
- B. The LMI exchange between the router and Frame Relay switch is functioning properly.
- C. LMI messages are being sent on DLCI 0.
- D. The Frame Relay switch is not responding to LMI requests from the router.
- E. The router is providing a clock signal on Serial0/0 on the circuit to the Frame Relay switch.
- F. Interface Serial0/0 is not configured to encapsulate Frame Relay.

**Correct Answer:** CD

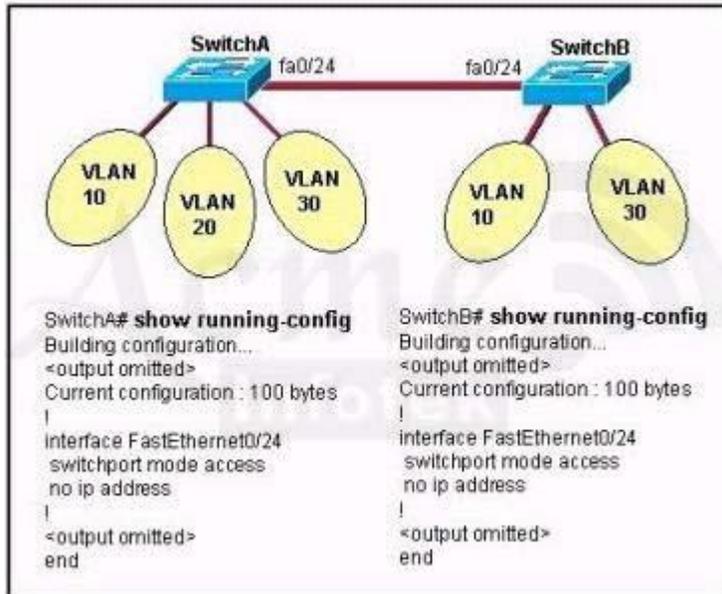
**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 22

Refer to the Exhibit.



All Switches ports are assigned to the correct VLANs, but none of the hosts connected to switchA can communicate with hosts in the same VLAN connected to switchB.

Based on the output shown, what is the most likely problem?

- A. The access link needs to be configured in multiple VLANs.
- B. The link between the switches is configured in the wrong VLAN.
- C. The link between the switches needs to be configured as a trunk.
- D. VTP is not configured to carry VLAN information between the switches.
- E. Switch IP addresses must be configured in order for traffic to be forwarded between the switches.

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 23

Refer to the exhibit. Which two statements are true of the interfaces on Switch1? (Choose two.)

```

Switch1# show mac-address-table
Dynamic Addresses Count: 19
Secure Addresses (User-defined) Count: 0
Static Addresses (User-defined) Count: 0
System Self Addresses Count: 41
Total MAC addresses: 50
Non-Static Address Table:
Destination Address Address Type VLAN Destination Port

0010.0de0.e289 Dynamic 1 FastEthernet0/1
0010.7b00.1540 Dynamic 2 FastEthernet0/5
0010.7b00.1545 Dynamic 2 FastEthernet0/5
0060.5cf4.0076 Dynamic 1 FastEthernet0/1
0060.5cf4.0077 Dynamic 3 FastEthernet0/1
0060.5cf4.1315 Dynamic 1 FastEthernet0/1
0060.70cb.f301 Dynamic 2 FastEthernet0/1
0060.70cb.3f01 Dynamic 5 FastEthernet0/2
00e0.1e42.9978 Dynamic 4 FastEthernet0/1
00e0.1e9f.3900 Dynamic 3 FastEthernet0/1
0060.70cb.33f1 Dynamic 6 FastEthernet0/3
0060.70cb.103f Dynamic 6 FastEthernet0/4

<output omitted>

Switch# show cdp neighbors
Capability Codes: R - Router, T - Trans Bridge, B - Source Route Bridge
 S - Switch, H - Host, I - IGMP, r - Repeater

Device ID Local Intrfce Holdtime Capability Platform Port ID
Switch2 Fas0/1 157 S 2950-12 Fas 0/1
Switch3 Fas0/2 143 S 2950-12 Fas 0/5

Switch1#

```

- A. Interface FastEthernet0/2 has been disabled.
- B. Multiple devices are connected directly to FastEthernet0/1.
- C. FastEthernet0/1 is configured as a trunk link.
- D. FastEthernet0/1 is connected to a host with multiple network interface cards.
- E. FastEthernet0/5 has statically assigned MAC addresses.
- F. A hub is connected directly to FastEthernet0/5.

**Correct Answer:** CF

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 24**

A receiving host computes the checksum on a frame and determines that the frame is damaged. The frame is then discarded. At which OSI layer did this happen?

- A. physical
- B. session
- C. data link
- D. transport
- E. network

**Correct Answer:** C

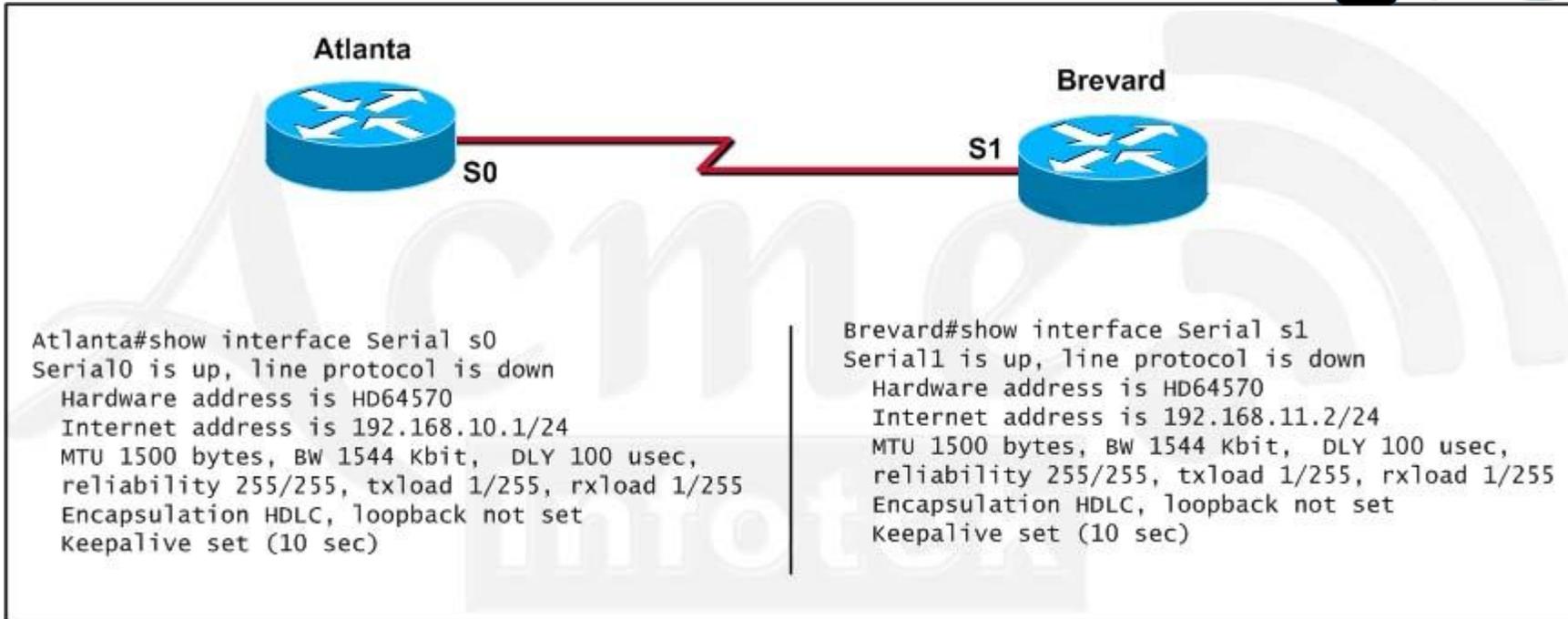
**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 25**

Two routers named Atlanta and Brevard are connected by their serial interfaces as shown in the exhibit, but there is no data connectivity between them. The Atlanta router is known to have a correct configuration. Given the partial configurations shown in the exhibit, what is the problem on the Brevard router that is causing the lack of connectivity?



- A. incompatible IP addresses
- B. insufficient bandwidth
- C. incorrect subnet mask
- D. incompatible encapsulation
- E. Link reliability too low
- F. IPCP closed

**Correct Answer:** A

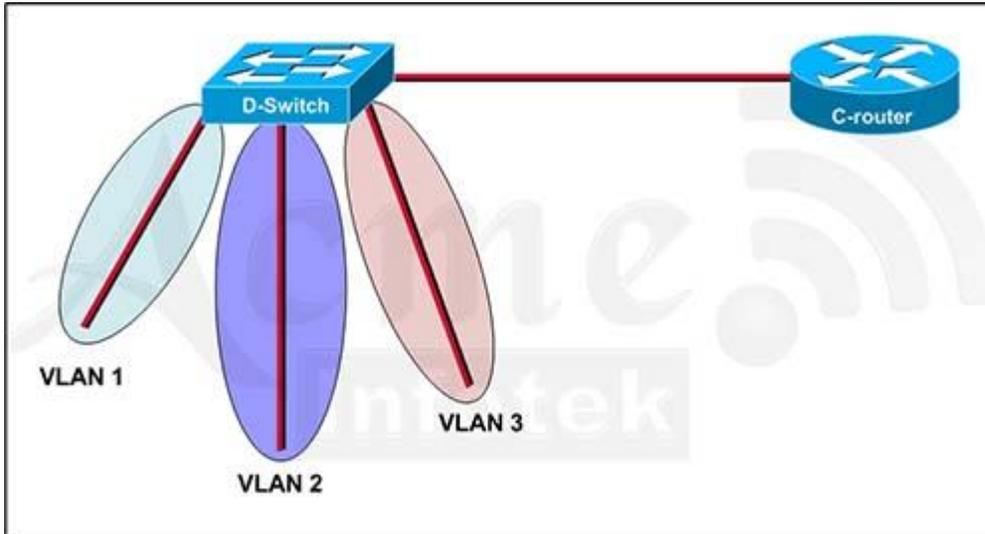
**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 26**

Refer to the exhibit.



C-router is to be used as a "router-on-a-stick" to route between the VLANs. All the interfaces have been properly configured and IP routing is operational.

The hosts in the VLANs have been configured with the appropriate default gateway. What can be said about this configuration?

- A. These commands need to be added to the configuration:  
 C-router(config)# router eigrp 123  
 C-router(config-router)# network 172.19.0.0
- B. No further routing configuration is required.
- C. These commands need to be added to the configuration:  
 C-router(config)# router ospf 1  
 C-router(config-router)# network 172.19.0.0 0.0.3.255 area 0
- D. These commands need to be added to the configuration:  
 C-router(config)# router rip  
 C-router(config-router)# network 172.19.0.0

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 27**

Which of the following services use UDP? (Choose three.)

- A. Telnet
- B. TFTP
- C. SNMP
- D. DNS
- E. SMTP
- F. HTTP

**Correct Answer:** BCD

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 28**

Which two states are the port states when RSTP has converged? (Choose two)

- A. blocking
- B. learning
- C. disabled
- D. forwarding
- E. listening

**Correct Answer:** AD

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 29**

There are no boot system commands in a router configuration in NVRAM. What is the fallback sequence that the router will use to find an IOS during reload?

- A. Flash, TFTP server, ROM
- B. Flash, NVRAM, ROM
- C. ROM, NVRAM, TFTP server

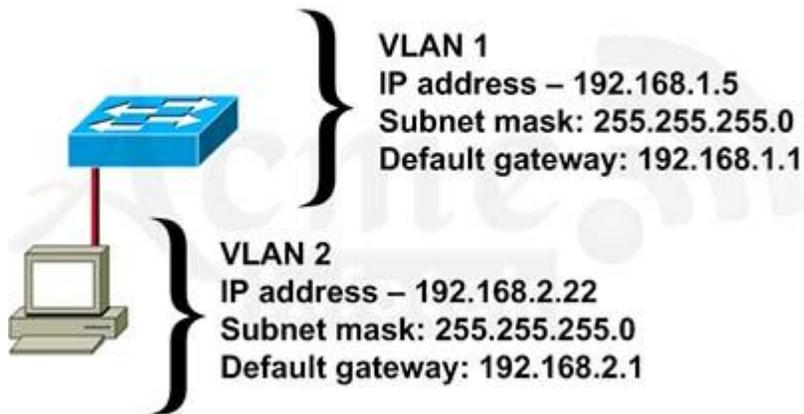
- D. NVRAM, TFTP server, ROM
- E. TFTP server, Flash, NVRAM

**Correct Answer:** A  
**Section:** (none)  
**Explanation**

**Explanation/Reference:**

### QUESTION 30

Refer to the graphic.



A host is connected to switch port Fa0/3 with a crossover cable. The host and switch have as shown. However, the port indicator on switch port Fa0/3 is not on, and the host cannot communicate with to vlan 2 on the same switch. Based on the information given. what is the problem?

- A. The switch has been assigned an incorrect subnet mask.
- B. Switch port FA0/3 is not configured as a trunk port
- C. Switch port FA0/3 has been blocked by STP
- D. The switch and the hosts must be in the same subnet
- E. The cable is the wrong type

**Correct Answer:** E

**Section: (none)**  
**Explanation**

**Explanation/Reference:**

**QUESTION 31**

Refer to the exhibit.

```
Router#config t
Router(config)#line vty 0 4
Router(config-line)#password c1sc0
Router(config-line)#login
```

Which user-mode password has just been set?

- A. Telnet
- B. Auxiliary
- C. SSH
- D. Console

**Correct Answer: A**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 32**

Which item represents the standard IP ACL?

- A. access-list 50 deny 192.168.1.1 0.0.0.255
- B. access-list 110 permit ip any any
- C. access-list 2500 deny tcp any host 192.168.1.1 eq 22
- D. access-list 101 deny tcp any host 192.168.1.1

**Correct Answer: A**

**Section: (none)**

## Explanation

### Explanation/Reference:

#### QUESTION 33

What is one benefit of PVST+?

- A. PVST+ reduces the CPU cycles for all the switches in the network
- B. PVST+ automatically selects the root bridge location, to provide optimize.
- C. PVST+ allows the root switch location to be optimized per VLAN.
- D. PVST+ supports Layer 3 load balancing without loops.

**Correct Answer:** C

**Section:** (none)

### Explanation

### Explanation/Reference:

#### QUESTION 34

Refer to following command.

```
access-list 114 permit ip 10.4.4.0 0.0.0.255
```

What would be the effect of issuing the command `ip access-group 114 in` to the fa0/0 interface?

- A. Attempts to telnet to the router would fail
- B. It would allow all traffic from the 10.4.4.0 network
- C. IP traffic would be passed through the interface but TCP and UDP traffic would not
- D. Routing protocol updates for the 10.4.4.0 network would not be accepted from the fa0/0 interface

**Correct Answer:** B

**Section:** (none)

### Explanation

### Explanation/Reference:

#### QUESTION 35

What would be the effect of issuing the command `ip access-group 115 in` on the s0/0/1 interface?

- A. No host could connect to RouterC through s0/0/1.
- B. Telnet and ping would work but routing updates would fail.
- C. FTP, FTP-DATA, echo, and www would work but telnet would fail.
- D. Only traffic from the 10.4.4.0 network would pass through the interface.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 36

Which statement is true?

- A. An IPv6 address is 64 b long and is represented as hexadecimal characters.
- B. An IPv6 address is 32 b long and is represented as decimal digits.
- C. An IPv6 address is 128 b long and is represented as decimal digits.
- D. An IPv6 address is 128 b long and is represented as hexadecimal characters.

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 37

In which circumstance are multiple copies of the same unicast frame likely to be transmitted in a switched LAN?

- A. after broken links are re-established
- B. in an improperly implemented redundant topology
- C. when upper-layer protocols require high reliability
- D. during high traffic periods
- E. when a dual ring topology is in use

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 38**

Which command sets and automatically encrypts the privileged enable mode password?

- A. Enable password cisco
- B. Secret enable cisco
- C. Password enable cisco
- D. Enable secret cisco

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 39**

A router receives information about network 192.168.10.0/24 from multiple sources.  
What will the router consider the most reliable information about the path to that network?

- A. an OSPF update for network 192.168.0.0/16
- B. a static router to network 192.168.10.0/24
- C. a static router to network 192.168.10.0/24 with a local serial interface configured as the next hop
- D. a RIP update for network 192.168.10.0/24
- E. a directly connected interface with an address of 192.168.10.254/24
- F. a default route with a next hop address of 192.168.10.1 416

**Correct Answer:** E

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 40**

Which two commands can be used to verify a trunk link configuration status on a given Cisco switch? (Choose two)

- A. show interface
- B. show interface trunk
- C. show interface switchport
- D. show ip interface brief
- E. show interfaces vlan

**Correct Answer:** BC

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 41**

You are working in a data center environment and are assigned the address range 10.188.31.0/23.

You are asked to develop an IP addressing plan to allow the maximum number of subnets with as many as 30 hosts each. Which IP address range meets these requirements?

- A. 10.188.31.0/27
- B. 10.188.31.0/26
- C. 10.188.31.0/29
- D. 10.188.31.0/28
- E. 10.188.31.0/25

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 42**

Which commands are required to properly configure a router to run OSPF and to add network 192.168.16.0/24 to OSPF area 0? (Choose two.)

- A. Router(config)# router ospf 1
- B. Router(config)#router ospf 0
- C. Router(config)#router ospf area 0
- D. Router(config-router)# network 192.168.16.0 0.0.0.255 area 0
- E. Router(config-router)#network 192.168.16.0 0.0.0.255 0

F. Router(config-router)#network 192.168.16.0 255.255.255.0 area 0

**Correct Answer:** AD

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 43**

Given an IP address 172.16.28.252 with a subnet mask of 255.255.240.0, what is the correct network address?

- A. 172.16.16.0
- B. 172.16.24.0
- C. 172.16.0.0
- D. 172.16.28.0

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 44**

Which command can be used to verify the DLCI destination address in a Frame Relay static configuration?

- A. show frame-relay end-to-end
- B. show frame-relay map
- C. show frame-relay lmi
- D. show frame-relay pvc

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 45**

Which statement about vlan operation on cisco catalyst switches is true?

- A. when a packet is received from an 802.1Q trunk, the vlan id can be determined from the source MAC address table.
- B. Unknown unicast frames are retransmitted only to the ports that belong to the same VLAN.
- C. ports between switches should be configured in access mode so that vlans can span across the ports
- D. broadcast and multicast frames are retransmitted to ports that are configured on different vlan.

**Correct Answer:** B

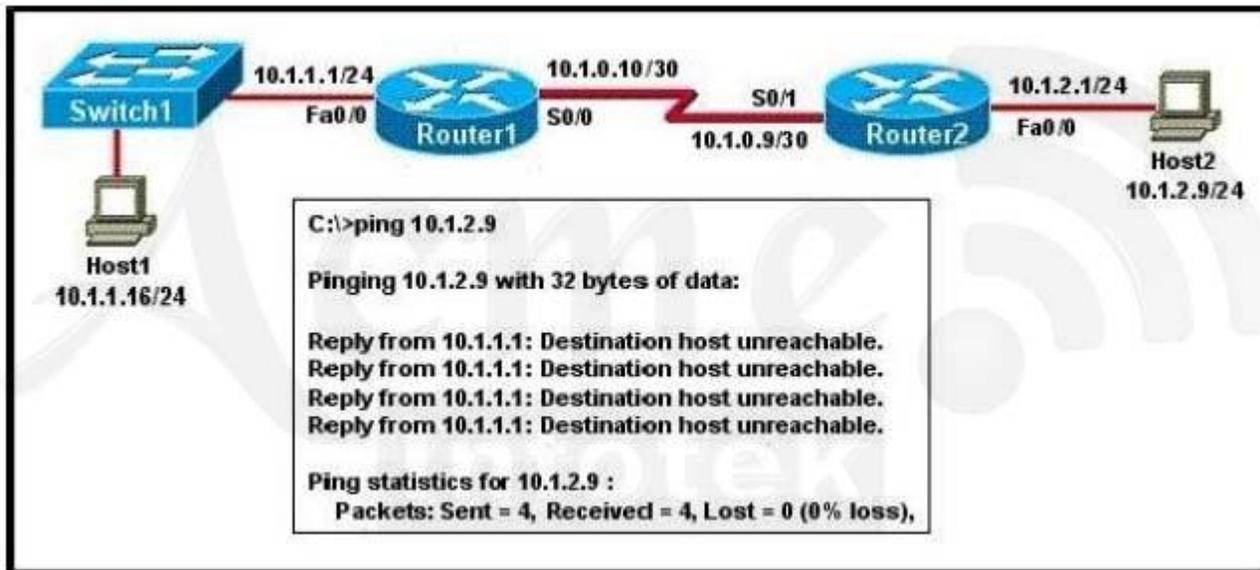
**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 46**

Refer to the exhibit.



A network administrator attempts to ping Host2 from Host1 and receives the results that are shown. What is a possible problem?

- A. The link between Host1 and Switch1 is down.
- B. Interface Fa0/0 Router1 is shutdown.
- C. TCP/IP is not functioning on Host1

- D. The link between Router1 and Router2 is down.
- E. The link between Switch1 and Router1 is down.
- F. The default gateway on Host1 is incorrect.

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 47**

Which two are features of IPv6 (Choose two)

- A. pod cast
- B. multicast
- C. anycast
- D. allcast
- E. broadcast

**Correct Answer:** BC

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 48**

A network administrator receives an error message while trying to configure the Ethernet interface of a router with IP address 10.24.24.24/29. Which statement explains the reason for this issue?

- A. This address is a broadcast address.
- B. VLSM-capable routing protocols must be enabled first on the router.
- C. The Ethernet interface is faulty.
- D. This address is a network address.

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 49**

Which command enables RSTP on a switch?

- A. spanning tree backbonefast
- B. spanning-tree mode rapid-pvst
- C. spanning-tree mode mst
- D. spanning-tree uplinkfast

**Correct Answer: B**

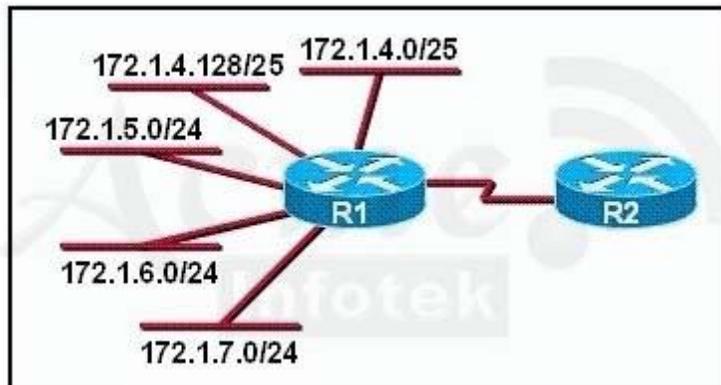
**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 50**

Refer to the exhibit.



What is the most efficient summarization that R1 can use to advertise its networks to R2?

- A. 172.1.4.0/25  
172.1.4.128/25  
172.1.5.0/24  
172.1.6.0/24  
172.1.7.0/24

- B. 172.1.0.0/22
- C. 172.1.4.0/24  
172.1.5.0/24  
172.1.6.0/24  
172.1.7.0/24
- D. 172.1.0.0/21
- E. 172.1.4.0/22

**Correct Answer:** E

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 51**

The enable secret command is used to secure access to which CLI mode?

- A. global configuration mode
- B. privileged EXEC mode
- C. user EXEC mode
- D. auxiliary setup mode

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 52**

Which address is the IPv6 all-RIP-routers multicast group address that is used by RIPng as the destination address for RIP updates?

- A. FF02::9
- B. FF02::6
- C. FF05::101
- D. FF02::A

**Correct Answer:** A

**Section:** (none)

### Explanation

### Explanation/Reference:

#### QUESTION 53

Which IPsec security protocol should be used when confidentiality is required?

- A. PSK
- B. AH
- C. MD5
- D. ESP

**Correct Answer:** D

**Section:** (none)

### Explanation

### Explanation/Reference:

#### QUESTION 54

What are three features of the IPv6 protocol? (Choose three.)

- A. checksums
- B. optional IPsec
- C. autoconfiguration
- D. complicated header
- E. plug-and-play
- F. no broadcasts

**Correct Answer:** CEF

**Section:** (none)

### Explanation

### Explanation/Reference:

#### QUESTION 55

At which layer of the OSI model is RSTP used to prevent loops?

- A. data link
- B. network
- C. physical
- D. transport

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 56**

Which device might be installed at a branch office to enable and manage an IPsec site-to-site VPN?

- A. Cisco IOS IPsec/SSL VPN client
- B. Cisco VPN Client
- C. ISDN terminal adapter
- D. Cisco Adaptive Security Appliance

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 57**

Which protocol is an open standard protocol framework that is commonly used in VPNs, to provide secure end-to-end communications?

- A. PPTP
- B. IPsec
- C. RSA
- D. L2TP

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 58**

Which three statements about RSTP are true? (Choose Three)

- A. RSTP port states are blocking, discarding, learning, or forwarding.
- B. RSTP expands the STP port roles by adding the alternate and backup roles.
- C. RSTP significantly reduces topology reconverging time after a link failure.
- D. RSTP also uses the STP proposal-agreement sequence.
- E. RSTP uses the same timer-based process as STP on point to point links.
- F. RSTP provides a faster transition to the forwarding state on point-to-point links than STP does.

**Correct Answer:** BCF

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 59**

Which three elements must be used when you configure a router interface for VLAN trunking? (Choose three.)

- A. one physical interface for each subinterface
- B. one IP network or subnetwork for each subinterface
- C. a management domain for each subinterface
- D. subinterface encapsulation identifiers that match VLAN tags
- E. one subinterface per VLAN
- F. subinterface numbering that matches VLAN tags

**Correct Answer:** BDE

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 60**

Which statement is true, as relates to classful or classless routing?

- A. Automatic summarization at classful boundaries can cause problems on discontinuous subnets.

- B. EIGRP and OSPF are classful routing protocols and summarize routes by default
- C. RIPv1 and OSPF are classless routing protocols
- D. Classful routing protocols send the subnet mask in routing updates

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 61

Refer to the exhibit.

```
ACL 10
Statements are written in this order:
A. permit any
B. deny 172.21.1.128 0.0.0.15
C. permit 172.21.1.129 0.0.0.0
D. permit 172.21.1.142 0.0.0.0
```

Statements A, B, C, and D of ACL 10 have been entered in the shown order and applied to interface E0 inbound, to prevent all hosts (except those whose address are the first and last IP of subnet 172.21.1.128/28) from accessing the network. But as is, the ACL does not restrict anyone from the network. How can the ACL statements be re-arranged so that the system works as intended?

- A. CDBA
- B. ACDB
- C. BADC
- D. DBAC

**Correct Answer:** A

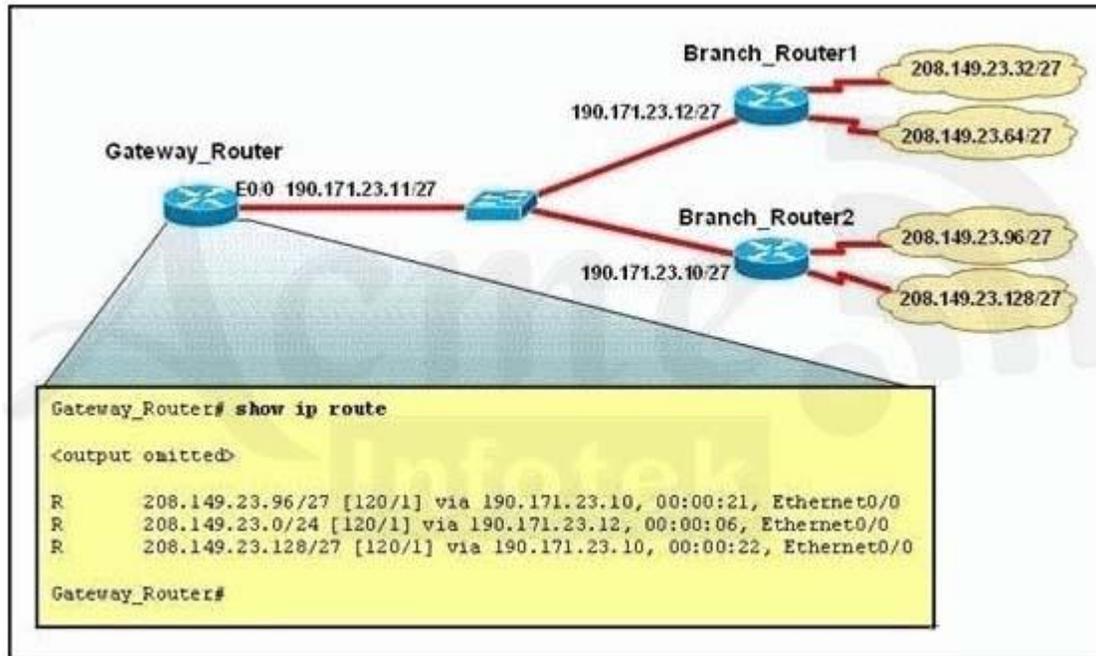
**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 62**

Refer to the exhibit.



What is the most likely reason for the disparity between the actual network numbers at the branches and the routes in the routing table on Gateway\_Router?

- A. Gateway\_Router is configured to receive only RIPv1 updates.
- B. Gateway\_Router is configured to only receive RIPv2 updates.
- C. Branch\_Router2 is configured to send both RIPv1 and RIPv2 updates.
- D. Branch\_Router1 is configured to only send RIPv1 updates.

**Correct Answer:** D

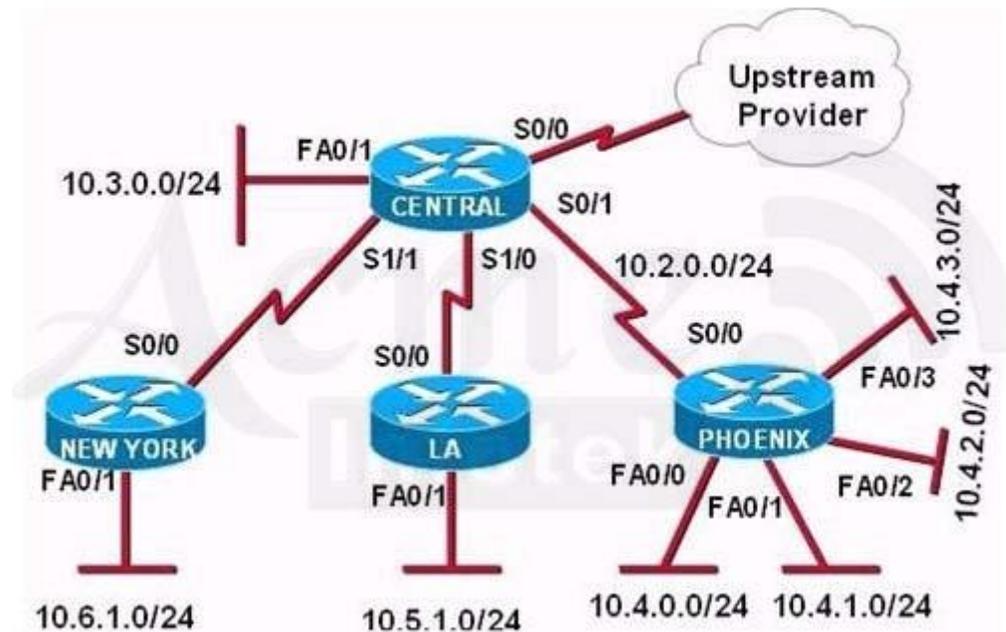
**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 63**

Refer to the exhibit.



The Lakeside Company has the internetwork in the exhibit. The administrator would like to reduce the size of the routing table on the Central router. Which partial routing table entry in the Central router represents a route summary that represents the LANs in Phoenix but no additional subnets?

- A. 10.0.0.0/22 is subnetted, 1 subnets  
D 10.0.0.0 [90/20514560] via 10.2.0.2, 6w0d, Serial0/1
- B. 10.0.0.0/28 is subnetted, 1 subnets  
D 10 2 0.0 [90/20514560] via 10.2.0.2, 6w0d, Serial0/1
- C. 10.0.0.0/28 is subnetted, 1 subnets  
D 10.4.4.0 [90/20514560] via 10.2.0.2, 6w0d, Serial0/1
- D. 10.0.0.0/30 is subnetted, 1 subnets  
D 10.4.4.4 [90/20514560] via 10.2.0.2, 6w0d, Serial0/1
- E. 10.0.0.0/22 is subnetted, 1 subnets  
D 10.4.0.0 [90/20514560] via 10.2.0.2, 6w0d, Serial0/1
- F. 10.0.0.0/30 is subnetted, 1 subnets  
D 10.2.2.0 [90/20514560] via 10.2.0.2, 6w0d, Serial0/1

**Correct Answer: E**

**Section: (none)**  
**Explanation**

**Explanation/Reference:**

**QUESTION 64**

Which two Cisco IOS commands, used in troubleshooting, can enable debug output to a remote location? (Choose two)

- A. no logging console
- B. logging host ip-address
- C. terminal monitor
- D. show logging | redirect flash:output.txt
- E. snmp-server enable traps syslog

**Correct Answer: BC**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 65**

A network administrator needs to configure port security on a switch. Which two statements are true? (Choose two)

- A. The network administrator can apply port security to dynamic access points.
- B. When dynamic MAC address learning is enabled on an interface, the switch can learn new addresses, up to the maximum defined.
- C. The network administrator can configure static secure or sticky secure MAC addresses in the voice VLAN.
- D. The network administrator can apply port security to EtherChannels.
- E. The sticky learning feature allows the addition of dynamically learned addresses to the running configuration.

**Correct Answer: BE**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 66**

Which three statements accurately describe Layer 2 Ethernet switches? (Choose three)

- A. Microsegmentation decreases the number of collisions on the network.
- B. if a switch receives a frame for an unknown destination, it uses ARP to resolve the address.
- C. Spanning Tree Protocol allows switches to automatically share vlan information.
- D. In a properly functioning network with redundant switched paths, each switched segment will contain one root bridge with all its ports in the forwarding state. All other switches in that broadcast domain will have only one root port.
- E. Establishing vlans increases the number of broadcast domains.
- F. Switches that are configured with vlans make forwarding decisions based on both layer 2 and layer 3 address information.

**Correct Answer:** ADE

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 67**

What is the purpose of Inverse ARP?

- A. to map a known IP address to a MAC address
- B. to map a known SPID to a MAC address
- C. to map a known MAC address to an IP address
- D. to map a known DLCI to an IP address
- E. to map a known IP address to a SPID
- F. to map a known DLCI to a MAC address

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 68**

Which two of these are characteristics of the 802.1Q protocol? (Choose two.)

- A. It modifies the 802.3 frame header, and thus requires that the FCS be recomputed.
- B. It is used exclusively for tagging VLAN frames and does not address network reconvergence following switched network topology changes.
- C. It is a Layer 2 messaging protocol which maintains VLAN configurations across networks.

- D. It is a trunking protocol capable of carrying untagged frames.
- E. It includes an 8-bit field which specifies the priority of a frame.

**Correct Answer:** AD

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 69**

Which type of EIGRP route entry describes a feasible successor?

- A. a primary router, stored in the topology table
- B. a backup router, stored in the routing table
- C. a backup route, stored in the topology table
- D. a primary router, stored in the routing table

**Correct Answer:** C

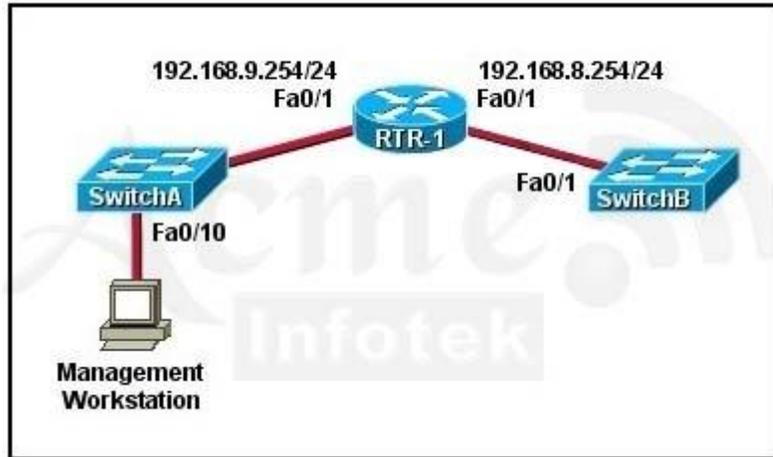
**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 70**

Refer to the exhibit.



A technician has installed SwitchB and needs to configure it for remote access from the management workstation connected to SwitchA. Which set of commands is required to accomplish this task?

- A. SwitchB(config)# ip default-gateway 192.168.8.254  
SwitchB(config)# interface vlan 1  
SwitchB(config-if)# ip address 192.168.8.252 255.255.255.0  
SwitchB(config-if)# no shutdown
- B. SwitchB(config)# ip default-network 192.168.8,254  
SwitchB(config)# interface vlan 1  
SwitchB(config-if)# ip address 192.168.8.252 255.255.255.0  
SwitchB(config-if)# no shutdown
- C. SwitchB(config)# interface vlan 1  
SwitchB(config-if)# ip address 192.168.8.252 255.255.255.0  
SwitchB(config-if)# ip default-gateway 192.168.8.254 255.255.255.0  
SwitchB(config-if)# no shutdown
- D. SwitchB(config)# ip router 192.168.8.254 255.255.255.0  
SwitchB(config-if)# interface FastEthernet 0/1  
SwitchB(config-if)# ip default-gateway 192.168.8.254 255.255.255.0  
SwitchB(config-if)# no shutdown
- E. SwitchB(config-if)# interface FastEthernet 0/1  
SwitchB(config-if)# ip default-gateway 192.168.8.252 255.255.255.0  
SwitchB(config-if)# no shutdown

**Correct Answer:** A

**Section:** (none)

## Explanation

### Explanation/Reference:

#### QUESTION 71

Which two statements describe the advantages to the use of RIP over the use of OSPF? (Choose two.)

- A. RIP requires less time to converge.
- B. RIP is less complex to configure.
- C. RIP uses less bandwidth.
- D. RIP has a more accurate metric.
- E. RIP demands fewer router resources.

**Correct Answer:** BE

**Section:** (none)

### Explanation

### Explanation/Reference:

#### QUESTION 72

Which IPv6 address is the equivalent of the IPv4 interface loopback address 127.0.0.1?

- A. 0::/10
- B. 2000::/3
- C. ::
- D. ::1

**Correct Answer:** D

**Section:** (none)

### Explanation

### Explanation/Reference:

#### QUESTION 73

What does the frame-relay interface-dlci command configure?

- A. remote DLCI on the subinterface

- B. remote DLCI on the main interface
- C. local DLCI on the main interface
- D. local DLCI on the subinterface

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 74

Refer to the exhibit.

```
hostname Tampa
!
username Orlando password 0 cisco
ip subnet-zero
!
interface FastEthernet0/0
ip address 192.168.1.1 255.255.255.0
!
interface Serial0/0
ip address 10.0.1.1 255.255.255.0
encapsulation ppp
ppp authentication chap
!
router eigrp 10
network 10.0.0.0
network 192.168.1.0
no auto-summary
```

The serial0/0 interface of the Tampa router connects to the Orlando router.  
Which two statements are true about the connection between these two routers?

- A. The link uses a three-way handshake for authentication.
- B. The link uses a two-way handshake for authentication.
- C. The only device with which the Tampa router will negotiate a data link is the Orlando router.
- D. Data exchanges between the Orlando and Tampa routers are encrypted.
- E. Routing updates exchanged between the Orlando and Tampa routers are authenticated.

**Correct Answer:** AC

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 75

Refer to the exhibit.

```
Router1#telnet 10.3.3.1
Trying 10.3.3.1 ...Open

Password required, but none set

[Connection to 10.3.3.1 closed by foreign host]
```

Why does the Telnet connection fail when a host attempts to connect to a remote router?

- A. No password was set for cty lines.
- B. No password was set for vty lines.
- C. No password was set for aux lines.
- D. No password was set for tty lines

**Correct Answer:** B

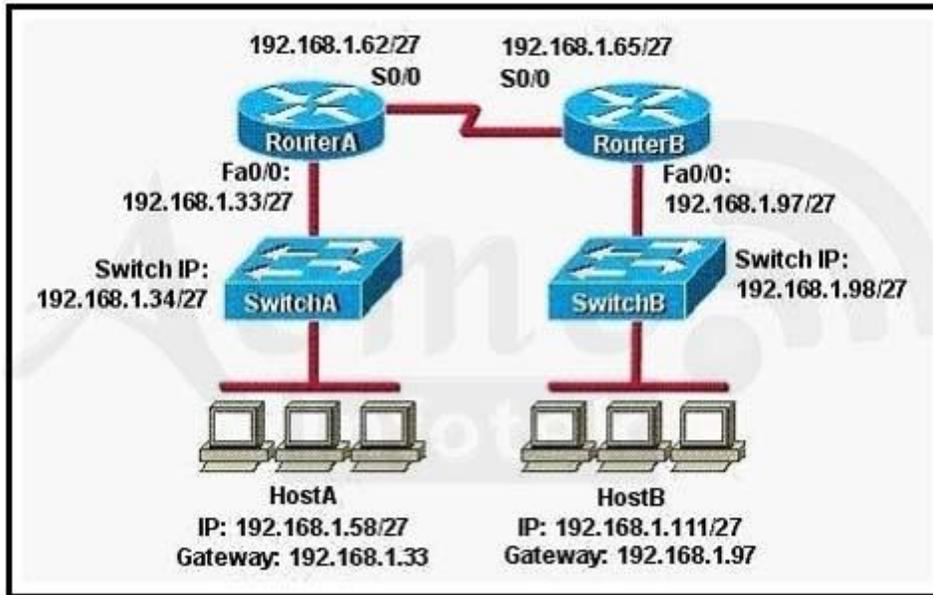
**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 76**

Refer to the exhibit.



HostA cannot ping HostB. Assuming routing is properly configured, what could be the cause of this problem?

- A. HostA is not on the same subnet as its default gateway
- B. The Fa0/0 interface on RouterB is using a broadcast address.
- C. The Fa0/0 interface on RouterA is on a subnet that can't be used.
- D. The address of SwitchA is a subnet address.
- E. The serial interfaces of the routers are not on the same subnet.

**Correct Answer:** E

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 77**

Which component of VPN technology ensures that data can be read only by its intended recipient?

- A. authentication
- B. data integrity
- C. key exchange
- D. encryption

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 78**

Assuming the default switch configuration, which VLAN range can be added, modified, and removed on a Cisco switch?

- A. 1 through 1002
- B. 2 through 1001
- C. 1 through 1001
- D. 2 through 1005

**Correct Answer:** B

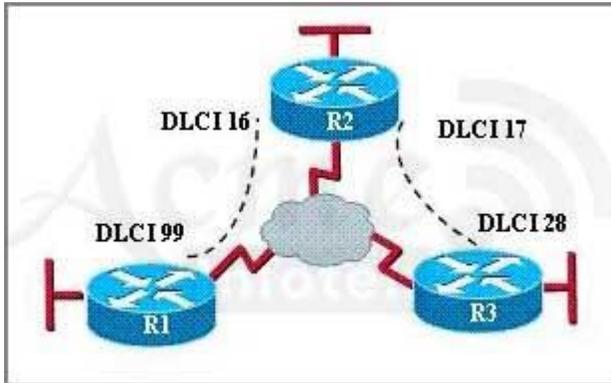
**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 79**

Refer to the exhibit.



In the Frame Relay network, which IP addresses would be assigned to the interfaces with point-to-point PVCs?

- A. DLCI 16: 192.168.10.1 /24  
DLCI 17: 192.168.10.1 /24  
DLCI 99: 192.168.10.2 /24  
DLCI 28: 192.168.10.3 /24
- B. DLCI 16: 192.168.10.1 /24  
DLCI 17: 192.168.11.1 /24  
DLCI 99: 192.168.12.1 /24  
DLCI 28: 192.168.13.1 /24
- C. DLCI 16: 192.168.10.1 /24  
DLCI 17: 192.168.10.2 /24  
DLCI 99: 192.168.10.3 /24  
DLCI 28: 192.168.10.4 /24
- D. DLCI 16: 192.168.10.1 /24  
DLCI 17: 192.168.11.1 /24  
DLCI 99: 192.168.10.2 /24  
DLCI 28: 192.168.11.2 /24

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 80**

Which name describes an IPv6 host-enabled tunneling technique that uses IPv4 UDP, does not require dedicated gateway tunnels, and can pass through existing IPv4 NAT gateways?

- A. dual stack
- B. manual 6to4
- C. Teredo
- D. dynamic

**Correct Answer: C**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 81**

What is the alternative notation for the IPv6 address B514:82C3:0000:0000:0029:EC7A:0000:EC72?

- A. B514:82C3:0029::EC7A:0000:EC72
- B. B514:82C3:0029:EC7A:EC72
- C. B514:82C3::0029:EC7A:0:EC72
- D. B514:82C3::0029:EC7A:EC72

**Correct Answer: C**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 82**

Which IPv6 address is valid?

- A. 2031:0:130F::9C0:876A:130B
- B. 2001:0db8:0:130H::87C:140B
- C. 2001:0db8:0000:130F:0000:0000:08GC:140B
- D. 2031::130F::9C0:876A:130B

**Correct Answer: A**

**Section: (none)**  
**Explanation**

**Explanation/Reference:**

**QUESTION 83**

Which component of VPN technology ensures that data is unaltered between the sender and recipient?

- A. authentication
- B. data integrity
- C. key exchange
- D. encryption

**Correct Answer: B**  
**Section: (none)**  
**Explanation**

**Explanation/Reference:**

**QUESTION 84**

You have been asked to come up with a subnet mask that will allow all three web servers to be on the same network while providing the maximum number of subnets.

Which network address and subnet mask meet this requirement?

- A. 192.168.252.8 255.255.255.252
- B. 192.168.252.16 255.255.255.252
- C. 192.168.252.8 255.255.255.248
- D. 192.168.252.0 255.255.255.252
- E. 192.168.252.16 255.255.255.240

**Correct Answer: C**  
**Section: (none)**  
**Explanation**

**Explanation/Reference:**

**QUESTION 85**

Which two statistics appear in show frame-relay map output? (Choose two.)

- A. the number of BECN packets that are received by the router
- B. the value of the local DLCI
- C. the number of FECN packets that are received by the router
- D. the status of the PVC that is configured on the router
- E. the IP address of the local router

**Correct Answer:** BD

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 86**

Which parameter can be tuned to affect the selection of a static route as a backup, when a dynamic protocol is also being used?

- A. link cost
- B. administrative distance
- C. link bandwidth
- D. hop count
- E. link delay

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 87**

Which command encrypts all plaintext passwords?

- A. Router# service password-encryption
- B. Router(config)# service password-encryption
- C. Router(config)# password-encryption
- D. Router# password-encryption

**Correct Answer:** B

**Section: (none)**  
**Explanation**

**Explanation/Reference:**

**QUESTION 88**

What is the function of the command `switchport trunk native vlan 999` on a Cisco Catalyst switch?

- A. It designates VLAN 999 for untagged traffic.
- B. It blocks VLAN 999 traffic from passing on the trunk
- C. It creates a VLAN 999 interface.
- D. It designates VLAN 999 as the default for all unknown tagged traffic.

**Correct Answer: A**  
**Section: (none)**  
**Explanation**

**Explanation/Reference:**

**QUESTION 89**

Which two statements about static NAT translation are true? (Choose two)

- A. They allow connections to be initiated from the outside.
- B. They require no inside or outside interface markings because addresses are statically defined.
- C. They can be configured with access lists, to allow two or more connections to be initiated from the outside.
- D. They are always present in the NAT table.

**Correct Answer: AD**  
**Section: (none)**  
**Explanation**

**Explanation/Reference:**

**QUESTION 90**

Which command is used to display the collection of OSPF link states?

- A. `show ip ospf neighbors`

- B. show ip ospf database
- C. show ip ospf link-state
- D. show ip ospf lsa database

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 91**

How are VTP advertisements delivered to switches across the network?

- A. unicast frames
- B. multicast frames
- C. broadcast frames
- D. anycast frames

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 92**

Refer to the exhibit.



```

S1# show running-config | include vtp
vtp mode transparent
vtp domain cisco
vtp password cisco

S1# show running-config interface fa0/24
interface FastEthernet0/24
switchport mode access
no ip address

S2# show running-config | include vtp
vtp mode server
vtp domain cisco
vtp password cisco

S1# show running-config interface fa0/24
interface FastEthernet0/24
switchport mode dynamic auto
no ip address

```

The VLAN configuration of S1 is not being updated in this VTP-enabled environment. The VTP and uplink port configuration for each switch are displayed. Which two command sets, if issued, resolve this failure and allow VTP to operate as expected?

- A. S1(config)#vtp mode client
- B. S2(config)#vtp mode client
- C. S2(config)#interface FastEthernet 0/24  
S2(config-if)#switchport mode access  
S2(config-if)#end
- D. S1(config)#interface FastEthernet 0/24  
S1(config-if)#switchport mode trunk

```
S2(config-if)#end
E. S2(config)#vtp mode transparent
```

**Correct Answer:** AD

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 93

Refer to the exhibit.

```
ACL 102

access-list 102 deny tcp 172.21.1.1 0.0.0.255 any eq 80
access-list 102 deny any any

RouterA# show ip interface
FastEthernet0/0 is up, line protocol is up
Internet address is 192.168.1.144/20
Broadcast address is 255.255.255.255
Address determined by DHCP
MTU is 1500 bytes
Helper address is not set
Directed broadcast forwarding is enabled
Outgoing access list is 102
Inbound access list is not set
Proxy ARP is enabled
```

An attempt to deny web access to a subnet blocks all traffic from the subnet.  
Which interface command immediately removes the effect of ACL 102?

- A. no ip access-class 102 out
- B. no ip access-group 102 out

- C. no ip access-group 102 in
- D. no ip access-list 102 in
- E. no ip access-class 102 in

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 94**

Which pairing reflects a correct protocol-and-metric relationship?

- A. EIGRP and link cost
- B. OSPF and number of hops and reliability
- C. RIPv2 and number of hops
- D. IS-IS and delay and reliability

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

## Exam

### QUESTION 1

Which term describes a spanning-tree network that has all switch ports in either the blocking or forwarding state?

- A. spanned
- B. converged
- C. provisioned
- D. redundant

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 2

Refer to the exhibit.

```
Glencoe#show ip protocol
Routing Protocol is "eigrp 478"
 - output omitted -
 Redistributing: eigrp 478
 Automatic network summarization is not in effect
 Maximum path: 4
 Routing for Networks:
 172.26.168.128/26
 172.26.169.0/26
 Routing Information Sources:
 Gateway Distance Last Update
 172.26.168.129 90 01:01:59
 Distance: internal 90 external 170
```

The EIGRP configuration in the Glencoe router uses a single network statement. From the output shown in the graphic, which network statement would advertise these networks in EIGRP?

- A. network 172.26.168.128 area 478

- B. network 172.26.168.128 0.0.0.127
- C. network 172.26.168.0 area 478
- D. network 172.26.0.0

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 3

Refer to the exhibit.

```
Router#configure terminal
Router(config)#line vty 0 4
Router(config-line)#password c1sc0
Router(config-line)#no login
```

What is the result of setting the no login command?

- A. Telnet access is denied.
- B. Telnet access requires a new password at the first login.
- C. Telnet access requires a new password.
- D. There is a virtually limitless supply of IP addresses.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 4

Which command helps a network administrator to manage memory by displaying flash memory and NVRAM utilization?

- A. show secure
- B. show file systems
- C. show version
- D. show flash

**Correct Answer:** B

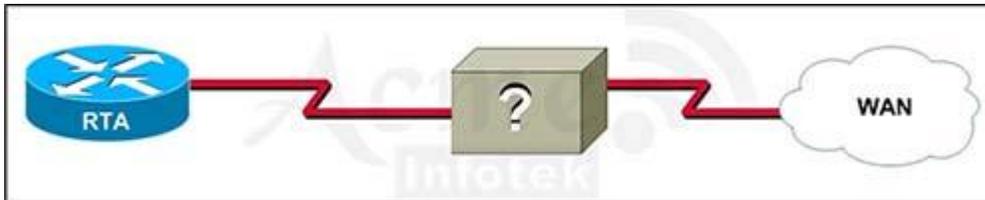
**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 5

Refer to the exhibit.



Which two devices can be used to complete the connection between the WAN router at the customer site and the service provider? (Choose two.)

- A. modem
- B. ISDN TA
- C. CSU/DSU
- D. ATM switch
- E. Frame Relay switch
- F. WAN switch

**Correct Answer:** AC

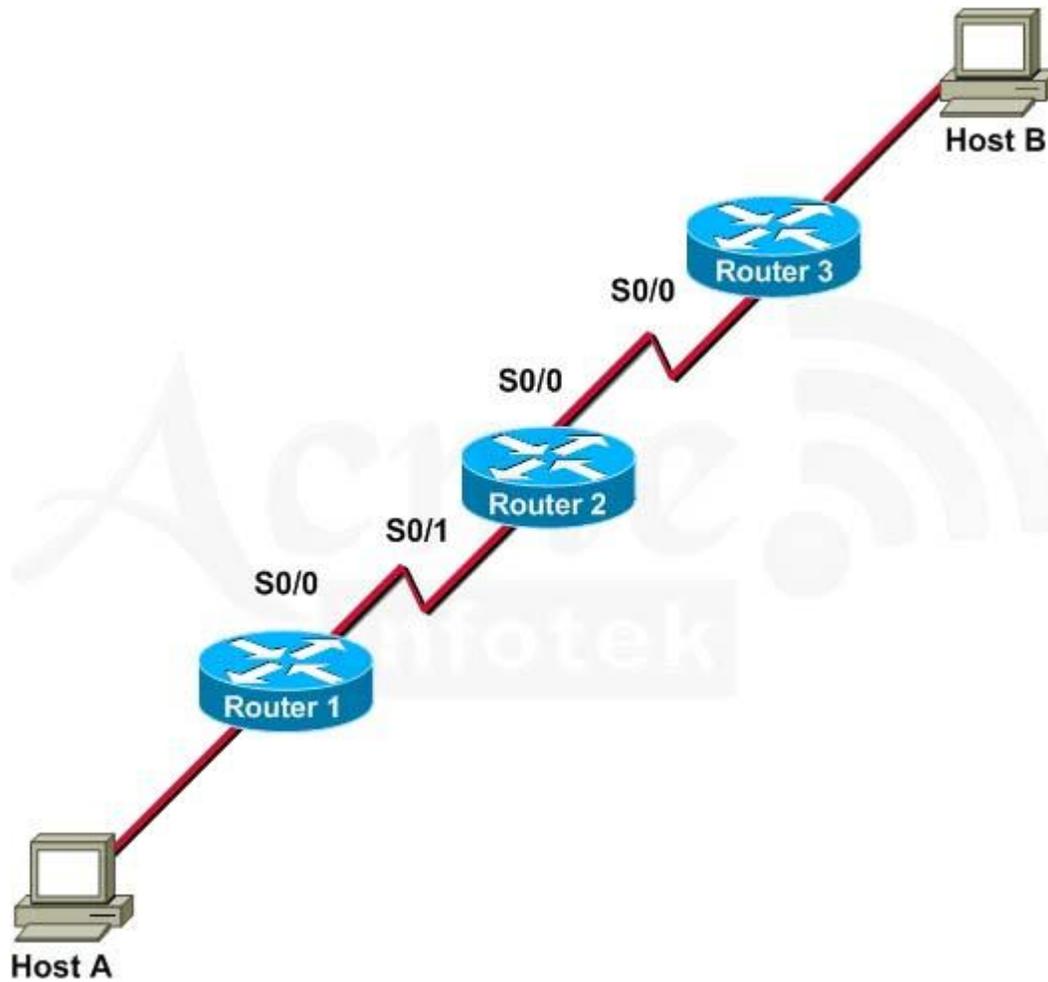
**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 6

Refer to Exhibit.



Host A pings interface S0/0 on router 3. What is the TTL value for the ping?

- A. 253
- B. 252
- C. 255
- D. 254

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### **QUESTION 7**

What are two characteristics of a switch that is configured as a VTP client? (Choose two.)

- A. VTP advertisement are not forwarded to neighboring switches that are configured in VTP transparent mode.
- B. If a switch that is configured to operate in client mode cannot access a VTP server, then the switch reverts to transparent mode.
- C. VTP client is the default VTP mode.
- D. On switches that are configured to operate in client mode, VLANs can be created, deleted, or renamed locally.
- E. The local VLAN configuration is updated only when an update that has a higher configuration revision number is received.
- F. When switches in VTP client mode are rebooted, they send a VTP advertisement request to the VTP servers.

**Correct Answer:** EF

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### **QUESTION 8**

What value is primarily used to determine which port becomes the root port on each nonroot switch in a spanning-tree topology?

- A. port priority number and MAC address
- B. lowest port MAC address
- C. path cost
- D. VTP revision number
- E. highest port priority number

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 9**

Two switches are connected through a trunk link. Which two commands show that there is a native VLAN mismatch on that link? (Choose two)

- A. show interfaces interface switchport
- B. show interface interface trunk
- C. show vlan brief
- D. show interfaces vlan
- E. show interfaces interface
- F. show interface switchport
- G. show interface trunk

**Correct Answer:** FG

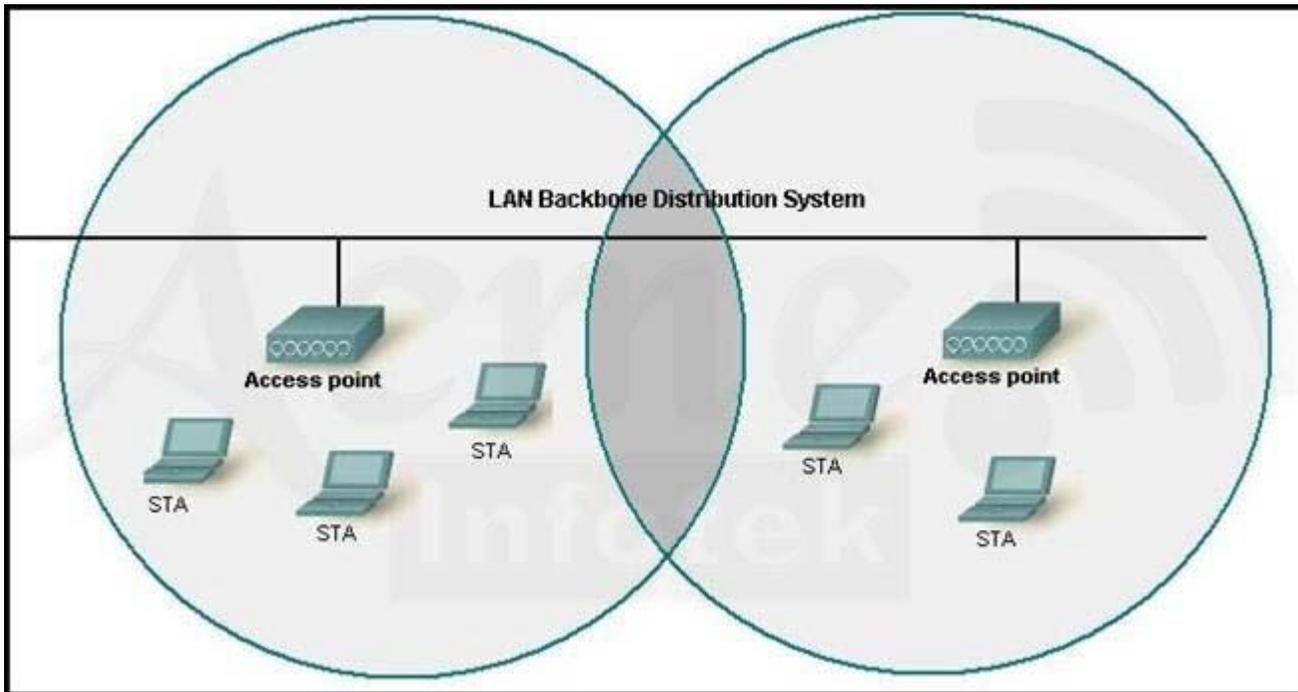
**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 10**

Refer to the exhibit.



What two facts can be determined from the WLAN diagram? (Choose two)

- A. The two access points generally are configured with a common SSID to allow roaming from access point to access point.
- B. Each access point must have a unique SSID.
- C. The network diagram represents an extended service set (ESS).
- D. The area of overlap of the two cells represents a basic service set (BSS).
- E. The network diagram represents an ad hoc topology.

**Correct Answer:** AC

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 11

Why will a switch never learn a broadcast address?

- A. Broadcast frames are never sent to switches.
- B. Broadcast addresses use an incorrect format for the switching table.
- C. A broadcast address will never be the source address of a frame.
- D. Broadcasts only use network layer addressing.
- E. A broadcast frame is never forwarded by a switch.

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 12**

Which command can you use to manually assign a static IPv6 address to a router interface?

- A. ipv6 address PREFIX\_1::1/64
- B. ipv6 autoconfig 2001:db8:2222:7272::72/64
- C. ipv6 autoconfig
- D. ipv6 address 2001:db8:2222:7272::72/64

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 13**

What is the function of the command switchport trunk native vlan 999 on a trunk port?

- A. It designates VLAN 999 for untagged traffic.
- B. It blocks VLAN 999 traffic from passing on the trunk.
- C. It creates a VLAN 999 interface.
- D. It designates VLAN 999 as the default for all unknown tagged traffic.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 14**

Which command can be used from a PC to verify the connectivity between host that connect through path.?

- A. tracert address
- B. ping address
- C. arp address
- D. traceroute address

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 15**

In which solution is a router ACL used?

- A. protecting a server from unauthorized access
- B. controlling path selection, based on the route metric
- C. reducing router CPU utilization
- D. filtering packets that are passing through a router

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 16**

A router has two Fast Ethernet interfaces and needs to connect to four VLANs in the local network.

How can you accomplish this task, using the fewest physical interfaces and without decreasing network performance?

- A. Add two more FastEthernet interfaces.
- B. Add a second router to handle the vlan traffic.
- C. Use a hub to connect the four vlans with a FastEthernet interface on router.

D. Implement a router-on-a-stick configuration.

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 17

Refer to the exhibit.

```
switch2# show vlan brief
```

VLAN	Name	Status	Ports
1	default	active	
10	VLAN0010	active	
11	VLAN0011	active	
20	VLAN0020	active	

How many broadcast domains are configured on switch2?

- A. 5
- B. 20
- C. 4
- D. 1

**Correct Answer:** C

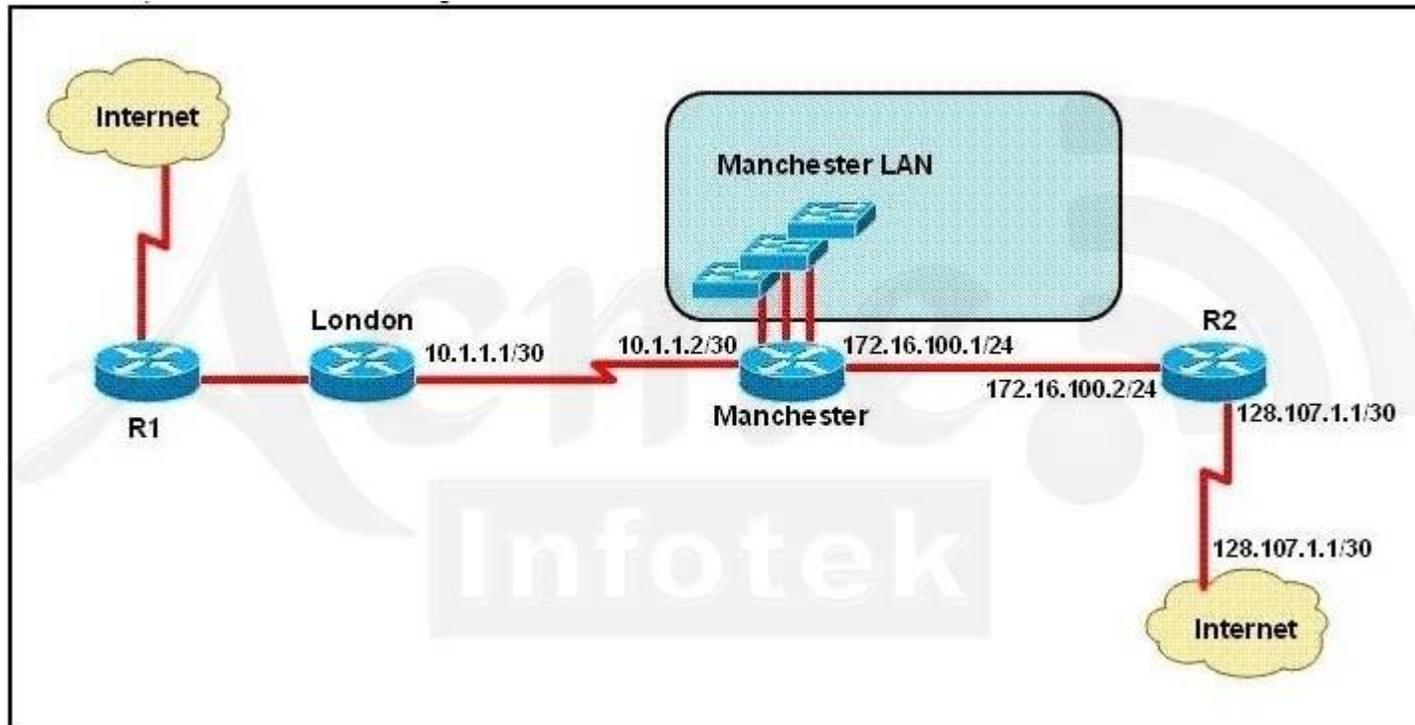
**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 18

Refer to the exhibit.



The speed of all serial links is E1 and the speed of the all Ethernet links is 100Mb/s.

A static route will be established on the Manchester router to the direct traffic toward the internet over the most direct path available.

What configuration on the Manchester router will establish a router toward the internet for traffic that originates from workstation on the Manchester LAN?

- A. ip route 0.0.0.0 255.255.255.0 172.16.100.2
- B. ip route 0.0.0.0 255.255.255.252 128.107.1.1
- C. ip route 0.0.0.0 0.0.0.0 128.107.1.1
- D. ip route 0.0.0.0 0.0.0.0 172.16.100.1
- E. ip route 0.0.0.0 255.255.255.255 172.16.100.2
- F. ip route 0.0.0.0 0.0.0.0 172.16.100.2

**Correct Answer:** F

**Section:** (none)

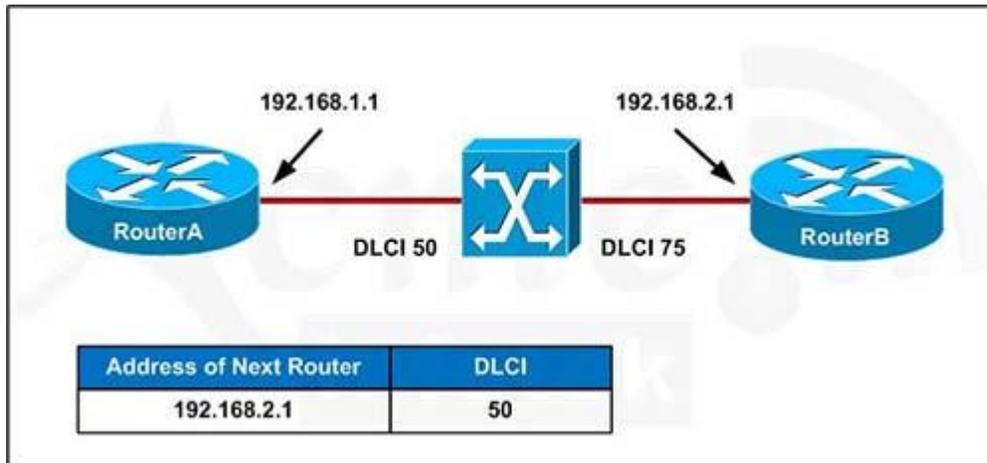
**Explanation**

**Explanation/Reference:**

We use default routing to send packets with a remote destination network not in the routing table to the next-hop router. You should generally only use default routing on stub networks--those with only one exit path out of the network. According to exhibit, all traffic towards Internet that originates from workstations should forward to Router R1. Syntax for default route is:  
 ip route <Remote\_Network> <Netmask> <Next\_Hop\_Address>.

**QUESTION 19**

What Frame Relay mechanism is used to build the map illustrated in the accompanying graphic?



- A. inverse multiplexing
- B. LMI mapping
- C. Inverse ARP
- D. ARP
- E. Proxy ARP

**Correct Answer:** C

**Section:** (none)

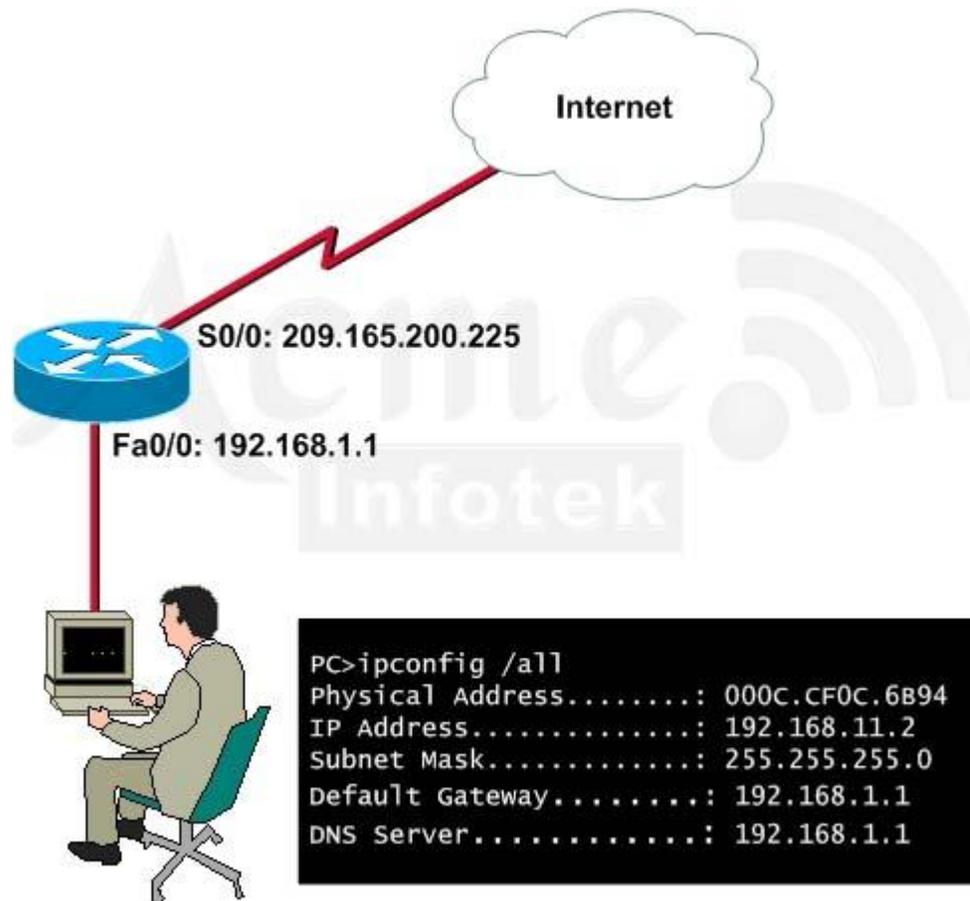
**Explanation**

**Explanation/Reference:**

**QUESTION 20**

Refer to the exhibit.

A network engineer is troubleshooting an internet connectivity problem on the computer. What is causing the problem?



- A. wrong DNS server
- B. wrong default gateway
- C. incorrect IP address
- D. incorrect subnet mask

**Correct Answer: C**

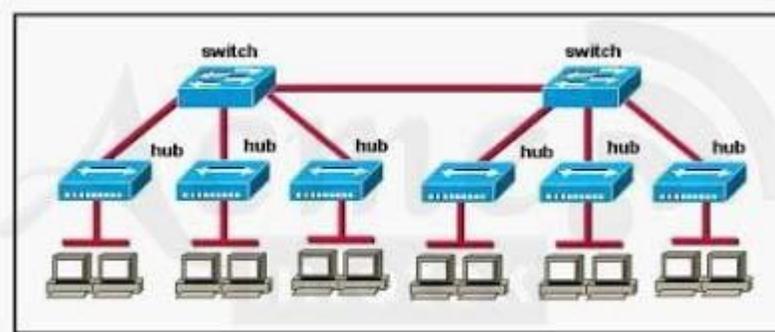
**Section: (none)**

**Explanation**

Explanation/Reference:

### QUESTION 21

How many broadcast domains are shown in the graphic assuming only the default vlan is configured on the switches?



- A. one
- B. six
- C. twelve
- D. two

**Correct Answer:** A

**Section:** (none)

**Explanation**

Explanation/Reference:

### QUESTION 22

How does a DHCP server dynamically assign IP address to host?

- A. Addresses are allocated after a negotiation between the server and the host to determine the length of the agreement.
- B. Addresses are assigned for a fixed period of time. At the end of period, a request for an address must be made, and another address is then assigned.
- C. Addresses are leased to host. A host will usually keep the same address by periodically contacting the DHCP server to renew the lease.
- D. Addresses are permanently assigned so that the host uses the same address at all times.

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 23**

What is the default maximum number of equal-cost paths that can be placed into the routing table of a Cisco OSPF router?

- A. 16
- B. 2
- C. unlimited
- D. 4

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 24**

Which IPV6 routing protocol uses multicast group FF02::9 to send updates?

- A. RIPng
- B. OSPFv3
- C. static
- D. IS-IS for Ipv6

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 25**

What are two benefits of using NAT? (Choose two)

- A. NAT protects network security because private networks are not advertised.

- B. NAT accelerates the routing process because no modifications are made on the packets.
- C. Dynamic NAT facilitates connections from the outside of the network.
- D. NAT facilitates end-to-end communication when IPsec is enable.
- E. NAT eliminates the need to re-address all hosts that require external access.
- F. NAT conserves addresses through host MAC-level multiplexing.

**Correct Answer:** AE

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 26**

A switch is configured as a vtp sever with a domain name of CCNA. Which cisco ios privileged mode command, followed by a reload of the switch, will reset the VTP management domain name of the switch to a NULL value?

- A. #vtp domain unset
- B. #delete vlan.dat
- C. #no vtp domain
- D. #vtp domain null

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 27**

If an Ethernet port on a router was assigned an IP address of 172.1.1.1/20, what is the maximum number of hosts allowed on this subnet?

- A. 4094
- B. 1024
- C. 8190
- D. 2046
- E. 4096

**Correct Answer:** A

**Section:** (none)

### Explanation

### Explanation/Reference:

#### QUESTION 28

Which two statements about static NAT translations are true? (Choose two)

- A. They are always present in the NAT table.
- B. They allow connection to be initiated from the outside.
- C. They can be configured with access lists, to allow two or more connections to be initiated from the outside.
- D. They require no inside or outside interface markings because addresses are statically defined.

**Correct Answer:** AB

**Section:** (none)

### Explanation

### Explanation/Reference:

#### QUESTION 29

Which of these represents an IPv6 link-local address?

- A. FE08::280e:611:a:f14f:3d69
- B. FE81::280f:512b:e14f:3d69
- C. FE80::380e:611a:e14f:3d69
- D. FEFE:0345:5f1b::e14d:3d69

**Correct Answer:** C

**Section:** (none)

### Explanation

### Explanation/Reference:

#### QUESTION 30

Assuming default setting,how can you erase the VTP database of VLANs on a CISCO IOS switch running in VTP server mode?

- A. Enable VTP pruning
- B. From privileged mode ,erase the startup configuration file,then reload.

- C. From privileged mode ,erase the vlan dat file, then reload.
- D. Cycle the switch power.

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 31

Refer to the exhibit. Which address and mask combination represents a summary of the routes learned by EIGRP?

```
Gateway of last resort is not set

192.168.25.0/30 is subnetted, 4 subnets
D 192.168.25.20 [90/2681856] via 192.168.15.5, 00:00:10, Serial0/1
D 192.168.25.16 [90/1823638] via 192.168.15.5, 00:00:50, Serial0/1
D 192.168.25.24 [90/3837233] via 192.168.15.5, 00:05:23, Serial0/1
D 192.168.25.28 [90/8127323] via 192.168.15.5, 00:06:45, Serial0/1
C 192.168.15.4/30 is directly connected, Serial0/1
C 192.168.2.0/24 is directly connected, FastEthernet0/0
```

- A. 192.168.25.0 255.255.255.240
- B. 192.168.25.16 255.255.255.252
- C. 192.168.25.0 255.255.255.252
- D. 192.168.25.28 255.255.255.240
- E. 192.168.25.16 255.255.255.240
- F. 192.168.25.28 255.255.255.240

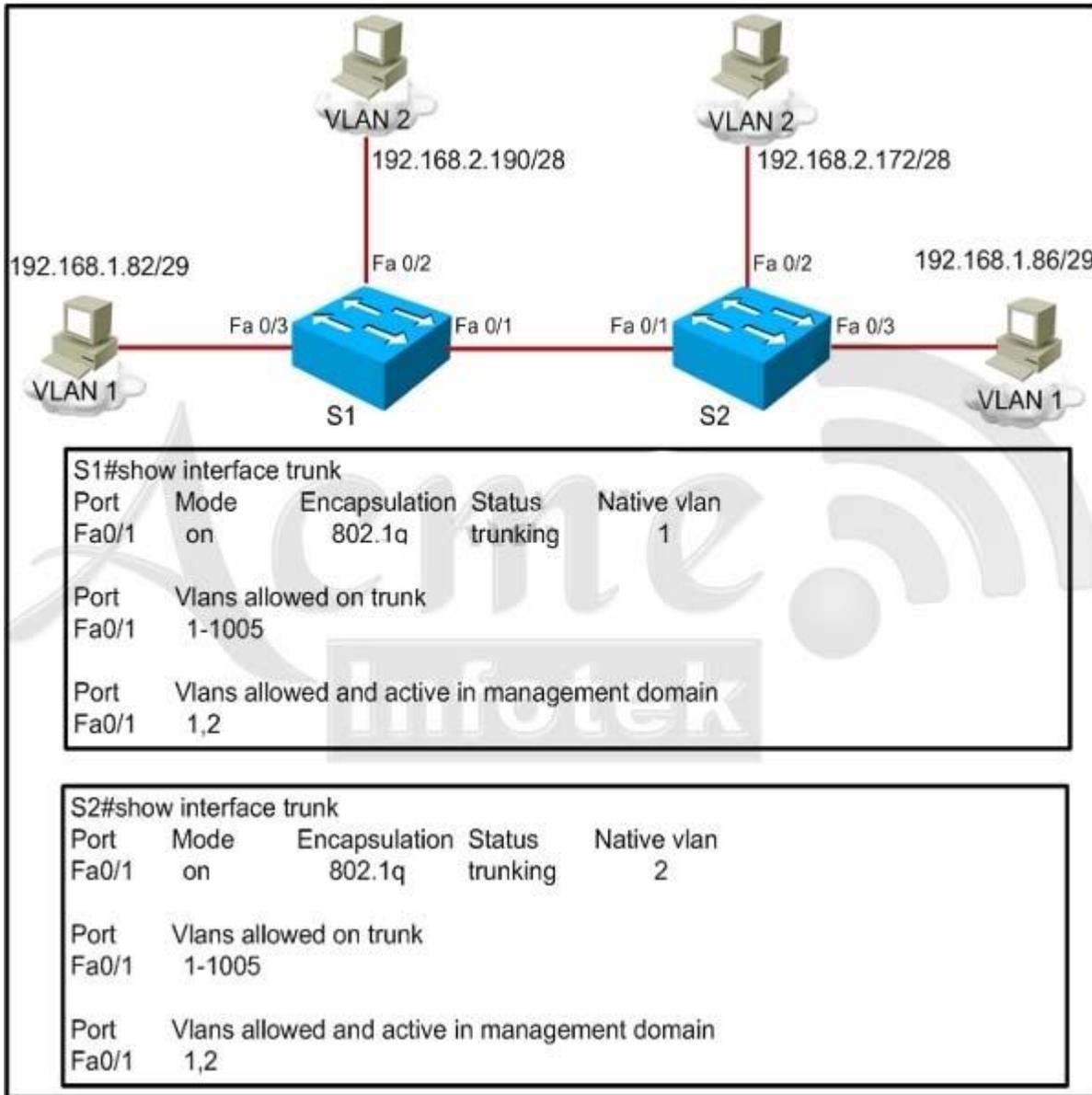
**Correct Answer:** E

**Section:** (none)

**Explanation**

**Explanation/Reference:**

QUESTION 32



A frame on vlan 1 on switch s1 is sent to switch s2 when the frame is received on vlan 2, what causes this behavior?

- A. trunk mode mismatches
- B. vlans that do not correspond to a unique IP subnet
- C. native vlan mismatches
- D. allowing only vlan 2 on the destination.

**Correct Answer:** C

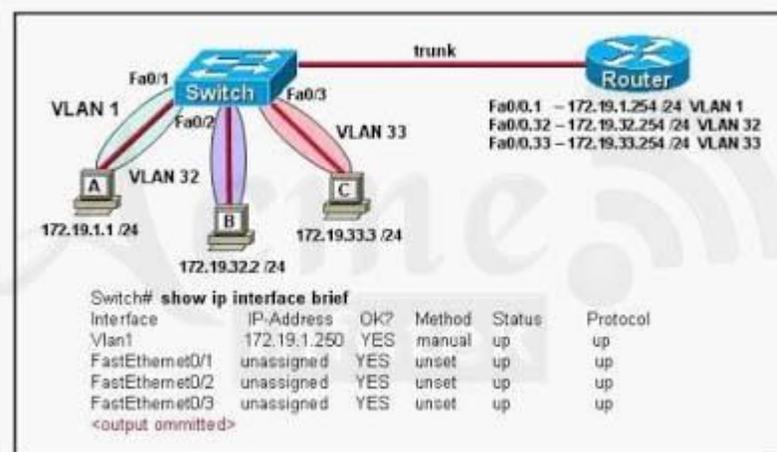
**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 33

Refer to the exhibit.



The network administrator normally establishes a Telnet session with the switch from host A. However, host A is unavailable. The administrator's attempt to telnet to the switch from host B fails, but pings to the other two hosts are successful. What is the issue?

- A. Host B and the switch need to be in the same subnet.
- B. The switch needs an appropriate default gateway assigned.
- C. The switch interface connected to the router is down.
- D. Host B needs to be assigned an IP address in vlan 1.

**Correct Answer:** B  
**Section:** (none)  
**Explanation**

**Explanation/Reference:**

### QUESTION 34

Refer to the exhibit.

```
Router1# show ip interface brief
```

Interface	IP-Address	OK?	Method	Status	Protocol
Ethernet0	190.172.32.10	YES	NVRAM	up	up
Loopback0	208.149.23.162	YES	NVRAM	up	up
Loopback1	208.149.23.194	YES	NVRAM	up	up
Serial0	220.173.149.10	YES	manual	down	down
Serial1	unassigned	YES	NVRAM	administratively down	down

Router1 was just successfully rebooted. Identify the current OSPF router ID for Router1.

- A. 208.149.23.194
- B. 220.173.149.10
- C. 208.149.23.162
- D. 190.172.32.10

**Correct Answer:** A  
**Section:** (none)  
**Explanation**

**Explanation/Reference:**

### QUESTION 35

Why do large OSPF networks use a hierarchical design?(choose three)

- A. to confine network instability to single areas of the network
- B. to reduce the complexity of router configuration

- C. to speed up convergence
- D. to lower costs by replacing routers with distribution layer switches
- E. to decrease latency by increasing bandwidth
- F. to reduce routing overhead

**Correct Answer:** ACF

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 36

A company has a small network, consisting of a single switch and a single router. The switch has been configured with two vlans, and route-on-a-stick is being configured on the router for inter-vlan routing. A trunk is configured to connect the switch to the router. What is the minimum number of router subinterfaces that are required for all the vlans to communicate?

- A. one
- B. three
- C. two
- D. zero

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 37

Which command can be used from a router to verify the Layer 3 path to a host?

- A. traceroute address
- B. tracert address
- C. ssh address
- D. telnet address

**Correct Answer:** A

**Section:** (none)

### Explanation

### Explanation/Reference:

#### QUESTION 38

What is the OSPF default frequency, in seconds, at which a Cisco router sends hello packets on a multiaccess network?

- A. 10
- B. 40
- C. 30
- D. 20

**Correct Answer:** A

**Section:** (none)

### Explanation

### Explanation/Reference:

#### QUESTION 39

Refer to the exhibit.

```
PC>tracert 10.16.176.23

Tracing route to [173.194.36.35] over a maximum of 30 hops:

 0 31 ms 31 ms 32 ms 172.16.182.1
 1 62 ms 62 ms 62 ms 192.168.1.6
 2 93 ms 93 ms 34 ms 192.168.1.10
 3 125 ms 110 ms 125 ms 10.16.176.23

Trace complete.
```

Host A has tested connectivity to a remote network. What is the default gateway for host A?

- A. 172.16.182.1

- B. 192.168.1.1
- C. 10.16.176.1
- D. 192.168.1.6

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 40**

Which command is necessary to permit SSH or Telnet access to a cisco switch that is otherwise configured for these vty line protocols?

- A. transport type all
- B. transport output all
- C. transport preferred all
- D. transport input all

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 41**

Refer to the exhibit. Explain how the routes in the table are being affected by the status change on interface Ethernet0.

```
GW_Router# debug ip rip
RIP protocol debugging is on

<output omitted>

*Mar 1 00:19:36.804: %LINK-5-CHANGED: Interface Ethernet0, changed state to down
*Mar 1 00:19:36.805: RIP: sending v2 flash update to 224.0.0.9 via Ethernet1
(190.172.32.11)
*Mar 1 00:19:36.805: RIP: build flash update entries
*Mar 1 00:19:36.809: 190.171.23.0/24 via 0.0.0.0, metric 16, tag 0
*Mar 1 00:19:36.813: 208.149.23.32/27 via 0.0.0.0, metric 16, tag 0
*Mar 1 00:19:36.813: 208.149.23.64/27 via 0.0.0.0, metric 16, tag 0
*Mar 1 00:19:36.817: 208.149.23.96/27 via 0.0.0.0, metric 16, tag 0
*Mar 1 00:19:36.821: 208.149.23.128/27 via 0.0.0.0, metric 16, tag 0
*Mar 1 00:19:37.789: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet0,
changed state to down
*Mar 1 00:19:39.131: RIP: sending request on Ethernet0 to 224.0.0.9
<output omitted>

GW_Router#
```

- A. The router is poisoning the routes and multicasting the new path costs via interface Ethernet1.
- B. The router is receiving updates about unreachable networks from router that are connected to interface Ethernet1.
- C. The router is poisoning the routes and broadcasting the new path costs via interface Ethernet1.
- D. The router is requesting updates for these networks from routers that are connected to interface Etherne1.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 42

Which two data link protocols are supported by Cisco IOS software for IPv6? (Choose two)

- A. PPP
- B. FDDI
- C. Frame Relay PVC
- D. NBMA

E. Frame Relay SVC

**Correct Answer:** AC

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 43

Assuming the default switch configuration, which approach should you use to configure the extended VLAN range (1006 through 4094) on a Cisco Catalyst 3750 Series switch?

- A. Configure the switch to be in VTP client mode.
- B. Configure the switch to be in VTP domain mode.
- C. Configure the switch to be in VTP transparent mode.
- D. Configure the switch to be in VTPv2.

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 44

Which command is used to enable CHAP authentication, with PAP as the fallback method, on a serial interface?

- A. Router(config-if)# ppp authentication chap fallback ppp
- B. Router(config-if)# authentication ppp chap fallback ppp
- C. Router(config-if)# ppp authentication chap pap
- D. Router(config-if)# authentication ppp chap pap

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 45

Which two statements apply to dynamic access lists?(choose two)

- A. they offer simpler management in large internetworks.
- B. you can control logging messages.
- C. they allow packets to be filtered based on upper-layer session information.
- D. you can set a time-based security policy.
- E. they provide a level of security against spoofing.
- F. they are used to authenticate individual users.

**Correct Answer:** AF

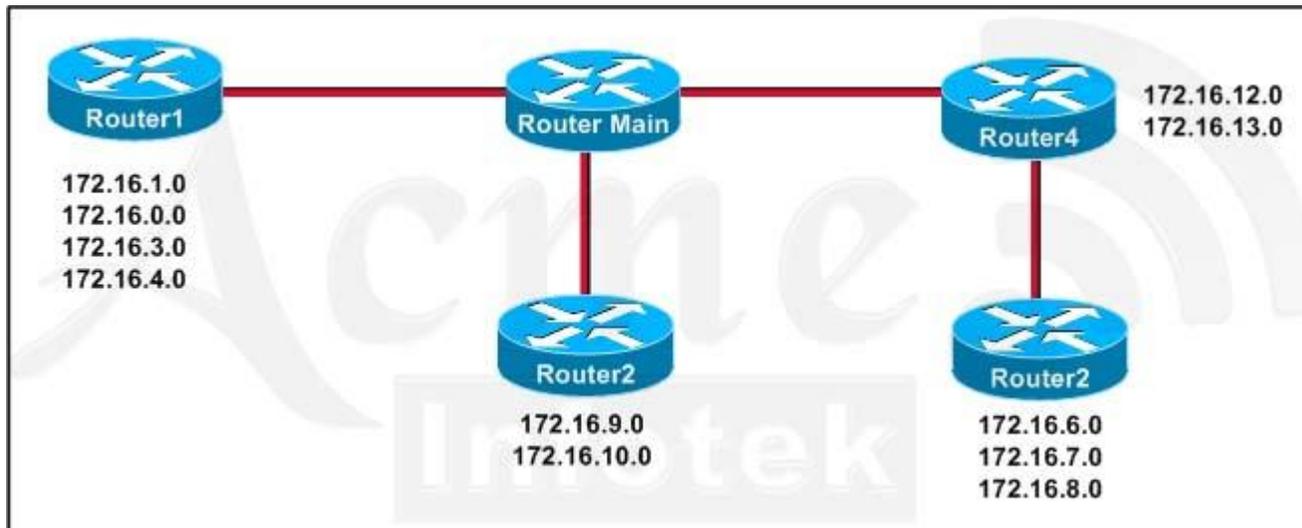
**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 46**

Which address range efficiently summarizes the routing table of the addresses for router main?



- A. 172.16.0.0/18
- B. 172.16.0.0/16
- C. 172.16.0.0/20

D. 172.16.0.0/21

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 47**

If IP routing is enabled, which two commands set the gateway of last resort to the default gateway? (Choose two.)

- A. ip default-gateway 0.0.0.0
- B. ip route 172.16.2.1 0.0.0.0 0.0.0.0
- C. ip default-network 0.0.0.0
- D. ip default-route 0.0.0.0 0.0.0.0 172.16.2.1
- E. ip route 0.0.0.0 0.0.0.0 172.16.2.1

**Correct Answer:** CE

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 48**

Which parameter would you tune to affect the selection of a static route as a backup, when a dynamic protocol is also being used?

- A. hop count
- B. administrative distance
- C. link bandwidth
- D. link delay
- E. link cost

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 49**

Which layer in the OSI reference model is responsible for determining the availability of the receiving program and checking to see if enough resources exist for that communication?

- A. transport
- B. network
- C. presentation
- D. session
- E. application

**Correct Answer:** E

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 50**

A network administrator is verifying the configuration of a newly installed host by establishing an FTP connection to a remote server. What is the highest layer of the protocol stack that the network administrator is using for this operation?

- A. application
- B. presentation
- C. session
- D. transport
- E. internet
- F. data link

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 51**

A network interface port has collision detection and carrier sensing enabled on a shared twisted pair network. From this statement, what is known about the network interface port?

- A. This is a 10 Mb/s switch port.
- B. This is a 100 Mb/s switch port.
- C. This is an Ethernet port operating at half duplex.
- D. This is an Ethernet port operating at full duplex.
- E. This is a port on a network interface card in a PC.

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 52**

A receiving host computes the checksum on a frame and determines that the frame is damaged. The frame is then discarded. At which OSI layer did this happen?

- A. session
- B. transport
- C. network
- D. data link
- E. physical

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 53**

An administrator must assign static IP addresses to the servers in a network. For network 192.168.20.24/29, the router is assigned the first usable host address while the sales server is given the last usable host address. Which of the following should be entered into the IP properties box for the sales server?

- A. IP address: 192.168.20.14  
Subnet Mask: 255.255.255.248  
Default Gateway: 192.168.20.9
- B. IP address: 192.168.20.254  
Subnet Mask: 255.255.255.0

Default Gateway: 192.168.20.1

- C. IP address: 192.168.20.30  
Subnet Mask: 255.255.255.248  
Default Gateway: 192.168.20.25
- D. IP address: 192.168.20.30  
Subnet Mask: 255.255.255.240  
Default Gateway: 192.168.20.17
- E. IP address: 192.168.20.30  
Subnet Mask: 255.255.255.240  
Default Gateway: 192.168.20.25

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 54**

Which subnet mask would be appropriate for a network address range to be subnetted for up to eight LANs, with each LAN containing 5 to 26 hosts?

- A. 0.0.0.240
- B. 255.255.255.252
- C. 255.255.255.0
- D. 255.255.255.224
- E. 255.255.255.240

**Correct Answer:** D

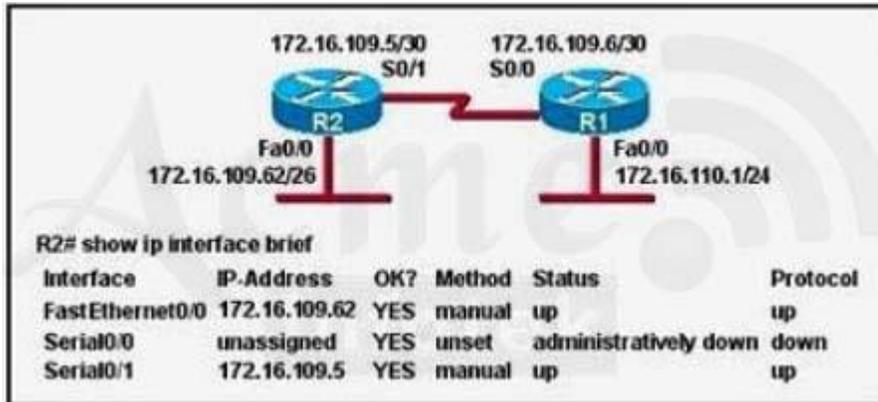
**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 55**

Refer to the Exhibit.



Assuming that the entire network topology is shown, what is the operational status of interfaces R2 as indicated by the command out put shown?

- A. One interface has a problem.
- B. Two interfaces have problems.
- C. The interfaces are functioning correctly.
- D. The operational status of the interfaces cannot be determined from the output shown.

**Correct Answer: C**

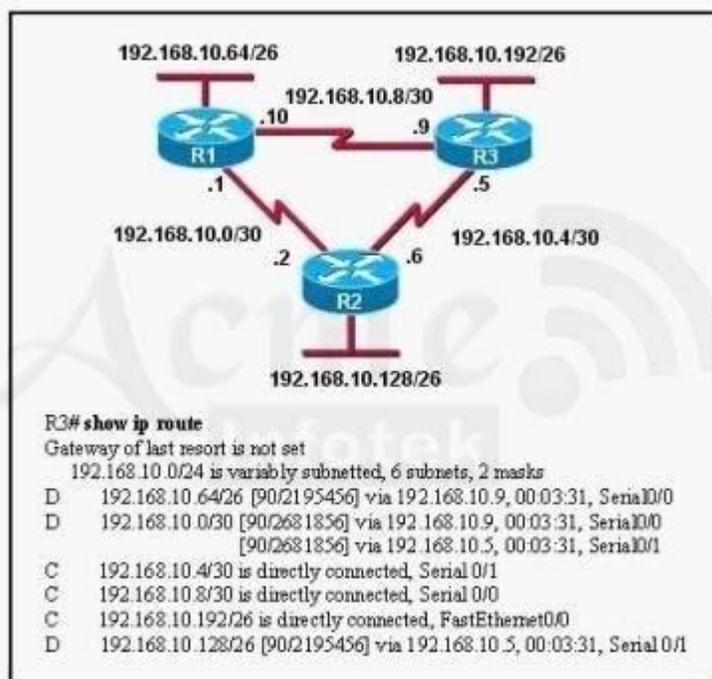
**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 56**

Refer to the exhibit.



Based on the exhibited routing table, how will packets from a host within the 192.168.10.192/26 LAN be forwarded to 192.168.10.1?

- A. The router will forward packets from R3 to R1.
- B. The router will forward packets from R3 to R2 to R1 AND from R3 to R1.
- C. The router will forward packets from R3 to R1 to R2.
- D. The router will forward packets from R3 to R2 to R1.

**Correct Answer:** B

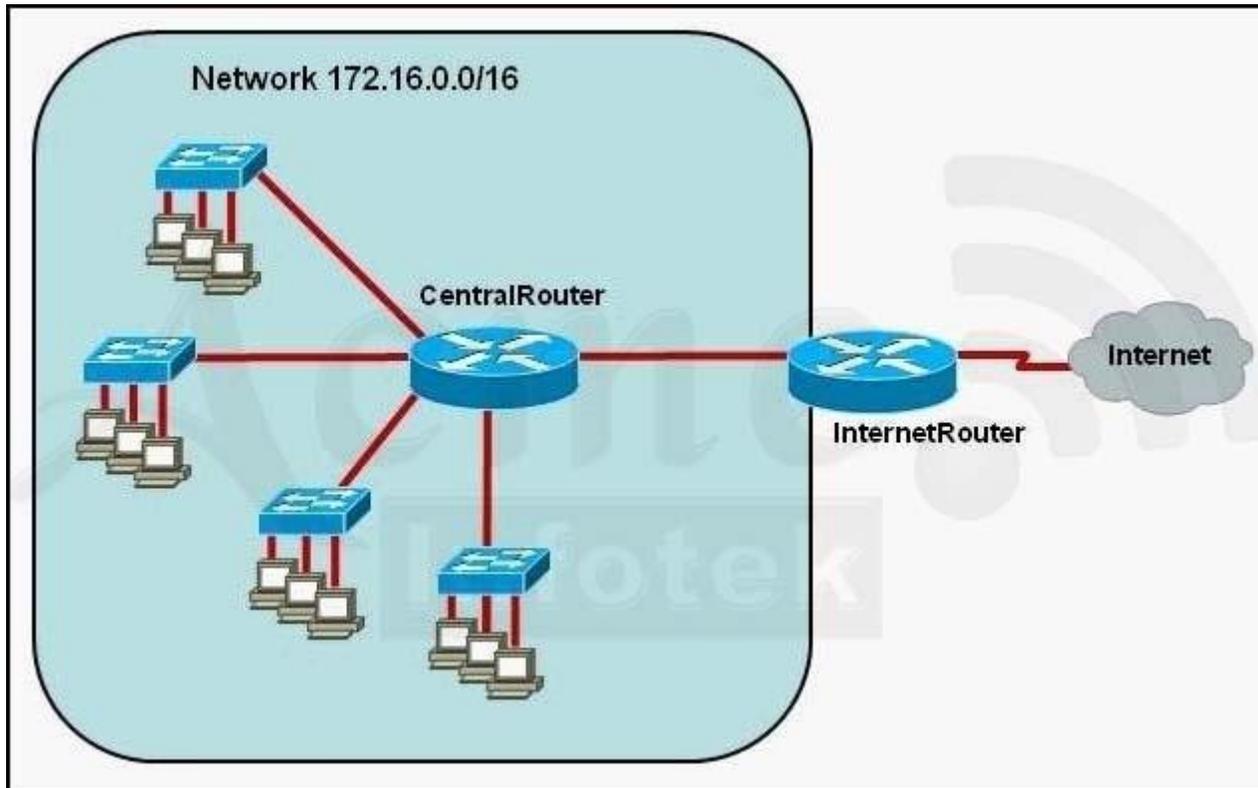
**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 57**

Refer to the exhibit.



The network administrator requires easy configuration options and minimal routing protocol traffic. What two options provide adequate routing table information for traffic that passes between the two routers and satisfy the requests of the network administrator? (Choose two)

- A. a dynamic routing protocol on InternetRouter to advertise all routes to CentralRouter.
- B. a dynamic routing protocol on InternetRouter to advertise summarized routes to CentralRouter.
- C. a static route on InternetRouter to direct traffic that is destined for 172.16.0.0/16 to CentralRouter.
- D. a dynamic routing protocol on CentralRouter to advertise all routes to InternetRouter.
- E. a dynamic routing protocol on CentralRouter to advertise summarized routes to InternetRouter.
- F. a static, default route on CentralRouter that directs traffic to InternetRouter.

**Correct Answer:** CF

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 58**

What is the effect of using the service password-encryption command?

- A. Only the enable password will be encrypted.
- B. It will encrypt all current and future passwords.
- C. It will encrypt the secret password and remove the enable secret password from the configuration.
- D. Only the enable secret password will be encrypted.
- E. Only passwords configured after the command has been entered will be encrypted.

**Correct Answer:** B

**Section:** (none)

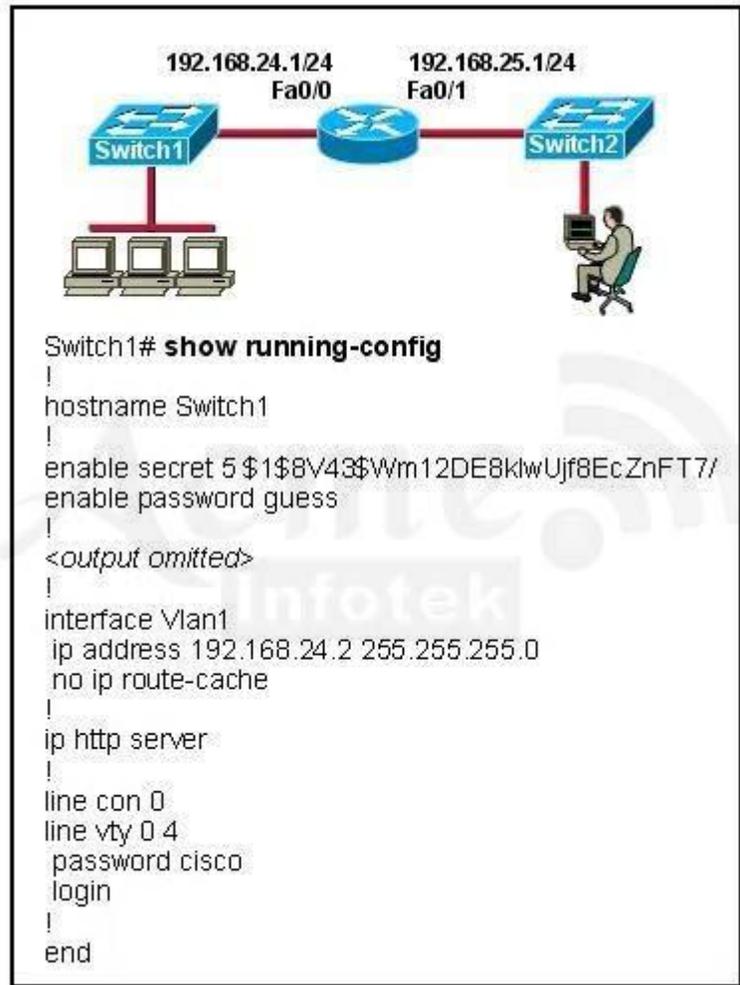
**Explanation**

**Explanation/Reference:**

Enable vty, console, AUX passwords are configured on the Cisco device. Use the show run command to show most passwords in clear text. If the service password-encryption is used, all the passwords are encrypted. As a result, the security of device access is improved.

**QUESTION 59**

Refer to the exhibit.



The network administrator cannot connect to Switch1 over a Telnet session, although the hosts attached to Switch1 can ping the interface Fa0/0 of the router.

Given the information in the graphic and assuming that the router and Switch2 are configured properly, which of the following commands should be issued on Switch1 to correct this problem?

- A. Switch1(config)# interface fa0/1  
Switch1(config-if)# ip address 192.168.24.3.255.255.255.0
- B. Switch1(config)# interface fa0/1

- Switch1(config-if)# switchport mode trunk
- C. Switch1(config)# interface fa0/1  
Switch1(config-if)# duplex full  
Switch1(config-if)# speed 100
  - D. Switch1(config)# ip default-gateway 192.168.24.1
  - E. Switch1(config)# line con0  
Switch1(config-line)# password cisco  
Switch1(config-line)# login

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

To route traffic to other vlans, we need to enter the IP address of the next-hop router interface that is directly connected to the switch where a default gateway is being configured.

The default gateway receives IP packets with unresolved destination IP addresses from the switch.

Once the default gateway is configured, the switch will have connectivity to the remote networks with which a host needs to communicate.

#### **QUESTION 60**

Which Layer 2 protocol encapsulation type supports synchronous and asynchronous circuits and has built-in security mechanisms?

- A. Frame Relay
- B. X.25
- C. PPP
- D. HDLC

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 61**

Which statement about access lists that are applied to an interface is true?

- A. You can configure one access list, per direction, per Layer 3 protocol
- B. You can apply multiple access lists with the same protocol or in different direction
- C. You can apply only one access list on any interface

D. You can plane as many access lists as you want on any interface

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 62

Which parameter CM parameters are used to calculate OSPF cost in Cisco routers?

- A. Bandwidth. Delay, and MTU
- B. Bandwidth. MTU. Reliability. Delay, and Load
- C. Bandwidth
- D. Bandwidth and Delay

**Correct Answer:** C

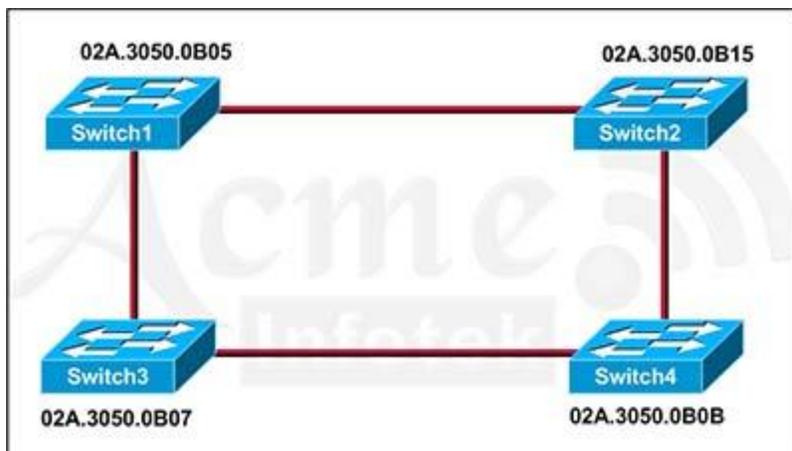
**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 63

Refer to the exhibit.



Four Cisco 2950 switches are set to their default priority settings. During the spanning-tree process, which switch will be elected as the root bridge?

- A. Switch4
- B. Switch2
- C. Switch1
- D. Switch3

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 64**

A network administrator needs to configure a serial link between the main office and a remote location. The router at the remote office is a non-Cisco router.

How should the network administrator configure the serial interface of the main office router to make the connection?

- A. Main(config)# interface serial 0/0  
Main(config-if)#ip address 172.16.1.1 255.255.255.252  
Main(config-if)#encapsulation ietf  
Main(config-if)# no shut
- B. Main(config)# interface serial 0/0  
Main(config-if)#ip address 172.16.1.1 255.255.255.252  
Main(config-if)# no shut
- C. Main(config)# interface serial 0/0  
Main(config-if)#ip address 172.16.1.1 255.255.255.252  
Main(config-if)#encapsulation PPP  
Main(config-if)# no shut
- D. Main(config)# interface serial 0/0  
Main(config-if)#ip address 172.16.1.1 255.255.255.252  
Main(config-if)#encapsulation frame-relay  
Main(config-if)# authentication chap  
Main(config-if)# no shut

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 65**

VLAN 3 is not yet configured on your switch. What happens if you set the switchport access vlan 3 command in interface configuration mode?

- A. The command is accepted and the respective VLAN is added to vlan.dat.
- B. The command is rejected.
- C. The command is accepted and you must configure the VLAN manually.
- D. The port turns amber.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 66**

A network engineer wants to allow a temporary entry for a remote user with a specific username and password so that the user can access the entire network over the Internet. Which ACL can be used?

- A. reflexive
- B. extended
- C. standard
- D. dynamic

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 67**

Which two privileged mode Cisco IOS commands can be used to determine a Cisco router chassis serial number? (Choose two.)

- A. show inventory
- B. show flash:fileys
- C. dir flash:|include chassis

- D. show diag
- E. show controllers

**Correct Answer:** AD

**Section:** (none)

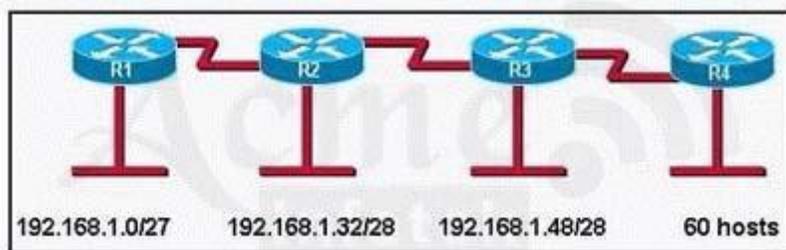
**Explanation**

**Explanation/Reference:**

### QUESTION 68

Refer to the exhibit. A new subnet with 60 hosts has been added to the network.

Which subnet address should this network use to provide enough usable addresses while wasting the fewest addresses?



- A. 192.168.1.56/27
- B. 192.168.1.64/26
- C. 192.168.1.64/27
- D. 192.168.1.56/26

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 69

Which of the following protocols uses both TCP and UDP ports?

- A. SMTP
- B. Telnet

- C. FTP
- D. DNS

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 70**

The network technician is planning to use the 255.255.255.224 subnet mask on the network. Which three valid IP addresses can the technician use for the hosts? (Choose three.)

- A. 172.22.243.127
- B. 172.22.243.191
- C. 172.22.243.190
- D. 10.16.33.98
- E. 10.17.64.34
- F. 192.168.1.160

**Correct Answer:** CDE

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 71**

Which IEEE standard protocol is initiated as a result of successful DTP completion in a switch over Fast Ethernet?

- A. 802.3ad
- B. 802.1w
- C. 802.1Q
- D. 802.1d

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 72**

Which command enhances the 802.1D convergence time on ports that are connected to hosts?

- A. spanning-tree backbonefast
- B. spanning-tree uplinkfast
- C. spanning-tree portfast
- D. spanning-tree cost512

**Correct Answer: C**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 73**

Which two statements are characteristics of a distance vector routing protocol? (Choose two)

- A. RIP is an example of distance vector routing protocols.
- B. Updates are periodic and include the entire routing table.
- C. Routing updates are sent only after topology changes
- D. The protocol can be useful in hub-and-spoke and hierarchical networks.
- E. Convergence is usually faster than with link state protocols
- F. Each router has its own view of the topology

**Correct Answer: AB**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 74**

Refer to the exhibit.

```
Core_Router# show ip ospf neighbor

Neighbor ID Pri State Dead Time Address Interface
208.149.23.194 1 FULL/DR 00:00:33 190.172.32.10 Ethernet1
208.149.23.66 1 FULL/BDR 00:00:32 190.171.23.13 Ethernet0
208.149.23.130 1 FULL/DR 00:00:39 190.171.23.10 Ethernet0

Core_Router#
```

Why are two OSPF designated routers identified on Core\_Router?

- A. Core\_Router is connected to more than one multiaccess network.
- B. The router at 208.149.23.130 is a secondary DR in case the primary fails.
- C. Two router IDs have the same OSPF priority and are therefore tied for DR election
- D. The DR election is still underway and there are two contenders for the role.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 75**

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. A protocol mismatch exists
- D. An incorrect cable is being used.
- E. There is an incorrect IP address on the Serial 0/0 interface.

**Correct Answer:** AD

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 76**

Before installing a new, upgraded version of the IOS, what should be checked on the router, and which command should be used to gather this information? (Choose two.)

- A. the amount of available ROM
- B. the amount of available flash and RAM memory
- C. the version of the bootstrap software present on the router
- D. show version
- E. show processes
- F. show running-config

**Correct Answer:** BD

**Section:** (none)

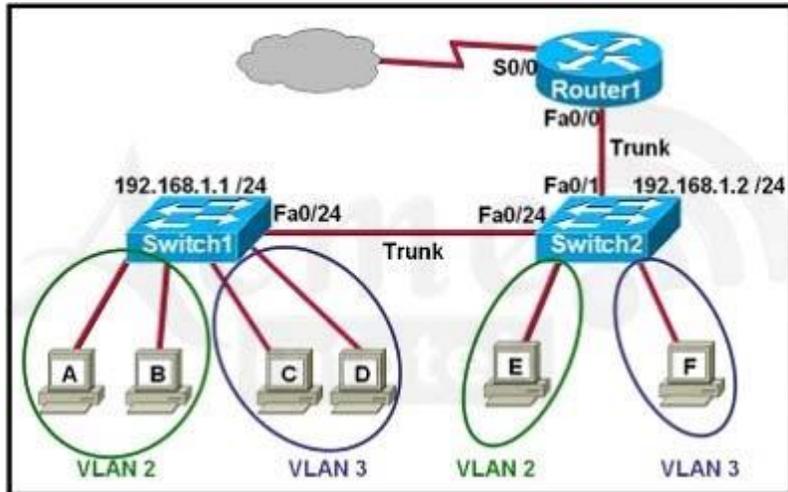
**Explanation**

**Explanation/Reference:**

#### **QUESTION 77**

Refer to the exhibit.

Which two statements are true about interVLAN routing in the topology that is shown in the exhibit? (Choose two.)



- A. Host E and host F use the same IP gateway address.
- B. Router1 and Switch2 should be connected via a crossover cable.
- C. Router1 will not play a role in communications between host A and host D.
- D. The FastEthernet 0/0 interface on Router1 must be configured with subinterfaces.
- E. Router1 needs more LAN interfaces to accommodate the VLANs that are shown in the exhibit.
- F. The FastEthernet 0/0 interface on Router1 and Switch2 trunk ports must be configured using the same encapsulation type.

**Correct Answer:** DF

**Section:** (none)

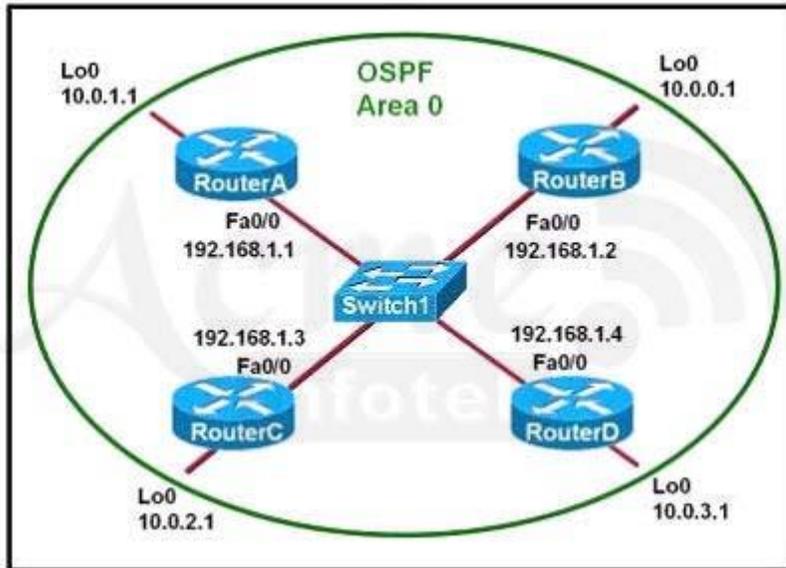
**Explanation**

**Explanation/Reference:**

### QUESTION 78

Refer to the exhibit.

Which two statements are true about the loopback address that is configured on RouterB? (Choose two.)



- A. It ensures that data will be forwarded by RouterB.
- B. It provides stability for the OSPF process on RouterB.
- C. It specifies that the router ID for RouterB should be 10.0.0.1.
- D. It decreases the metric for routes that are advertised from RouterB.
- E. It indicates that RouterB should be elected the DR for the LAN.

**Correct Answer:** BC

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 79

If you are a network administrator, how will you explain VTP configuration to a new technician? (Choose three.)

- A. In the VTP client mode, a switch is unable to update its local VLAN database.
- B. Configure a trunk link between the switches to forward VTP updates.
- C. In the VTP server mode, a switch is able to update a switch in the VTP transparent mode.
- D. In the VTP transparent mode, a switch will forward the received updates to other switches.

- E. A switch in the VTP server mode only updates switches in the VTP client mode that have a higher VTP revision number.
- F. A switch in the VTP server mode will update switches in the VTP client mode regardless of the configured VTP domain membership.

**Correct Answer:** ABD

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 80

Cisco IOS (originally Internetwork Operating System) is the software used on the vast majority of Cisco Systems routers and all current Cisco network switches.

Which two of the following devices could you configure as a source for the IOS image in the boot system command? (Choose two.)

- A. RAM
- B. NVRAM
- C. flash memory
- D. HTTP server
- E. TFTP server
- F. Telnet server

**Correct Answer:** CE

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 81

What are two reasons a network administrator would use CDP? (Choose two.)

- A. to obtain VLAN information from directly connected switches
- B. to determine the status of network services on a remote device
- C. to determine the status of the routing protocols between directly connected routers
- D. to verify the type of cable interconnecting two devices
- E. to verify Layer 2 connectivity between two devices when Layer 3 fails
- F. to obtain the IP address of a connected device in order to telnet to the device

**Correct Answer:** EF

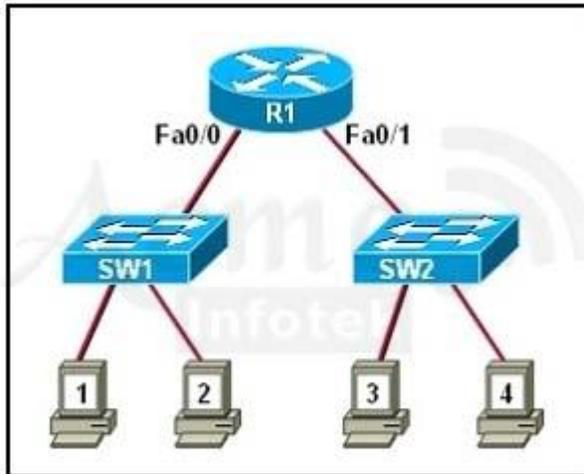
**Section: (none)**  
**Explanation**

**Explanation/Reference:**

**QUESTION 82**

Refer to the exhibit.

Both switches are using a default configuration. Which two destination addresses will host 4 use to send data to host 1? (Choose two.)



- A. the IP address of host 1
- B. the IP address of host 4
- C. the MAC address of host 1
- D. the MAC address of host 4
- E. the MAC address of the Fa0/0 interface of the R1 router
- F. the MAC address of the Fa0/1 interface of the R1 router

**Correct Answer: AF**

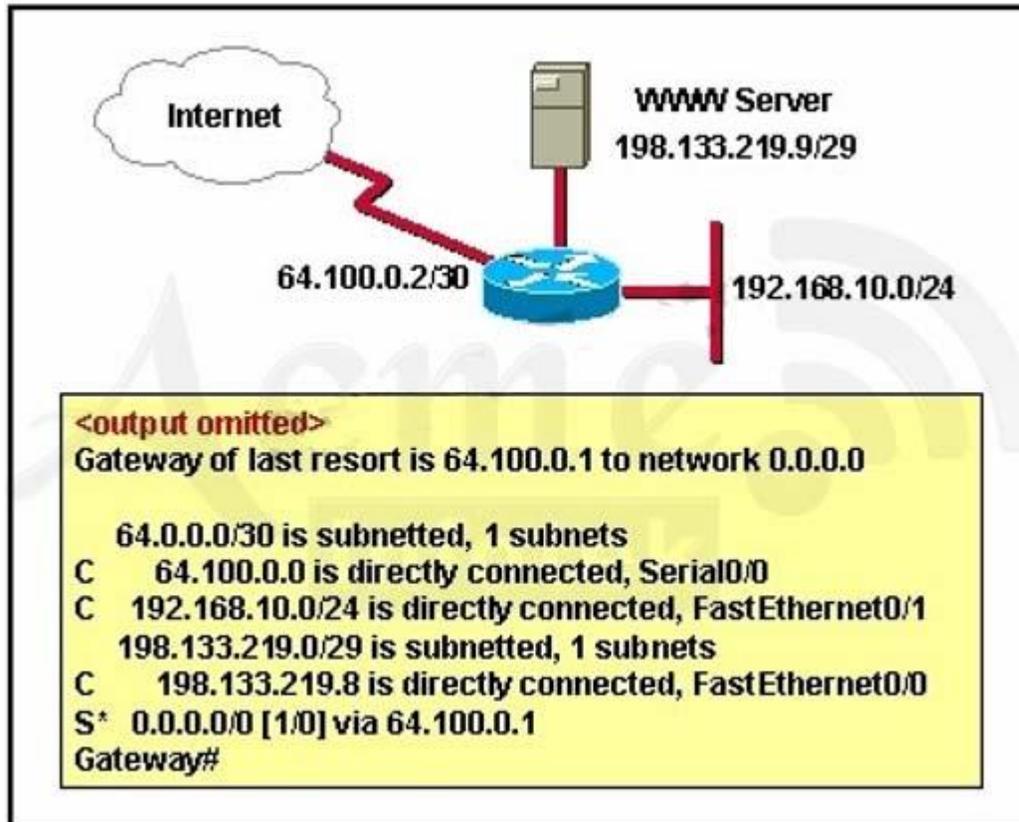
**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 83**

Exhibit:



Refer to the exhibit. The router has been configured with these commands:

```
hostname Gateway
interface FastEthernet 0/0
 ip address 198.133.219.14 255.255.255.248
 no shutdown
interface FastEthernet 0/1
 ip address 192.168.10.254 255.255.255.0
 no shutdown
interface Serial 0/0
 ip address 64.100.0.2 255.255.255.252
```

```
no shutdown
ip route 0.0.0.0 0.0.0.0 64.100.0.1
```

What are the two results of this configuration? (Choose two.)

- A. The default route should have a next hop address of 64.100.0.3.
- B. Hosts on the LAN that is connected to FastEthernet 0/1 are using public IP addressing.
- C. The address of the subnet segment with the WWW server will support seven more servers.
- D. The addressing scheme allows users on the Internet to access the WWW server.
- E. Hosts on the LAN that is connected to FastEthernet 0/1 will not be able to access the Internet without address translation.

**Correct Answer:** DE

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Since the hosts on the Fast Ethernet 0/1 network are using private RFC 1918 IP addressing (192.168.10.0/24) their IP addresses will need to be translated into a publicly routable address in order to access the Internet.

However, the server is using the 198.133.219.9 IP address, which is publicly routable and so Internet users can indeed access this server (assuming that the 198.133.219.9 IP address has been correctly assigned to the network)

#### **QUESTION 84**

Your Company has installed IP phones. Both the phones and the office computers connect to the same device.

The phone traffic and the office computer data traffic must be on different networks to ensure maximum throughput for the phone data.

Which network device can be best connected to the phones and computers, and which technology will be performed on this device? (Choose two.)

- A. hub
- B. router
- C. switch
- D. stp
- E. subinterfaces
- F. VLAN

**Correct Answer:** CF

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 85**

Which two addresses can be assigned to a host with a subnet mask of 255.255.254.0? (Choose two.)

- A. 113.10.4.0
- B. 186.54.3.0
- C. 175.33.3.255
- D. 26.35.2.255
- E. 17.35.36.0

**Correct Answer:** BD

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 86**

The network administrator has asked you to check the status of the workstation's IP stack by pinging the loopback address. Which address would you ping to perform this task?

- A. 10.1.1.1
- B. 127.0.0.1
- C. 192.168.0.1
- D. 239.1.1.1

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 87**

Workstation A has been assigned an IP address of 192.0.2.24/28. Workstation B has been assigned an IP address of 192.0.2.100/28. The two workstations are connected with a straight-through cable. Attempts to ping between the hosts are unsuccessful. What are two things that could be attempted that would allow communications between the hosts? (Choose two.)

- A. Replace the straight-through cable with a crossover cable.
- B. Change the subnet mask of the hosts to /25.

- C. Change the subnet mask of the hosts to /26.
- D. Change the address of Workstation A to 192.0.2.15.
- E. Change the address of Workstation B to 192.0.2.111.

**Correct Answer:** AB

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 88**

Your ISP has given you the address 223.5.14.6/29 to assign to your router's interface. They have also given you the default gateway address of 223.5.14.7.

After you have configured the address, the router is unable to ping any remote devices. What is preventing the router from pinging remote devices?

- A. The default gateway is not an address on this subnet.
- B. The default gateway is the broadcast address for this subnet.
- C. The IP address is the broadcast address for this subnet.
- D. The IP address is an invalid class D multicast address.

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 89**

Which command is used to copy the configuration from RAM into NVRAM?

- A. copy running-config startup-config
- B. copy startup config running config
- C. copy startup-config running-config
- D. copy running config startup config
- E. write terminal

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 90**

Which command is used to load a configuration from a TFTP server and merge the configuration into RAM?

- A. copy running-config: TFTP:
- B. copy TFTP: running-config
- C. copy TFTP: startup-config
- D. copy startup-config: TFTP:

**Correct Answer: B**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 91**

A system administrator types the command to change the hostname of a router. Where on the Cisco IFS is that change stored?

- A. NVRAM
- B. RAM
- C. FLASH
- D. ROM
- E. PCMCIA

**Correct Answer: B**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 92**

Which command is used to configure a default route?

- A. ip route 172.16.1.0 255.255.255.0 0.0.0.0
- B. ip route 172.16.1.0 255.255.255.0 172.16.2.1

- C. ip route 0.0.0.0 255.255.255.0 172.16.2.1
- D. ip route 0.0.0.0 0.0.0.0 172.16.2.1

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 93

If IP routing is enabled, which two commands set the gateway of last resort to the default gateway? (Choose two.)

- A. ip default-gateway 0.0.0.0
- B. ip route 172.16.2.1 0.0.0.0 0.0.0.0
- C. ip default-network 0.0.0.0
- D. ip default-route 0.0.0.0 0.0.0.0 172.16.2.1
- E. ip route 0.0.0.0 0.0.0.0 172.16.2.1

**Correct Answer:** CE

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 94

Which command can enable CDP globally on the router and show the information about directly connected Cisco devices?

- A. enable cdp
- B. cdp enable
- C. cdp run
- D. run cdp

**Correct Answer:** C

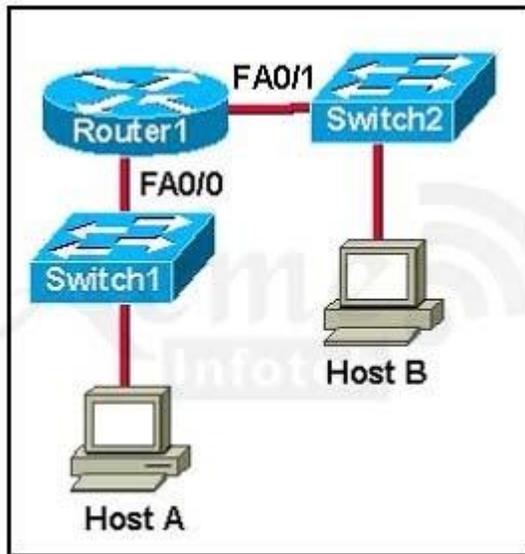
**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 95**

Refer to the exhibit. Which destination addresses will Host A use to send data to Host B? (Choose two.)



- A. the IP address of Switch1
- B. the IP address of Router1 Fa0/0
- C. the IP address of HostB
- D. the MAC address of Switch1
- E. the MAC address of Router1 Fa0/0
- F. the MAC address of HostB

**Correct Answer:** CE

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 96**

The network security policy requires that only one host be permitted to attach dynamically to each switch interface. If that policy is violated, the interface should shut down.

Which two commands must the network administrator configure on the 2950 Catalyst switch to meet this policy? (Choose two.)

- A. Switch1(config-if)# switchport port-security violation shutdown
- B. Switch1(config)# mac-address-table secure
- C. Switch1(config-if)# switchport port-security maximum 1
- D. Switch1(config)# access-list 10 permit ip host
- E. Switch1(config-if)# ip access-group 10

**Correct Answer:** AC

**Section:** (none)

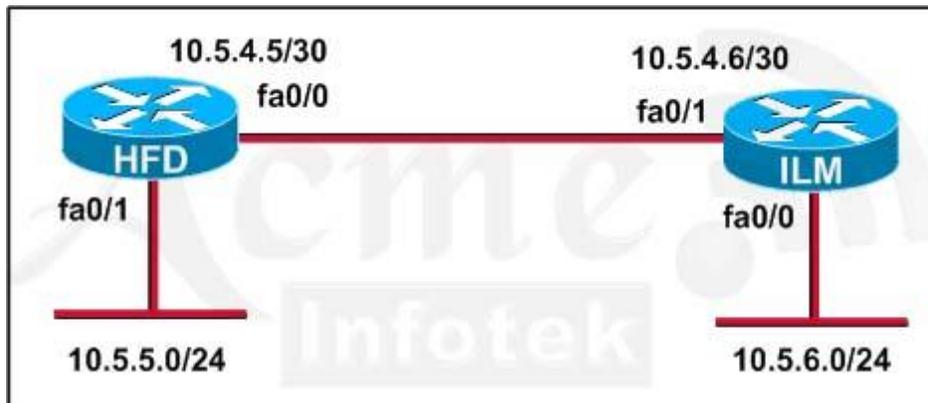
**Explanation**

**Explanation/Reference:**

**QUESTION 97**

Refer to the graphic.

A static route to the 10.5.6.0/24 network is to be configured on the HFD router. Which commands will accomplish this? (Choose two.)



- A. HFD(config)# ip route 10.5.6.0 0.0.0.255 fa0/0
- B. HFD(config)# ip route 10.5.6.0 0.0.0.255 10.5.4.6
- C. HFD(config)# ip route 10.5.6.0 255.255.255.0 fa0/0
- D. HFD(config)# ip route 10.5.6.0 255.255.255.0 10.5.4.6
- E. HFD(config)# ip route 10.5.4.6 0.0.0.255 10.5.6.0
- F. HFD(config)# ip route 10.5.4.6 255.255.255.0 10.5.6.0

**Correct Answer:** CD

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 98**

What should be done prior to backing up an IOS image to a TFTP server? (Choose three.)

- A. Make sure that the server can be reached across the network.
- B. Check that authentication for TFTP access to the server is set.
- C. Assure that the network server has adequate space for the IOS image.
- D. Verify file naming and path requirements.
- E. Make sure that the server can store binary files.
- F. Adjust the TCP window size to speed up the transfer.

**Correct Answer:** ACD

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 99**

Which are valid modes for a switch port used as a VLAN trunk? (Choose three.)

- A. transparent
- B. auto
- C. on
- D. desirable
- E. client
- F. forwarding

**Correct Answer:** BCD

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 100**

The network 172.25.0.0 has been divided into eight equal subnets.

Which of the following IP addresses can be assigned to hosts in the third subnet if the ip subnet-zero command is configured on the router? (Choose three.)

- A. 172.25.78.243
- B. 172.25.98.16
- C. 172.25.72.0
- D. 172.25.94.255
- E. 172.25.96.17
- F. 172.25.100.16

**Correct Answer:** ACD

**Section:** (none)

**Explanation**

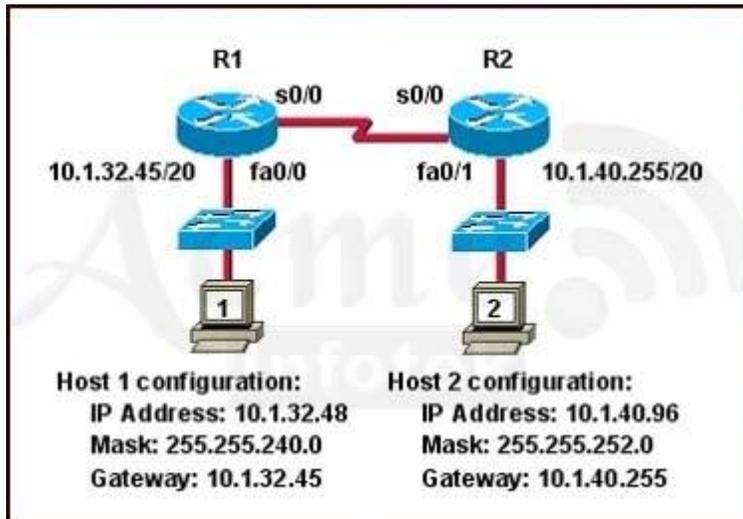
**Explanation/Reference:**

## Exam

### QUESTION 1

Refer to the graphic. Host 1 cannot receive packets from Host 2.

Assuming that RIP v1 is the routing protocol in use, what is wrong with the IP configuration information shown? (Choose two.)



- A. The fa0/1 interface of router R2 has been assigned a broadcast address.
- B. The fa0/1 network on router R2 overlaps with the LAN attached to R1.
- C. Host 2 has been assigned the incorrect subnet mask.
- D. Host 1 has been configured with the 255.255.248.0 subnet mask.
- E. Host 2 on router R2 is on a different subnet than its gateway.

**Correct Answer:** BC

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 2

What are three valid reasons to assign ports to VLANs on a switch? (Choose three.)

- A. to make VTP easier to implement

- B. to isolate broadcast traffic
- C. to increase the size of the collision domain
- D. to allow more devices to connect to the network
- E. to logically group hosts according to function
- F. to increase network security

**Correct Answer:** BEF

**Section:** (none)

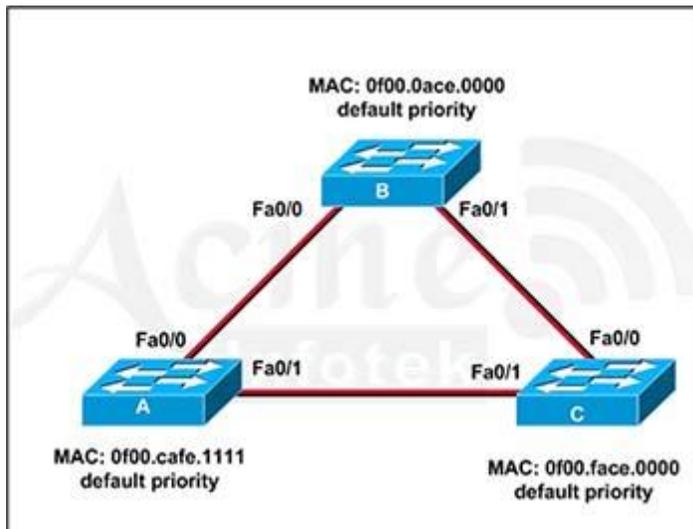
**Explanation**

**Explanation/Reference:**

### QUESTION 3

Refer to the topology shown in the exhibit.

Which ports will be STP designated ports if all the links are operating at the same bandwidth? (Choose three.)



- A. Switch A - Fa0/0
- B. Switch A - Fa0/1
- C. Switch B - Fa0/0
- D. Switch B - Fa0/1
- E. Switch C - Fa0/0

F. Switch C - Fa0/1

**Correct Answer:** BCD

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 4**

Which statements describe two of the benefits of VLAN Trunking Protocol? (Choose two.)

- A. VTP allows routing between VLANs.
- B. VTP allows a single switch port to carry information to more than one VLAN.
- C. VTP allows physically redundant links while preventing switching loops.
- D. VTP simplifies switch administration by allowing switches to automatically share VLAN configuration information.
- E. VTP helps to limit configuration errors by keeping VLAN naming consistent across the VTP domain.
- F. VTP enhances security by preventing unauthorized hosts from connecting to the VTP domain.

**Correct Answer:** DE

**Section:** (none)

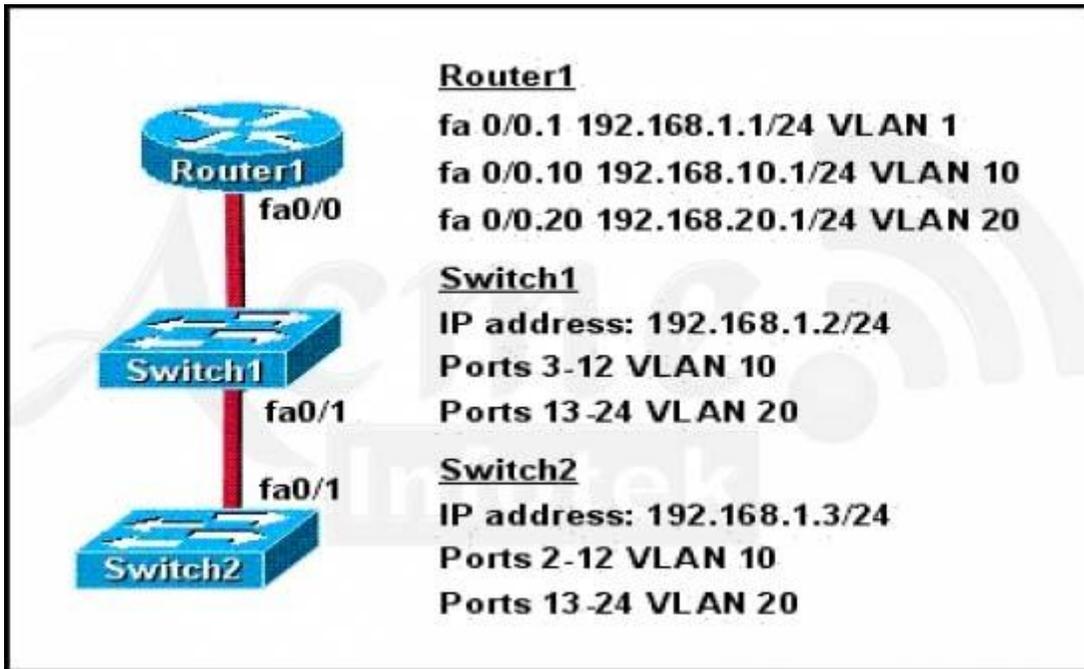
**Explanation**

**Explanation/Reference:**

#### **QUESTION 5**

Refer to the exhibit.

How should the FastEthernet0/1 ports on the 2950 model switches that are shown in the exhibit be configured to allow connectivity between all devices?



- A. The ports only need to be connected by a crossover cable.
- B. SwitchX(config)# interface fastethernet 0/1  
 SwitchX(config-if)# switchport mode trunk
- C. SwitchX(config)# interface fastethernet 0/1  
 SwitchX(config-if)#switchport mode access  
 SwitchX(config-if)#switchport access vlan 1
- D. SwitchX(config)#interface fastethernet 0/1  
 SwitchX(config-if)#switchport mode trunk  
 SwitchX(config-if)#switchport trunk vlan 1  
 SwitchX(config-if)#switchport trunk vlan 10  
 SwitchX(config-if)#switchport trunk vlan 20

**Correct Answer:** B

**Section:** (none)

**Explanation**

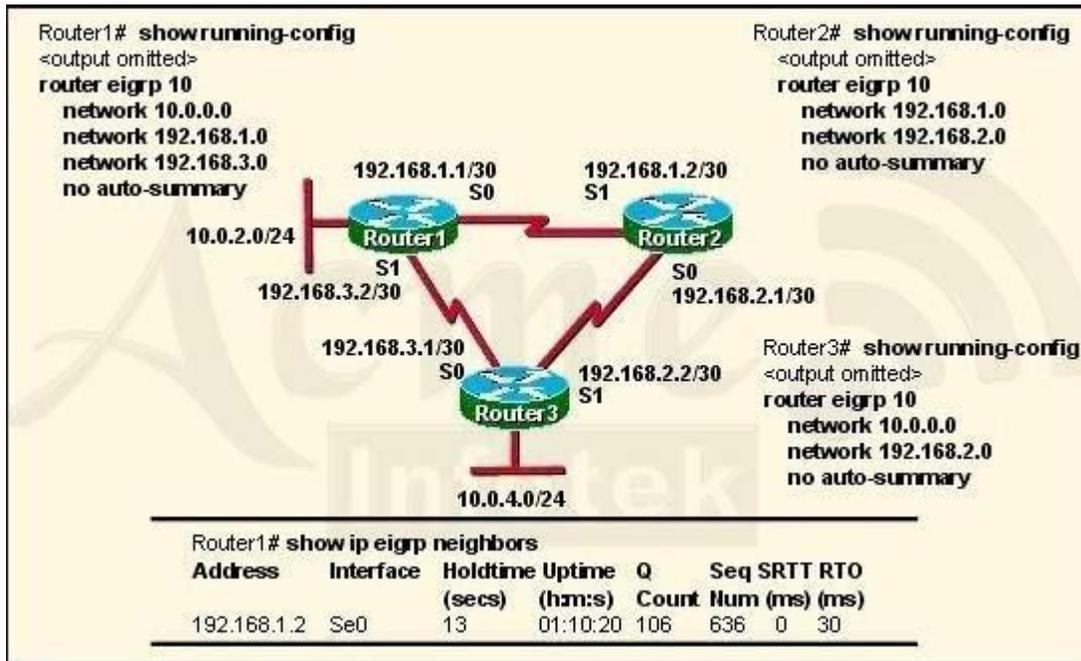
**Explanation/Reference:**

### QUESTION 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?



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

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 7

Refer to the exhibit.

After SwitchB was added to the network, VLAN connectivity problems started to occur. What caused this problem?

```
SwitchA# show vtp status
VTP Version : 2
Configuration Revision : 1
Maximum VLANs supported locally : 64
Number of existing VLANs : 8
VTP Operation Mode : Server
VTP Domain Name : cisco
VTP Pruning Mode : Disabled
VTP V2 Mode : Disabled

SwitchB# show vtp status
VTP Version : 2
Configuration Revision : 7
Maximum VLANs supported locally : 64
Number of existing VLANs : 4
VTP Operation Mode : Server
VTP Domain Name : cisco
VTP Pruning Mode : Disabled
VTP V2 Mode : Disabled
```

- A. Both switches are in server mode in the same domain.
- B. The revision number of SwitchB was higher than the revision number of SwitchA.
- C. SwitchA was not rebooted prior to adding SwitchB to the network.
- D. V2-mode is not enabled.
- E. VTP pruning is not activated, so the new paths in the network have not been recalculated.

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 8

Refer to the exhibit.

The output that is shown is generated at a switch. Which three of these statements are true? (Choose three.)

```
Switch# show spanning-tree vlan 30
VLAN0030
Spanning tree enabled protocol rstp
Root ID Priority 24606
Address 00d0.047b.2800
This bridge is the root
Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec
Bridge ID Priority 24606 (priority 24576 sys-id-ext 30)
Address 00d0.047b.2800
Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec
Aging Time 300
Interface Role Sts Cost Prio.Nbr Type

Fa1/1 Desg FWD 4 128.1 p2p
Fa1/2 Desg FWD 4 128.2 p2p
Fa5/1 Desg FWD 4 128.257 p2p
```

- A. All ports will be in a state of discarding, learning, or forwarding.
- B. Thirty VLANs have been configured on this switch.
- C. The bridge priority is lower than the default value for spanning tree.
- D. All interfaces that are shown are on shared media.
- E. All designated ports are in a forwarding state.
- F. This switch must be the root bridge for all VLANs on this switch.

**Correct Answer:** CEF

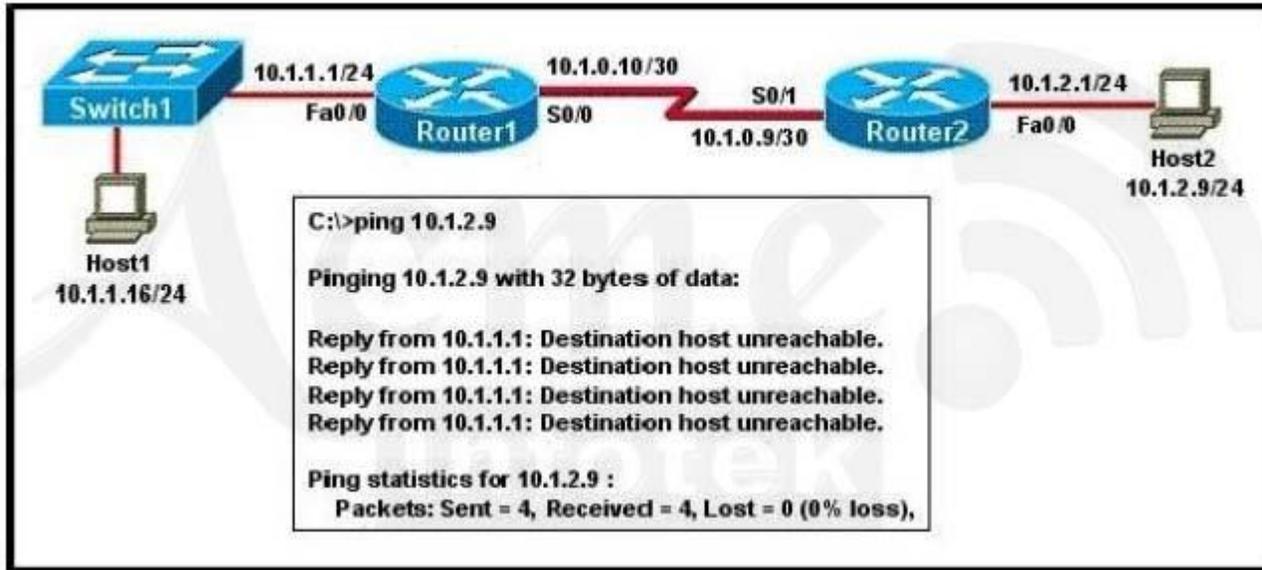
**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 9

Refer to the exhibit:



A network administrator attempts to ping Host2 from Host1 and receives the result that are shown. What is a possible problem?

- A. The link between Host1 and Switch1 is down.
- B. TCP/IP is not functioning on Host1.
- C. The link between Router1 and Router2 is down.
- D. The default gateway on Host1 is incorrect.
- E. Interface Fa0/0 on Router1 is shutdown.
- F. The link between Switch1 and Router1 is down.

**Correct Answer:** C

**Section:** (none)

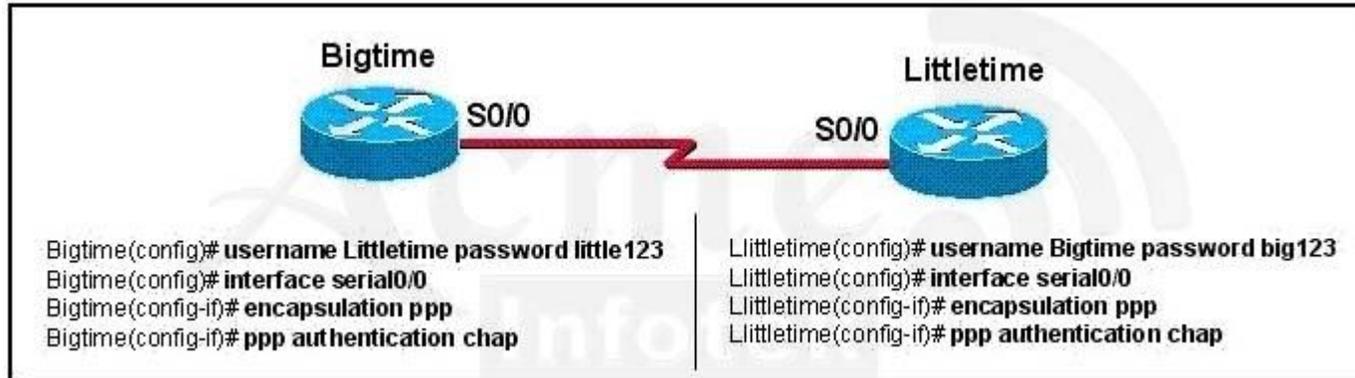
**Explanation**

**Explanation/Reference:**

#### QUESTION 10

Refer to the exhibit.

The Bigtime router is unable to authenticate to the Littletime router. What is the cause of the problem?



- A. The usernames are incorrectly configured on the two routers.
- B. The passwords do not match on the two routers.
- C. CHAP authentication cannot be used on a serial interface.
- D. The routers cannot be connected from interface S0/0 to interface S0/0.
- E. With CHAP authentication, one router must authenticate to another router. The routers cannot be configured to authenticate to each other.

**Correct Answer:** B

**Section:** (none)

**Explanation**

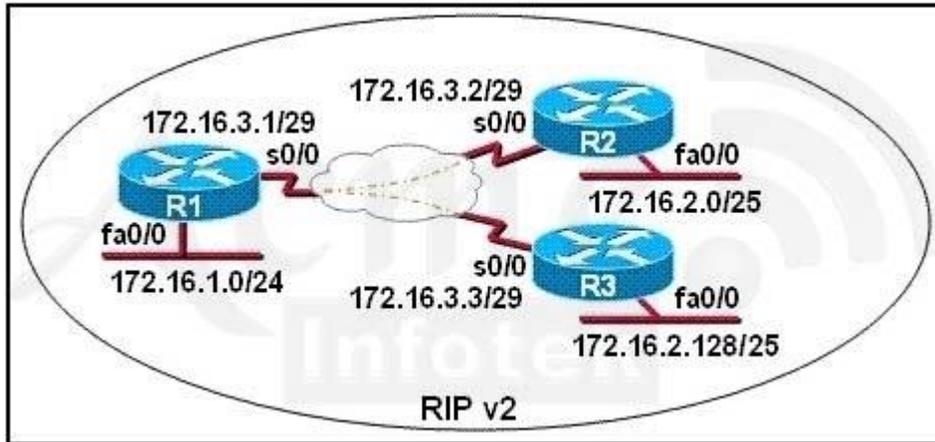
**Explanation/Reference:**

#### QUESTION 11

S0/0 on R1 is configured as a multipoint interface to communicate with R2 and R3 in the hub-and-spoke Frame Relay topology shown in the exhibit.

Originally, static routes were configured between these routers to successfully route traffic between the attached networks.

What will need to be done in order to use RIP v2 in place of the static routes?



- Configure the `no ip subnet-zero` command on R1, R2, and R3.
- Dynamic routing protocols such as RIP v2 cannot be used across Frame Relay networks.
- Configure the s0/0 interface on R1 as two subinterfaces and configure point-to-point links to R2 and R3.
- Change the 172.16.2.0/25 and 172.16.2.128/25 subnetworks so that at least two bits are borrowed from the last octet.
- Change the network address configurations to eliminate the discontinuous 172.16.2.0/25 and 172.16.2.128/25 subnetworks.

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 12

Refer to the exhibit. A router interface is being configured for Frame Relay.

However, as the exhibit shows, the router will not accept the command to configure the LMI type. What is the problem?

```
Router(config)# interface serial 0/0
Router(config-if)# frame-relay lmi-type cisco

% Unrecognized command
Router(config-if)# frame-relay ?
% Unrecognized command
```

- A. The interface does not support Frame Relay connections.
- B. The interface does not have an IP address assigned to it yet.
- C. The interface requires that the no shutdown command be configured first.
- D. The interface requires that the encapsulation frame-relay command be configured first.

**Correct Answer:** D

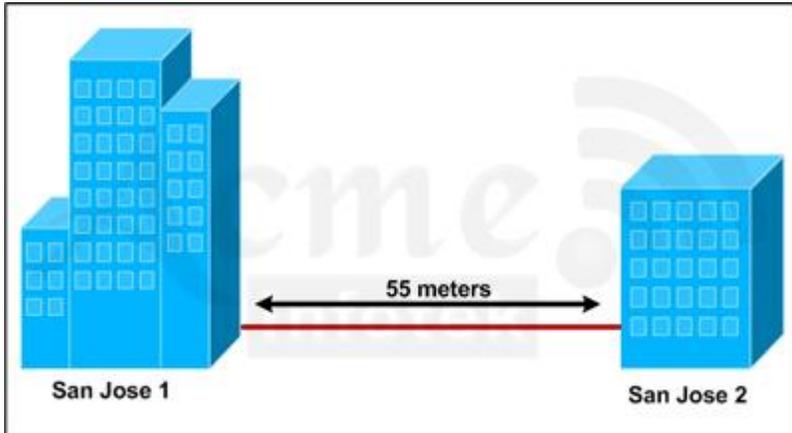
**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 13

Refer to the exhibit. Two buildings on the San Jose campus of a small company must be connected to use Ethernet with a bandwidth of at least 100 Mbps. The company is concerned about possible problems from voltage potential difference between the two buildings. Which media type should be used for the connection?



- A. UTP cable
- B. STP cable
- C. Coaxial cable
- D. Fiber optic cable

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 14**

Users have been complaining that their Frame Relay connection to the corporate site is very slow. The network administrator suspects that the link is overloaded. Based on the partial output of the

**Router# show frame relay pvc**

command shown in the graphic, which output value indicates to the local router that traffic sent to the corporate site is experiencing congestion?

PVC Statistics for interface Serial0 (Frame Relay DTE)

	Active	Inactive	Deleted	Static
Local	1	0	0	0
Switched	0	0	0	0
Unused	0	0	0	0

DLCI=100, DLCI USAGE=LOCAL, PVC STATUS=ACTIVE, INTERFACE=Serial0

input pkts 1300                      output pkts 1270                      in bytes 22121000  
out bytes 21802000                      dropped pkts 4                      out FECN pkts 147  
in BECN pkts 192                      out FECN pkts 259                      out BECN pkts 214  
in DE pkts 0                      out DE pkts 0  
out bcast pkts 1007                      out bcast bytes 19722  
Pvc create time 00:25:50, last time pvc status changed 00:25:40

- A. DLCI = 100
- B. last time PVC status changed 00:25:40
- C. in BECN packets 192
- D. in FECN packets 147
- E. in DE packets 0

**Correct Answer:** C

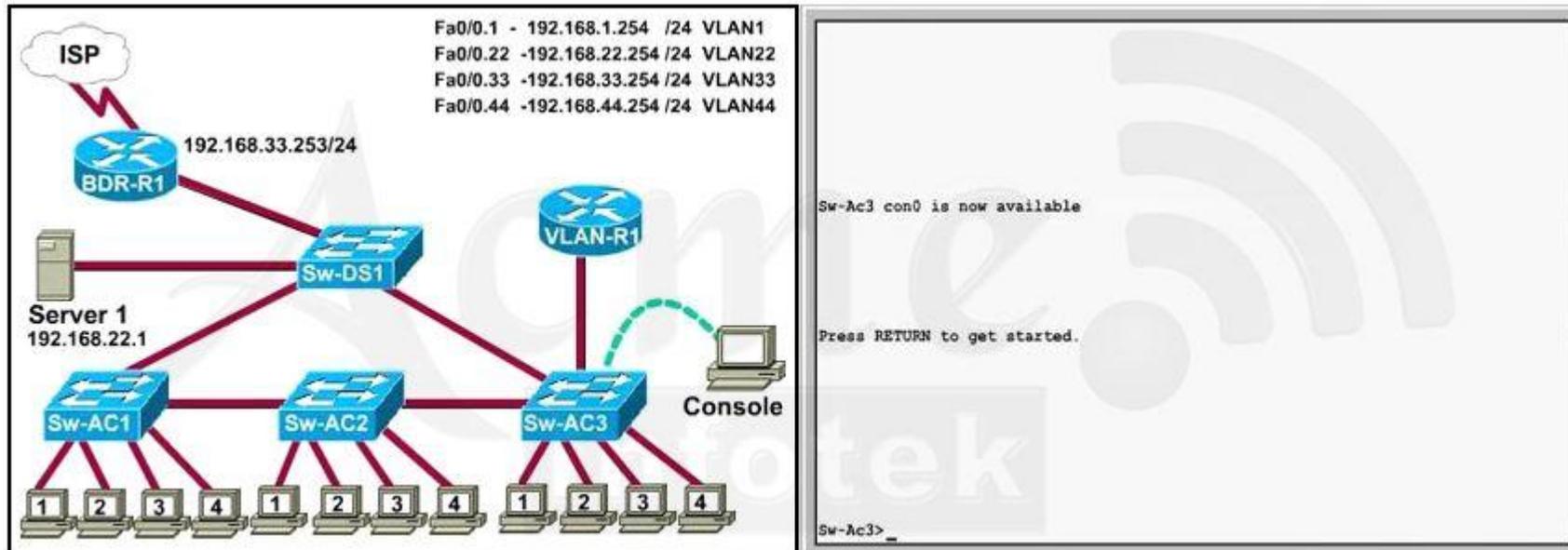
**Section:** (none)

**Explanation**

**Explanation/Reference:**

Exam

QUESTION 1



- 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 interface does Sw-AC3 associate with MAC address 0010.5a0c.ffba?**

- A. Fa0/1
- B. Fa0/3
- C. Fa0/6
- D. Fa0/8
- E. Fa0/9
- F. Fa0/12

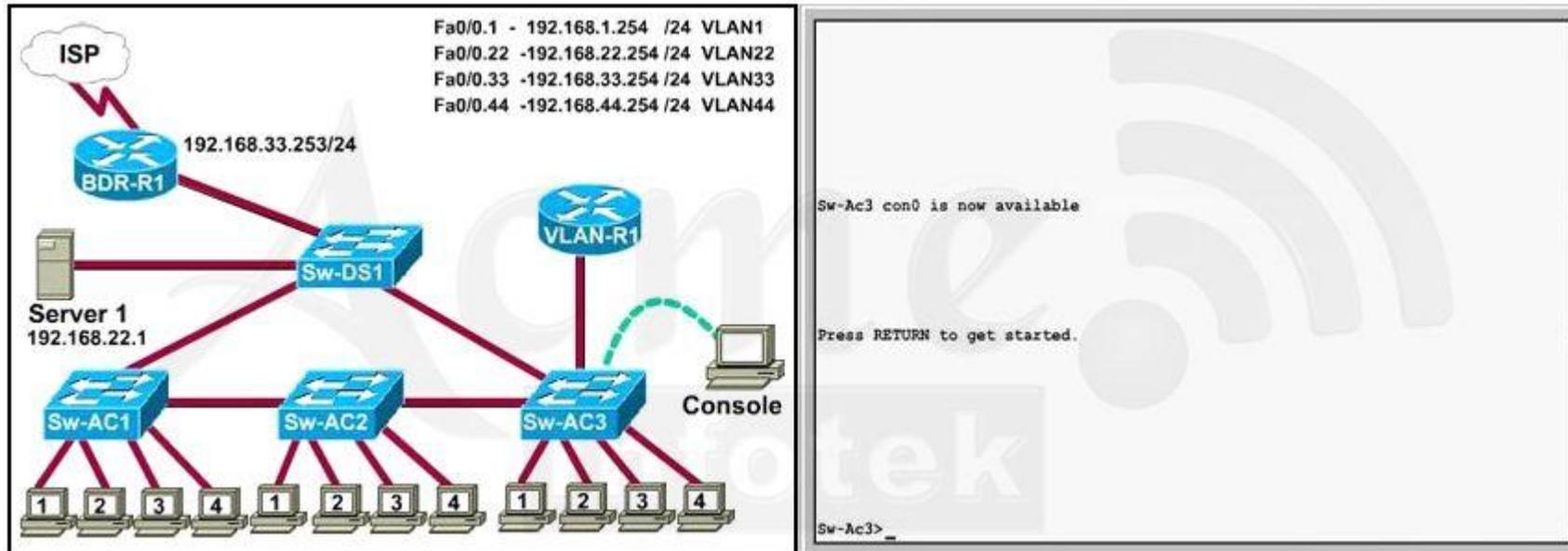
**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 2**



- 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.

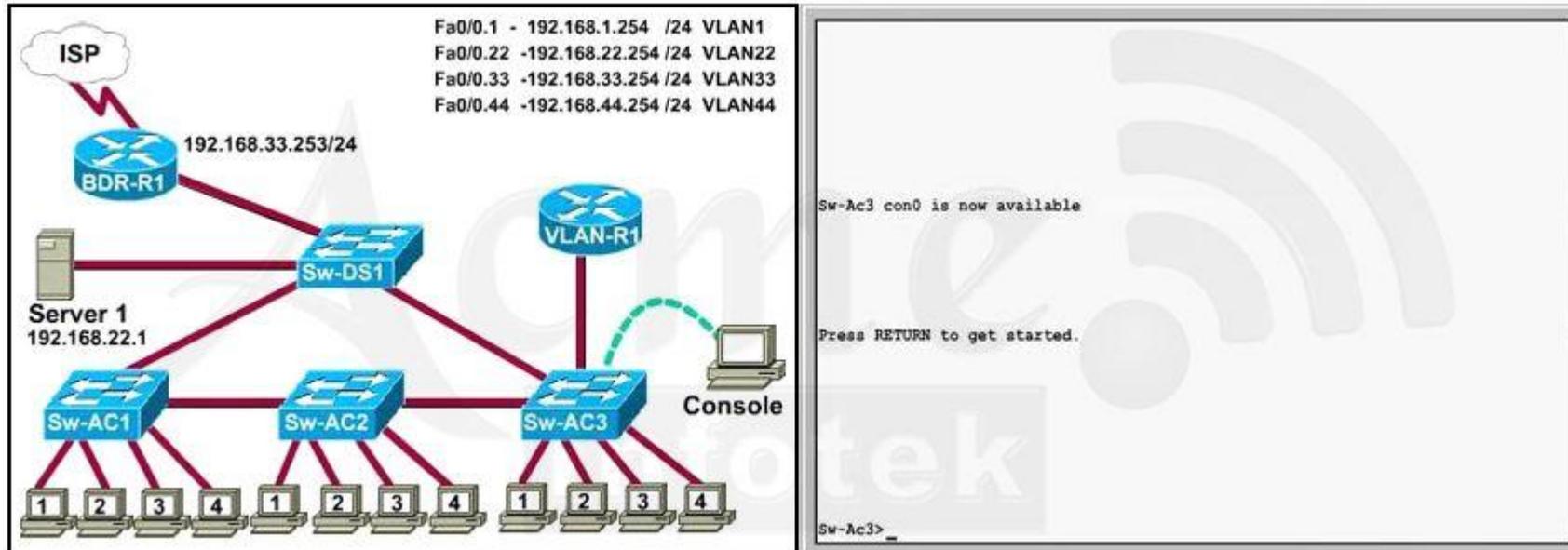
**What ports on Sw-AC3 are operating as trunks? (choose three.)**

- A. Fa0/1
- B. Fa0/3
- C. Fa0/4
- D. Fa0/6
- E. Fa0/9
- F. Fa0/12

Correct Answer: BEF  
 Section: (none)  
 Explanation

Explanation/Reference:

### QUESTION 3



- 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.

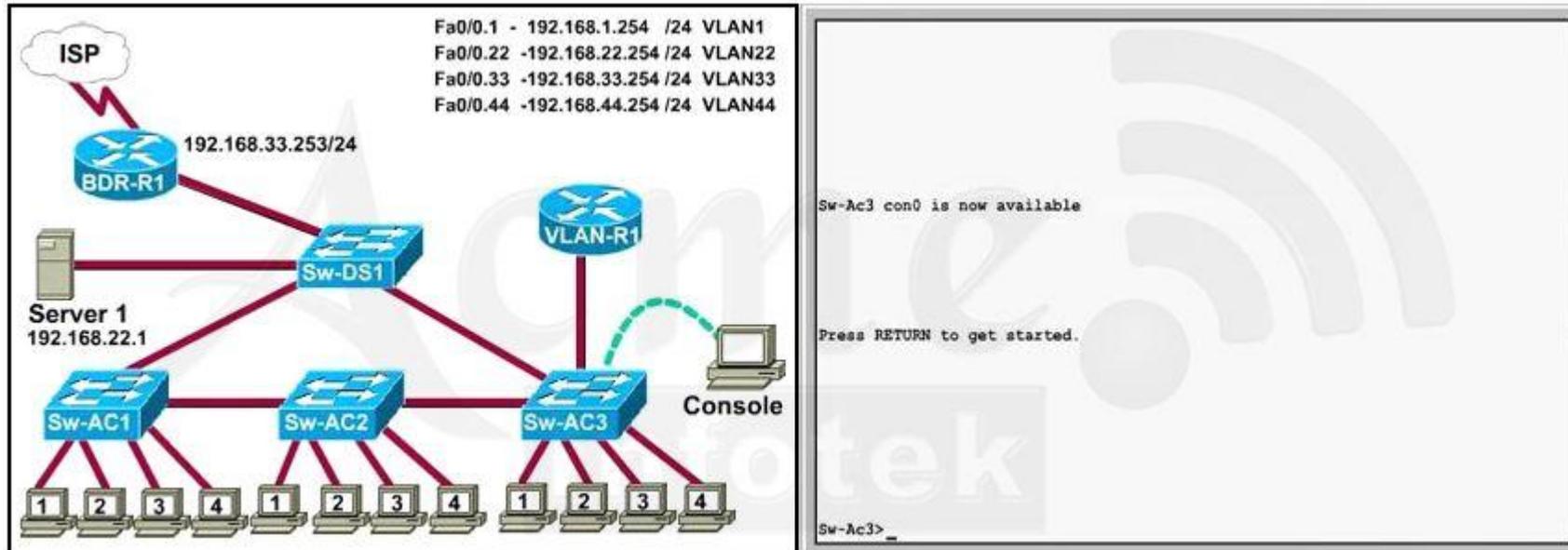
What kind of router is VLAN-R1?

- A. 1720
- B. 1841
- C. 2611
- D. 2620

Correct Answer: D  
 Section: (none)  
 Explanation

Explanation/Reference:

QUESTION 4



- 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.

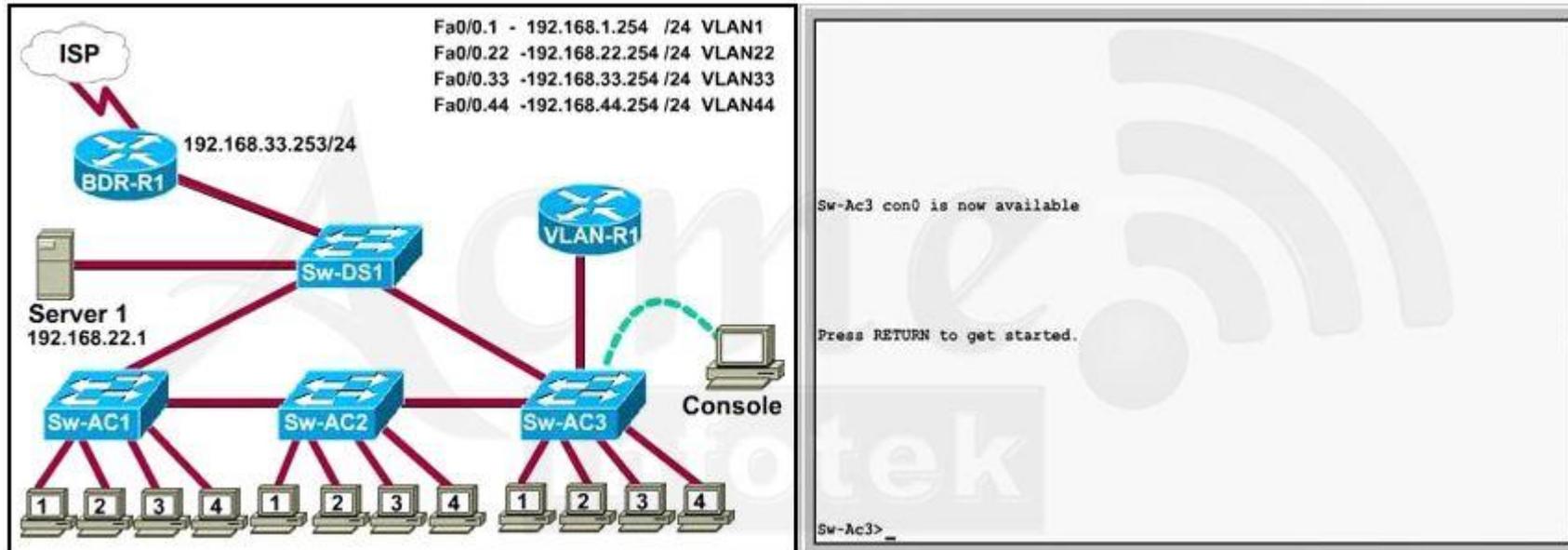
Which switch is the root bridge for VLAN1?

- A. Sw-DS1
- B. Sw-AC1
- C. Sw-AC2
- D. Sw-AC3

Correct Answer: A  
 Section: (none)  
 Explanation

Explanation/Reference:

QUESTION 5



- 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.

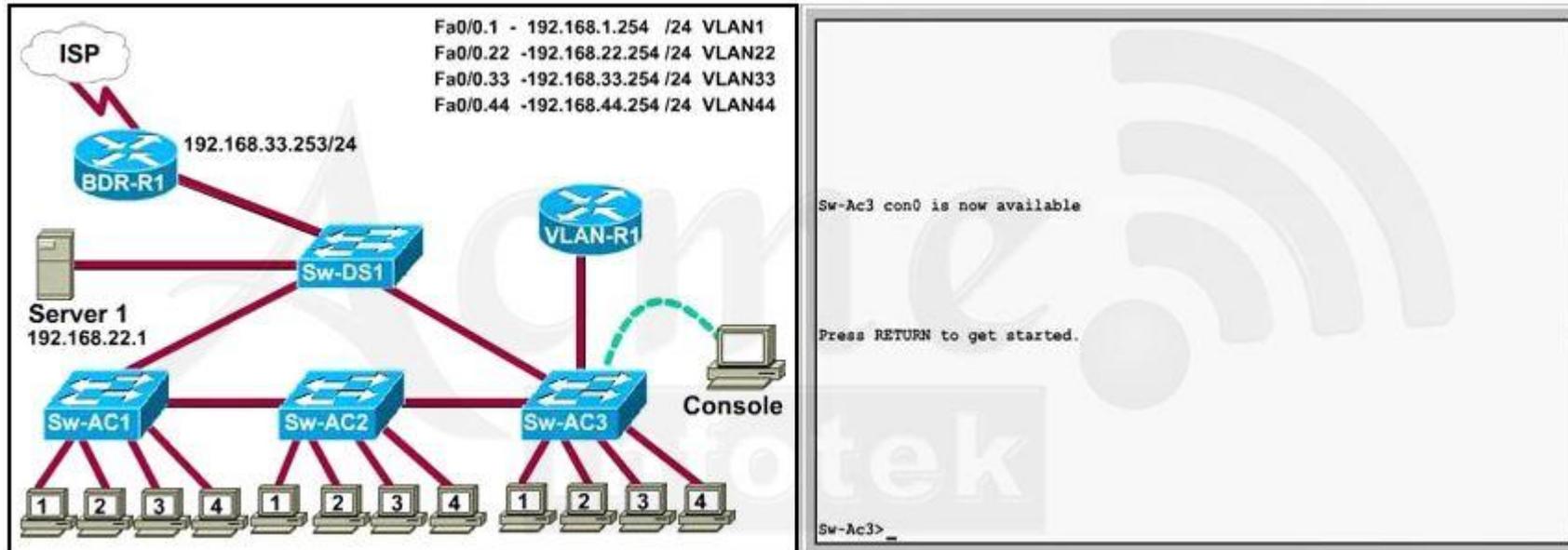
What address should be configure as the default-gateway for the host connected to interface fa0/4 of Sw-AC3?

- A. 192.168.1.254
- B. 192.168.22.254
- C. 192.168.33.254
- D. 192.168.44.254

Correct Answer: D  
 Section: (none)  
 Explanation

Explanation/Reference:

QUESTION 6



- 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.

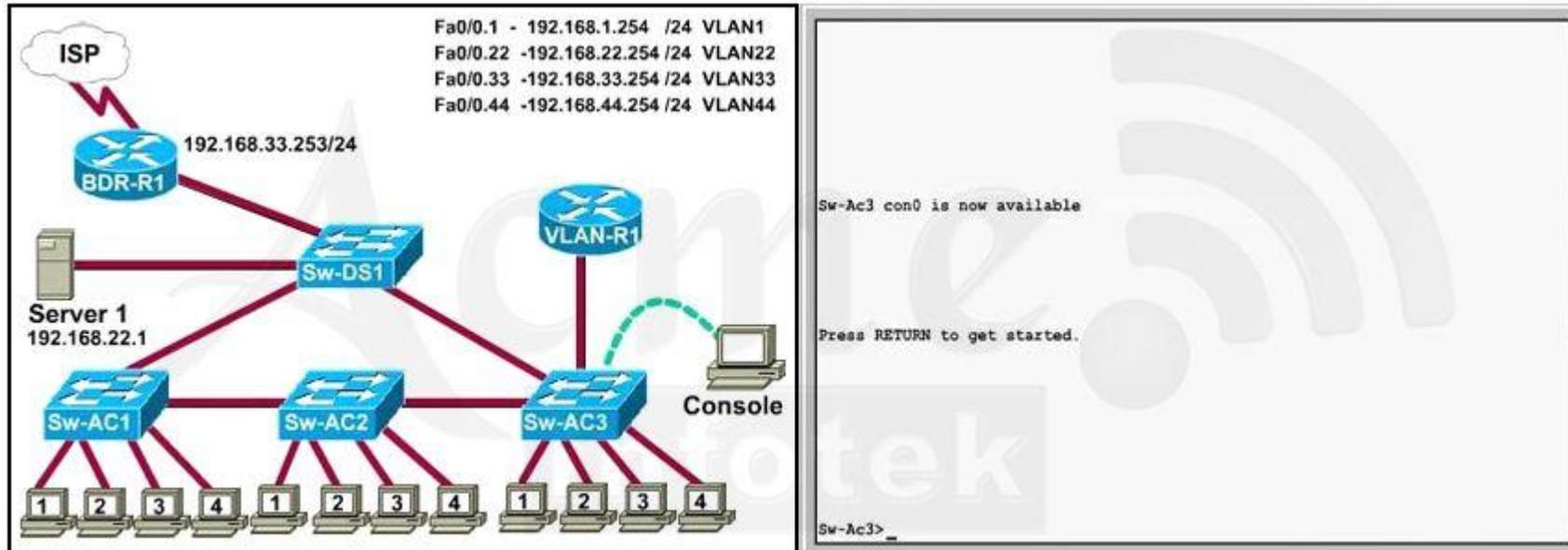
From which switch does Sw-AC3 receive VLAN information?

- A. Sw-DS1
- B. Sw-AC1
- C. Sw-AC2
- D. Sw-AC3(locally)

Correct Answer: A  
 Section: (none)  
 Explanation

Explanation/Reference:

QUESTION 7



- 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.

Refer to the exhibit. SwX was taken out the production network for maintenance. It will be reconnected to the Fa0/16 port of Sw-AC3. What happens to the network when it is reconnected and trunk exists between the two switches?

SwX#show vlan				SwX# show vtp stat	
VLAN Name	Status	Ports		VTP Version	: 2
1	default	active	Fa0/1, Fa0/2, Fa0/3 Fa0/4, Fa0/5, Fa0/6 Fa0/7, Fa0/8, Fa0/9 Fa0/10, Fa0/11, Fa0/12 Gi0/1, Gi0/2	Configuration Revision	: 6
2	students	active		Maximum VLANs supported locally	: 250
3	admin	active		Number of existing VLANs	: 8
4	faculty	active		VTP Operating Mode	: Server
				VTP Domain Name	: home-office
				VTP Pruning Mode	: Disabled
				VTP V2 Mode	: Disabled
				VTP Traps Generation	: Disabled
				MD5 digest	: 0xD8 0xD8 0x38 0x22 0x98 0xE3 0xAC 0x65
				Configuration last modified by	0.0.0.0 at 3-28-99 01:24:88

- A. All VLANs except default VLAN will be removed from all switches.
- B. All existing switches will have students, admin, faculty, Servers, Management, Production, and no-where VLANs.
- C. The VLANs Servers, Management, Production, and no-where will replace the VLANs on SwX.
- D. The VLANs Servers, Management, Production and no-where will be removed from existing switches.

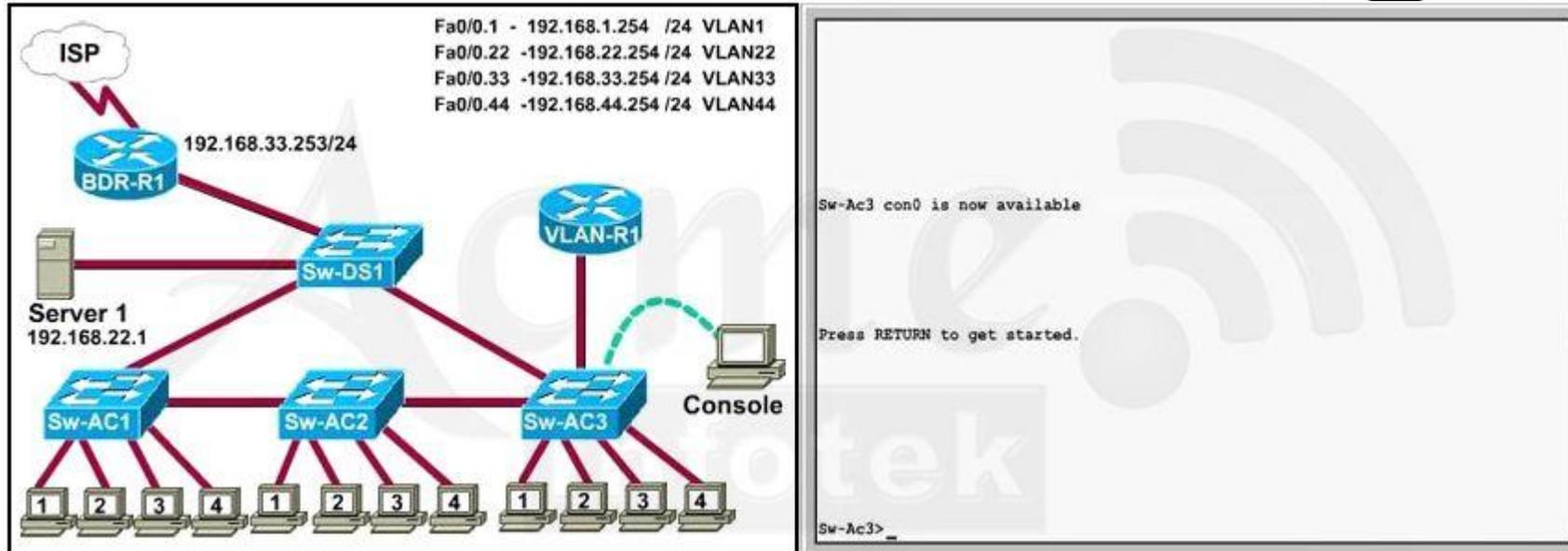
**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 8**



- 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.

**Out of which ports will a frame be forwarded that has source mac-address 0010.5a0c.fd86 and destination mac-address 000a.8a47.e612? (Choose three.)**

- A. Fa0/1
- B. Fa0/3
- C. Fa0/4
- D. Fa0/6
- E. Fa0/8
- F. Fa0/12

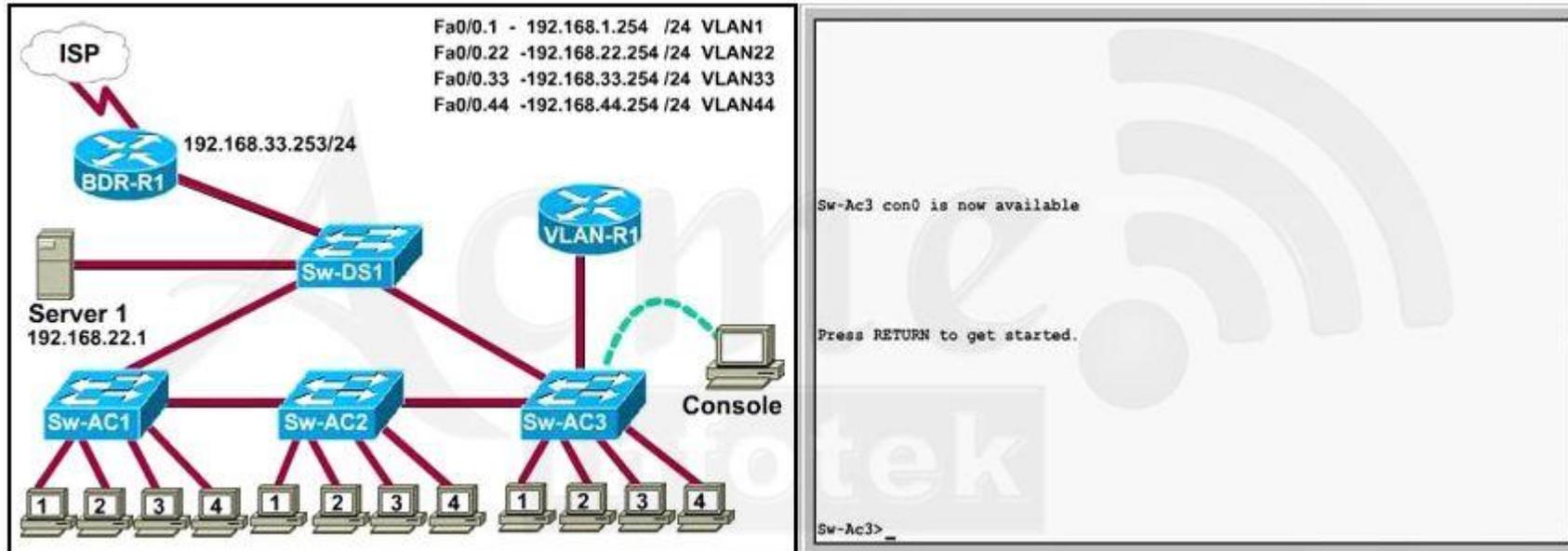
**Correct Answer:** BEF

**Section:** (none)

**Explanation**

Explanation/Reference:

QUESTION 9



- 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.

**If one of the host connected to Sw-AC3 wants to send something for the ip 190.0.2.5 (or any other ip that is not on the same subnet). What will be destination MAC address?**

- A. 0009.e8b2.c28c
- B. 000a.b7e9.8360
- C. 000c.ce8d.8720
- D. 0010.5a0c.fd86
- E. 0010.5a0c.fea6
- F. 0010.5a0c.ff9f

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**Exam**

**QUESTION 1**

Drag the function on the left to the matching security appliance or application on the right. (Not all functions are used)

block unknown MAC addresses from accessing a wireless LAN	antispyware
detects software designed to capture sensitive information and removes it from the computer	antivirus
prevents known malicious programs from being installed on workstations	IDS
filters traffic based on source and destination IP address or traffic type	firewall
identifies malicious network traffic and alerts network personnel	

**Select and Place:**

block unknown MAC addresses from accessing a wireless LAN	antispyware
detects software designed to capture sensitive information and removes it from the computer	antivirus
prevents known malicious programs from being installed on workstations	IDS
filters traffic based on source and destination IP address or traffic type	firewall
identifies malicious network traffic and alerts network personnel	

**Correct Answer:**

block unknown MAC addresses from accessing a wireless LAN	detects software designed to capture sensitive information and removes it from the computer
	prevents known malicious programs from being installed on workstations
	identifies malicious network traffic and alerts network personnel
	filters traffic based on source and destination IP address or traffic type

Section: (none)  
Explanation

Explanation/Reference:

### QUESTION 2

If a Cisco router has learned about network 10.1.1.0 from multiple sources, the router will select and Install only one entry into the routing table. Indicate the order of preference that the router will use by dragging the routes on the left to the order of preference category on the right.

S 10.1.1.0/24 [1/0] via 10.1.2.2	first preference
R 10.1.1.0/24 [120/3] via 10.1.3.1, Serial0	second preference
D 10.1.1.0/24 [90/2172416] via 10.1.5.5, Serial0	third preference
S 10.1.1.0 is directly connected, Serial1	forth preference
O 10.1.1.0/24 [110/789] via 10.1.3.1, Serial0	fifth preference

Select and Place:

S 10.1.1.0/24 [1/0] via 10.1.2.2	first preference
R 10.1.1.0/24 [120/3] via 10.1.3.1, Serial0	second preference
D 10.1.1.0/24 [90/2172416] via 10.1.5.5, Serial0	third preference
S 10.1.1.0 is directly connected, Serial1	forth preference
O 10.1.1.0/24 [110/789] via 10.1.3.1, Serial0	fifth preference

Correct Answer:

	S 10.1.1.0 is directly connected, Serial1
	S 10.1.1.0/24 [1/0] via 10.1.2.2
	D 10.1.1.0/24 [90/2172416] via 10.1.5.5, Serial0
	O 10.1.1.0/24 [110/789] via 10.1.3.1, Serial0
	R 10.1.1.0/24 [120/3] via 10.1.3.1, Serial0

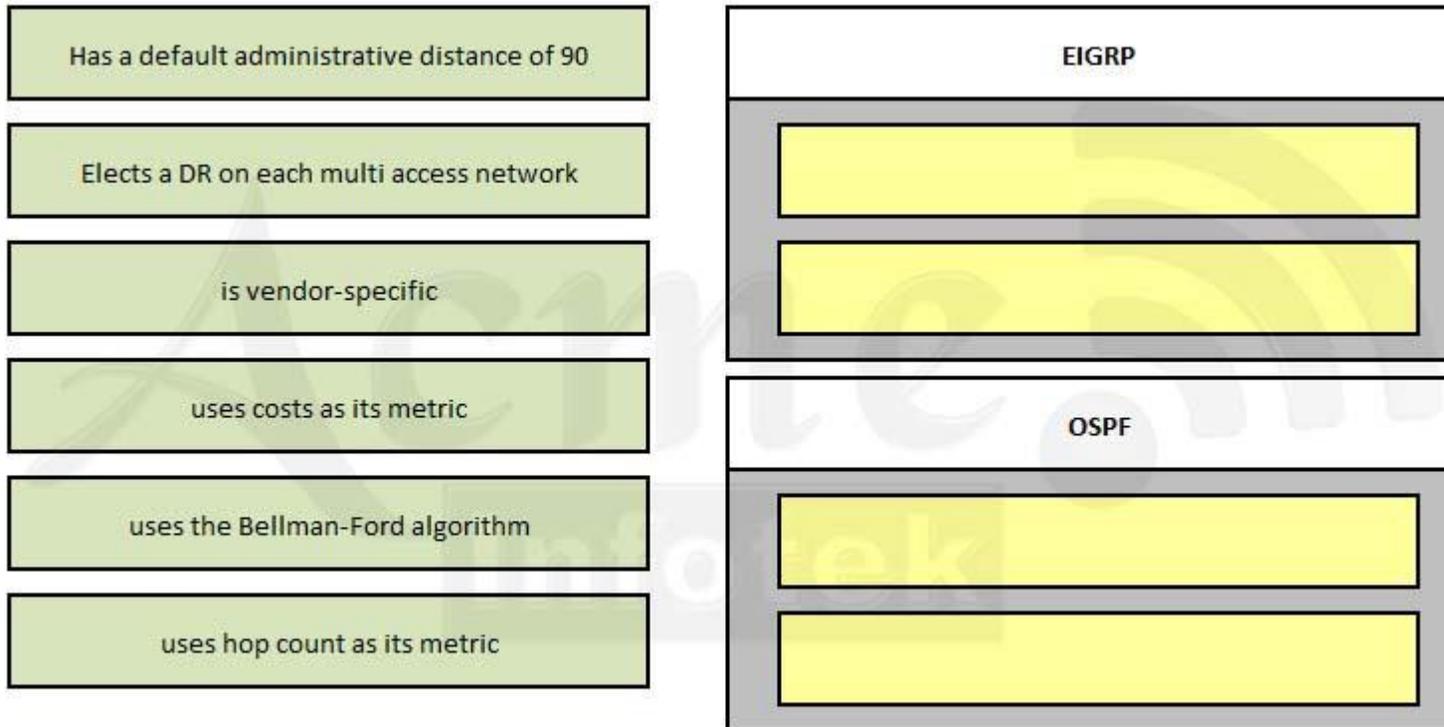
Section: (none)  
Explanation

Explanation/Reference:

**QUESTION 3**

Drag the description on the left to the routing protocol on the right.

Select and Place:



Has a default administrative distance of 90

Elects a DR on each multi access network

is vendor-specific

uses costs as its metric

uses the Bellman-Ford algorithm

uses hop count as its metric

EIGRP

OSPF

Correct Answer:

	<b>EIGRP</b>
	Has a default administrative distance of 90
	is vendor-specific
	<b>OSPF</b>
uses the Bellman-Ford algorithm	Elects a DR on each multi access network
uses hop count as its metric	uses costs as its metric

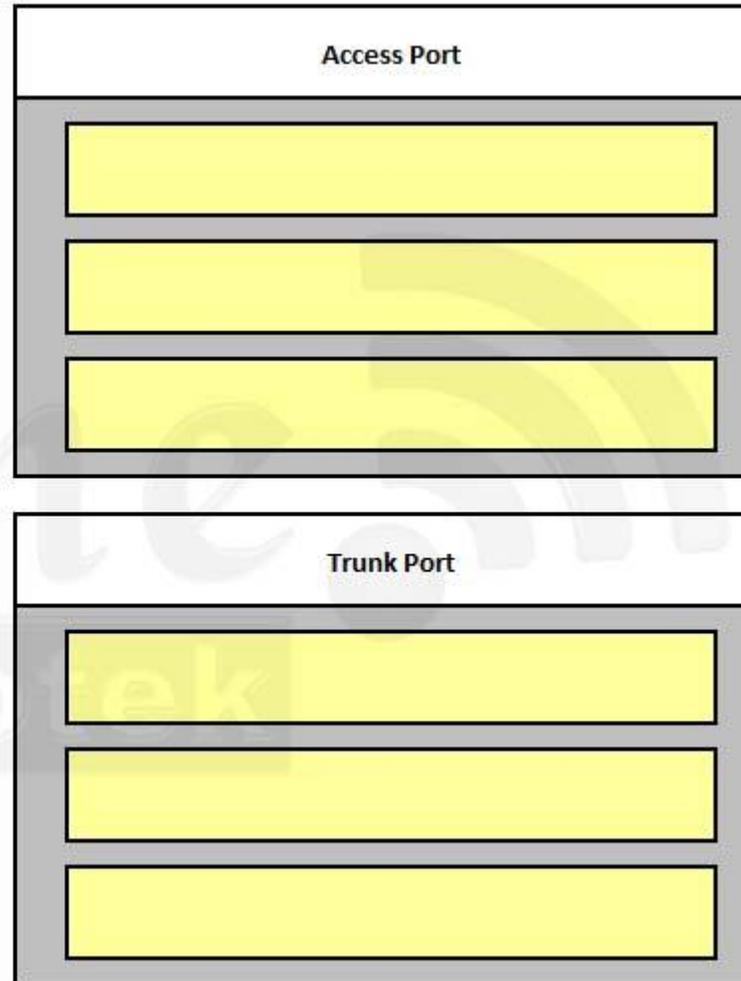
**Section: (none)**  
**Explanation**

**Explanation/Reference:**

**QUESTION 4**

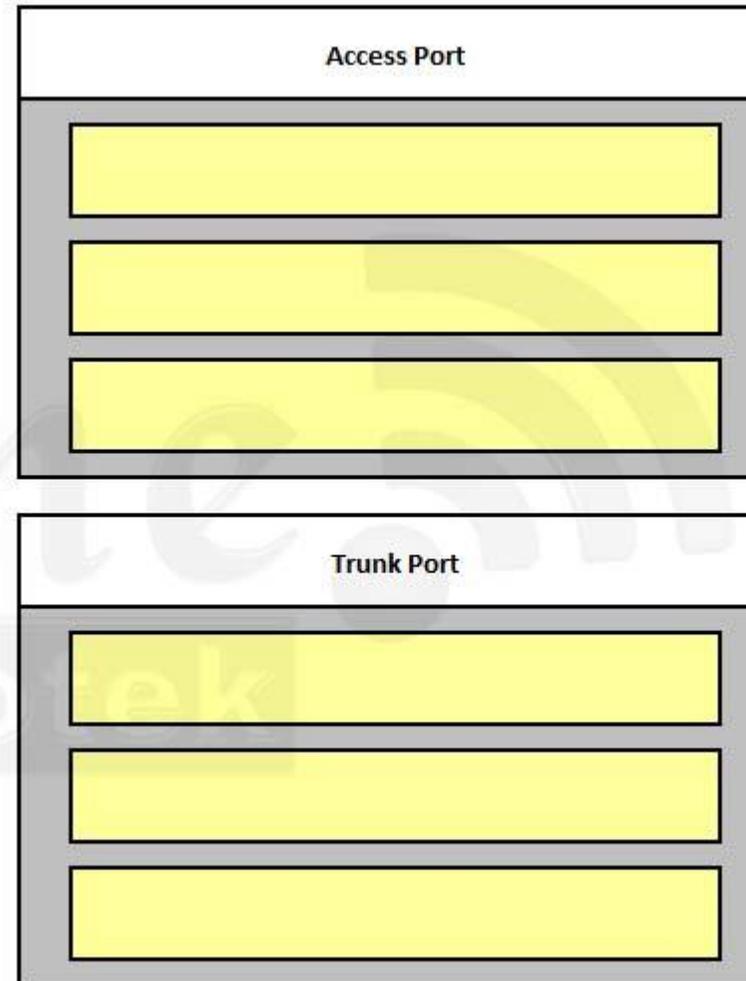
Drag the options on the left under the type of switch port that they describe on the right.

- carries traffic for a single VLAN
- facilitates interVLAN communication connected to a Layer 3 device
- connects an end-user workstation to a switch
- carries traffic for multiple VLANs
- uses 802.1q to identify traffic from different VLANs
- uses a straight-through cable to connect a device

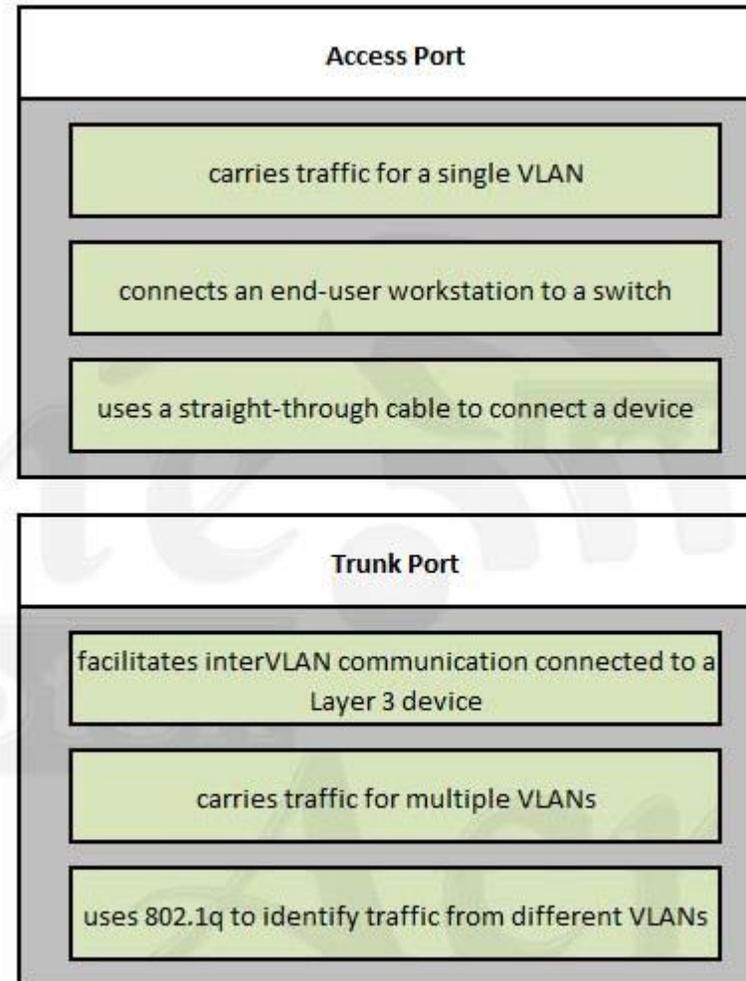


Select and Place:

- carries traffic for a single VLAN
- facilitates interVLAN communication connected to a Layer 3 device
- connects an end-user workstation to a switch
- carries traffic for multiple VLANs
- uses 802.1q to identify traffic from different VLANs
- uses a straight-through cable to connect a device



**Correct Answer:**

Section: (none)

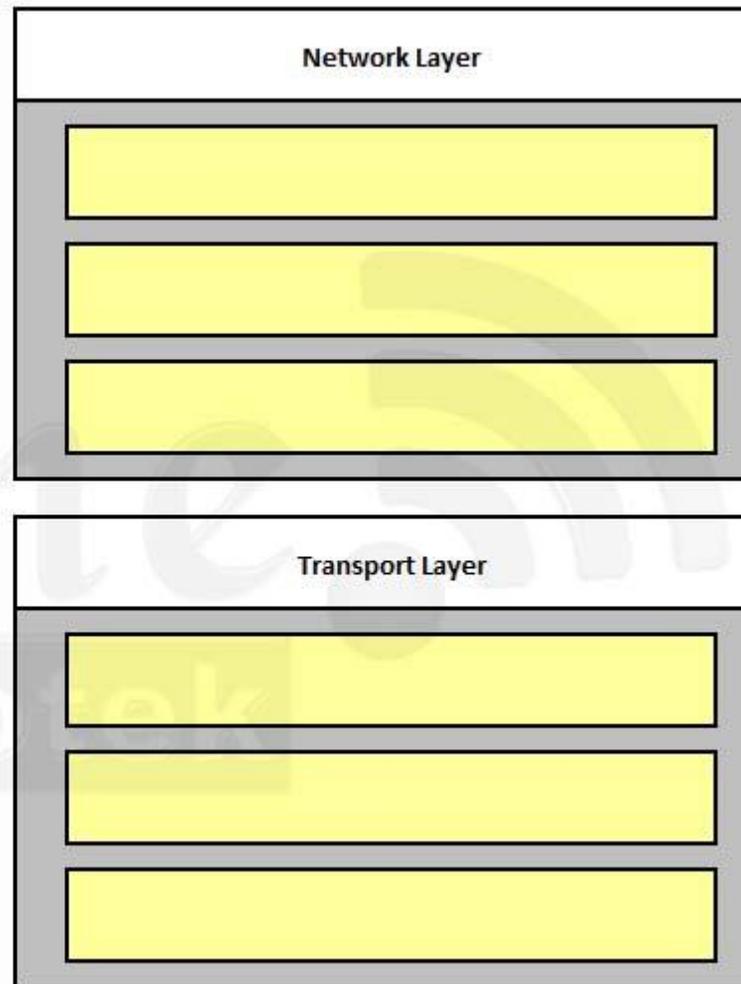
Explanation

Explanation/Reference:

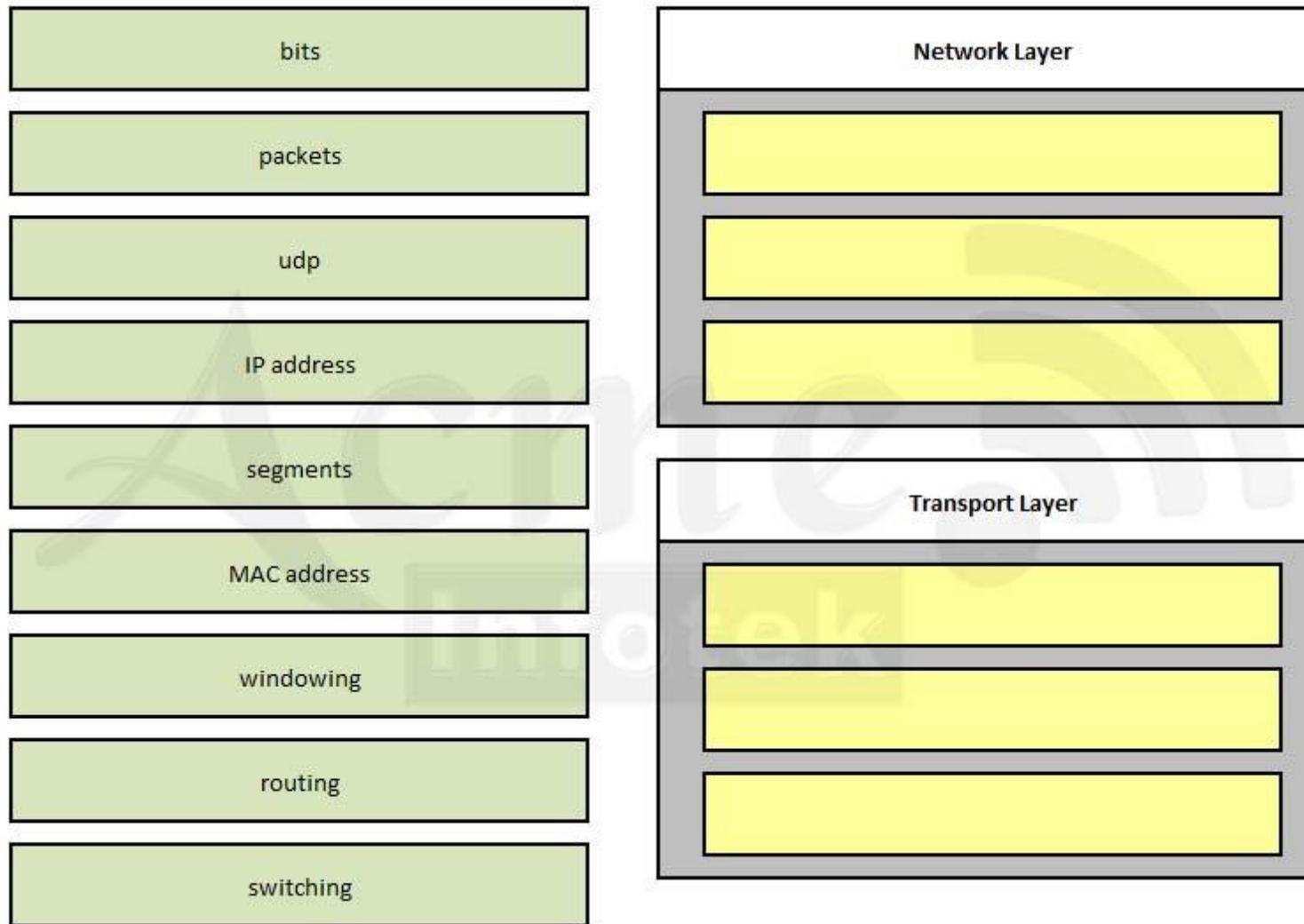
**QUESTION 5**

Match the items on the left with appropriate OSI layer on the right. (Not all options are used.)

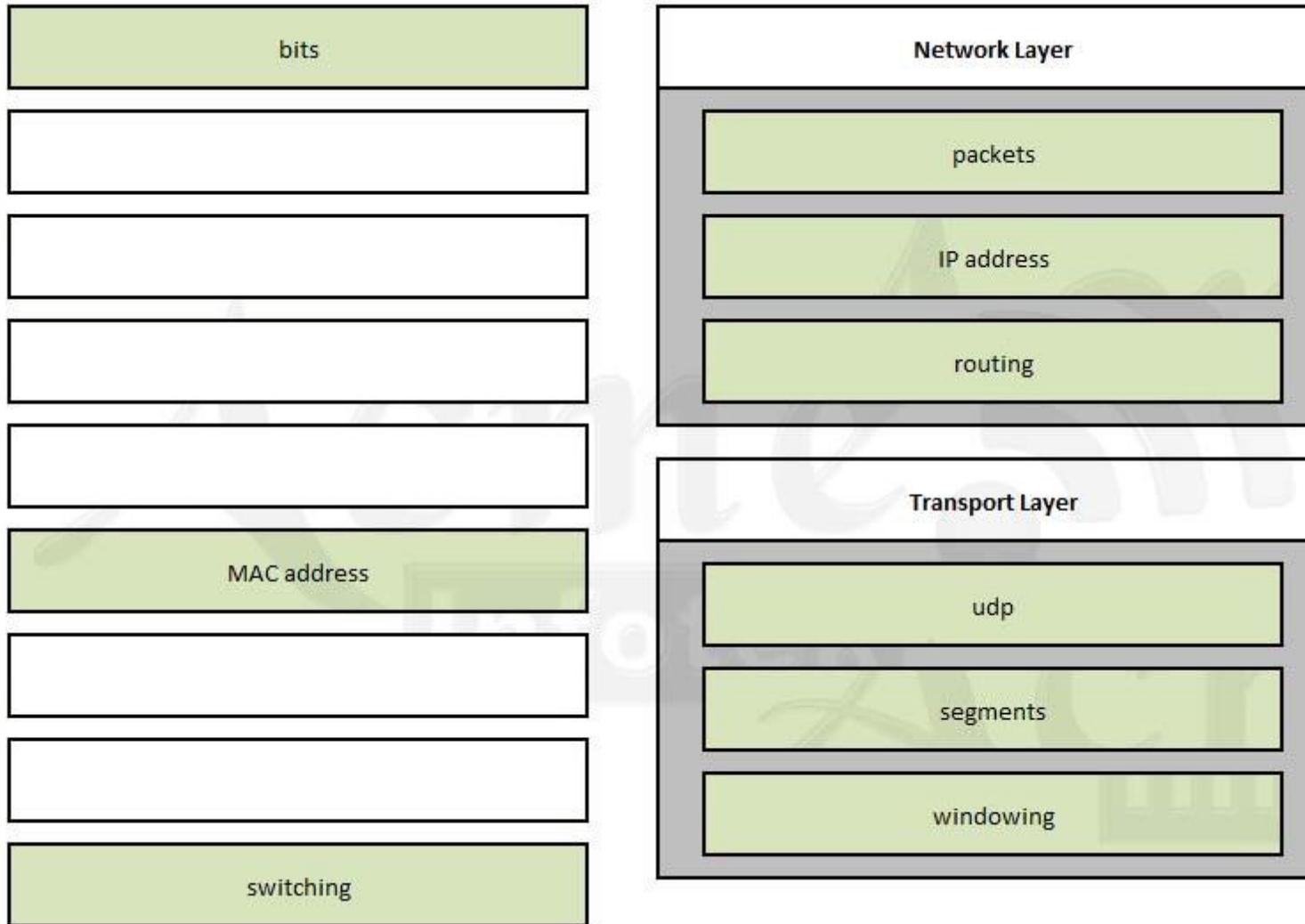
- bits
- packets
- udp
- IP address
- segments
- MAC address
- windowing
- routing
- switching



Select and Place:



**Correct Answer:**



Section: (none)

Explanation

Explanation/Reference:

**QUESTION 6**

Drag the Cisco default administrative distance to the appropriate routing protocol or route (Not all options are used.)

0

1

20

90

100

110

120

130

RIP

OSPF

static route referencing IP address of next hop

internal EIGRP route

directly connected network

Select and Place:

0	RIP
1	OSPF
20	static route referencing IP address of next hop
90	internal EIGRP route
100	directly connected network
110	
120	
130	

**Correct Answer:**

	120
	110
20	1
	90
100	0
130	

Section: (none)  
Explanation

Explanation/Reference:

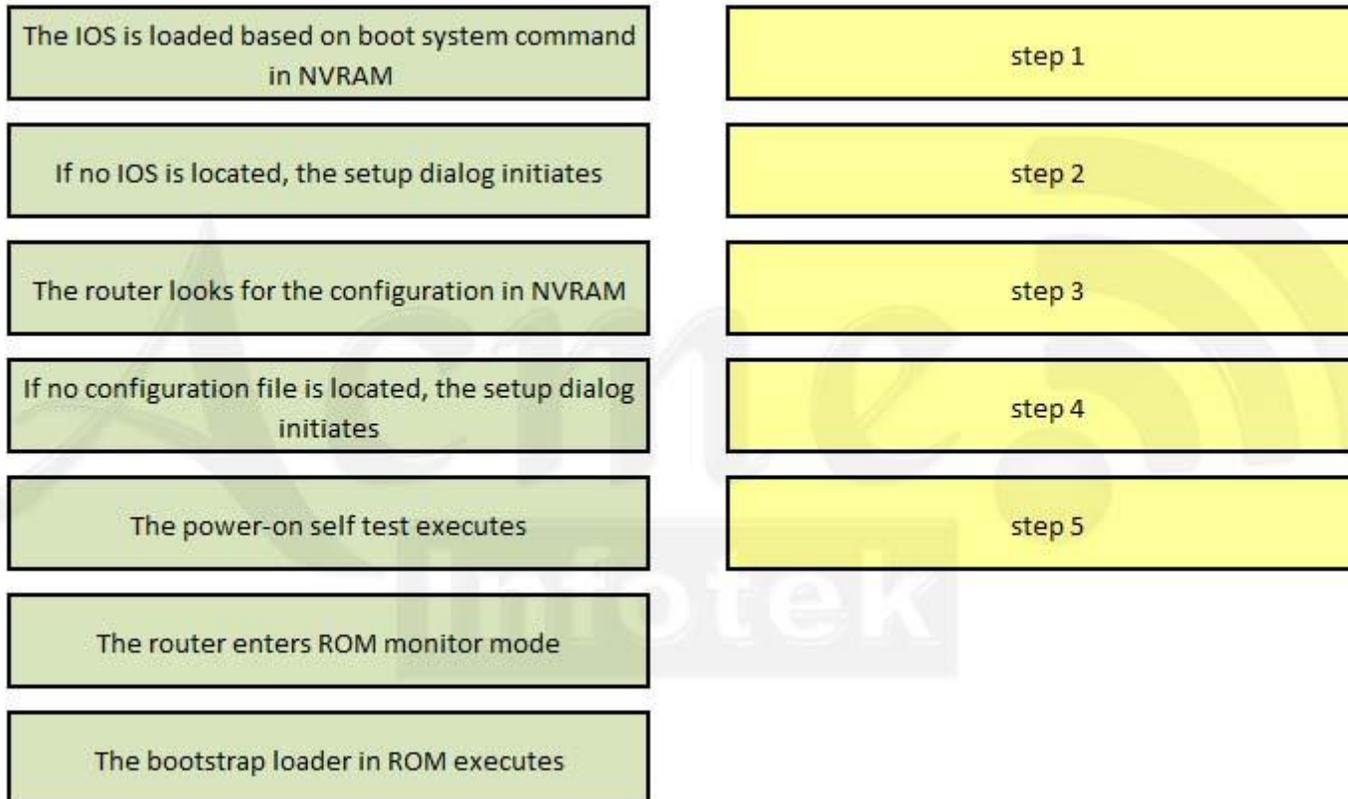
#### QUESTION 7

Drag the appropriate 5 steps of the boot sequence on the left to their correct slot on the right. (Not all options apply.)

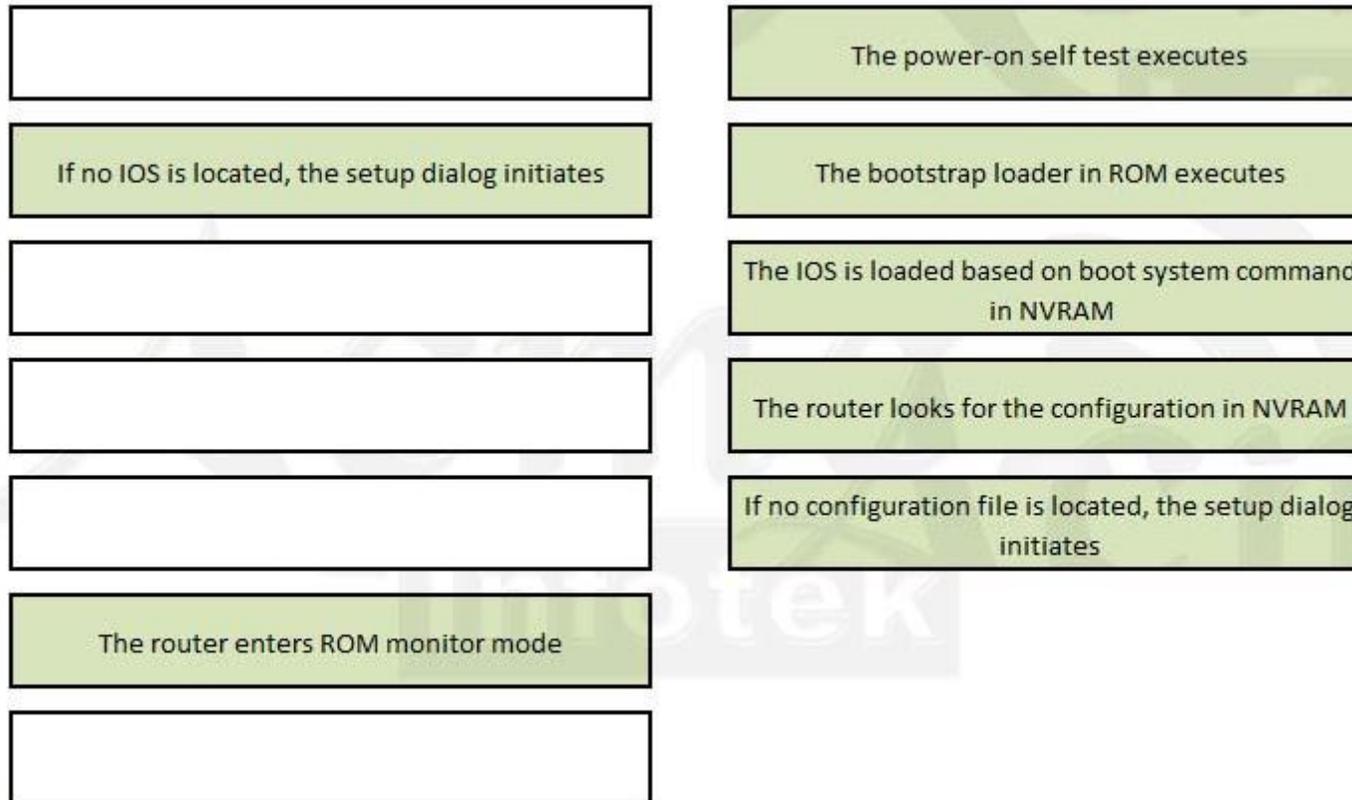
- The IOS is loaded based on boot system command in NVRAM
- If no IOS is located, the setup dialog initiates
- The router looks for the configuration in NVRAM
- If no configuration file is located, the setup dialog initiates
- The power-on self test executes
- The router enters ROM monitor mode
- The bootstrap loader in ROM executes

- step 1
- step 2
- step 3
- step 4
- step 5

Select and Place:



**Correct Answer:**



**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 8**

Routing has been configured on the local router with these commands:

```
Local(config)#ip route 0.0.0.0 0.0.0.0 192.168.1.1
Local(config)#ip route 10.1.0.0 255.255.255.0 192.168.2.2
Local(config)#ip route 10.1.0.0 255.255.0.0 192.168.3.3
```

Drag each destination IP address on the left to its correct next hop address on the right

- 10.1.1.10
- 10.1.0.14
- 10.2.1.3
- 10.1.4.6
- 10.1.0.123
- 10.6.8.4

Next hop 192.168.1.1

Next hop 192.168.2.2

Next hop 192.168.3.3

Select and Place:

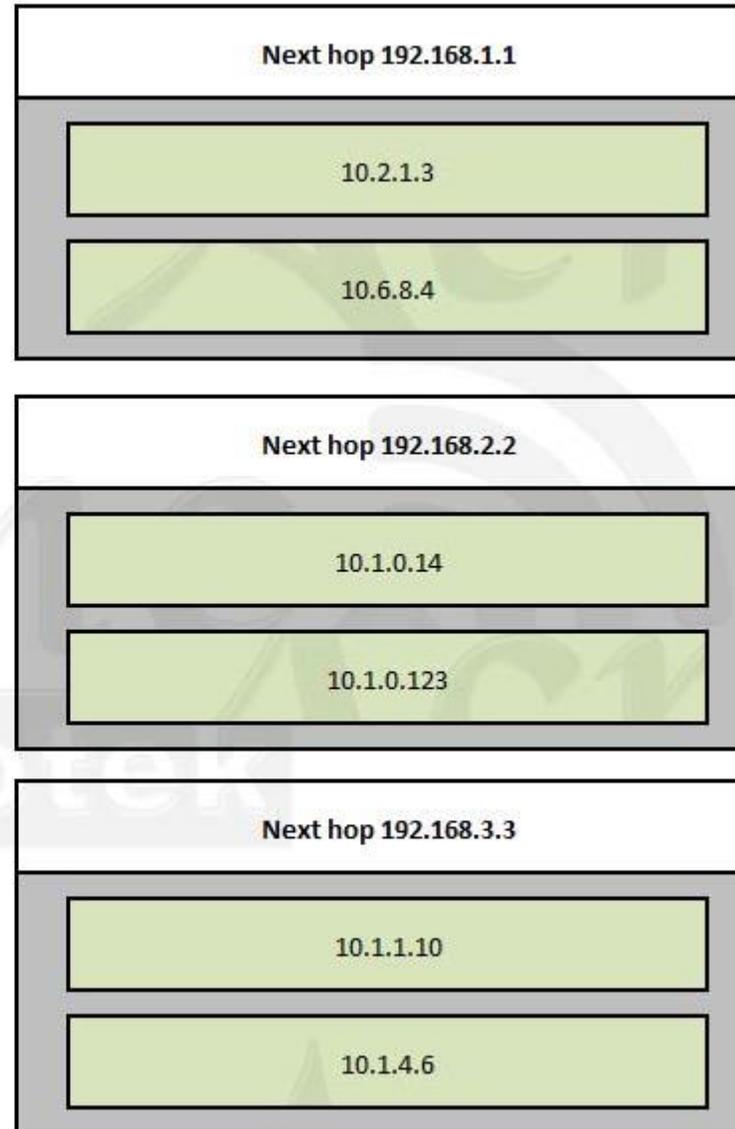
- 10.1.1.10
- 10.1.0.14
- 10.2.1.3
- 10.1.4.6
- 10.1.0.123
- 10.6.8.4

Next hop 192.168.1.1

Next hop 192.168.2.2

Next hop 192.168.3.3

**Correct Answer:**

**Section: (none)**  
**Explanation**

**Explanation/Reference:**

**QUESTION 9**

Drag the term on the left to its definition on the right. (Not all options are used.)

holddown timer	A router learns from its neighbor that a route is down, and the router sends an update back to the neighbor with an infinite metric to that route.
poison reverse	The packets flooded when a topology change occurs, causing network routers to update their topological databases and recalculate routes.
count to infinity	This prevents sending information about a route back out the same interface that originally learned about the route.
LSA	For a given period, this causes the router to ignore any updates with poorer metrics to a lost network.
split horizon	

**Select and Place:**

holddown timer

A router learns from its neighbor that a route is down, and the router sends an update back to the neighbor with an infinite metric to that route.

poison reverse

The packets flooded when a topology change occurs, causing network routers to update their topological databases and recalculate routes.

count to infinity

This prevents sending information about a route back out the same interface that originally learned about the route.

LSA

For a given period, this causes the router to ignore any updates with poorer metrics to a lost network.

split horizon

**Correct Answer:**

holddown timer

poison reverse

LSA

split horizon

count to infinity

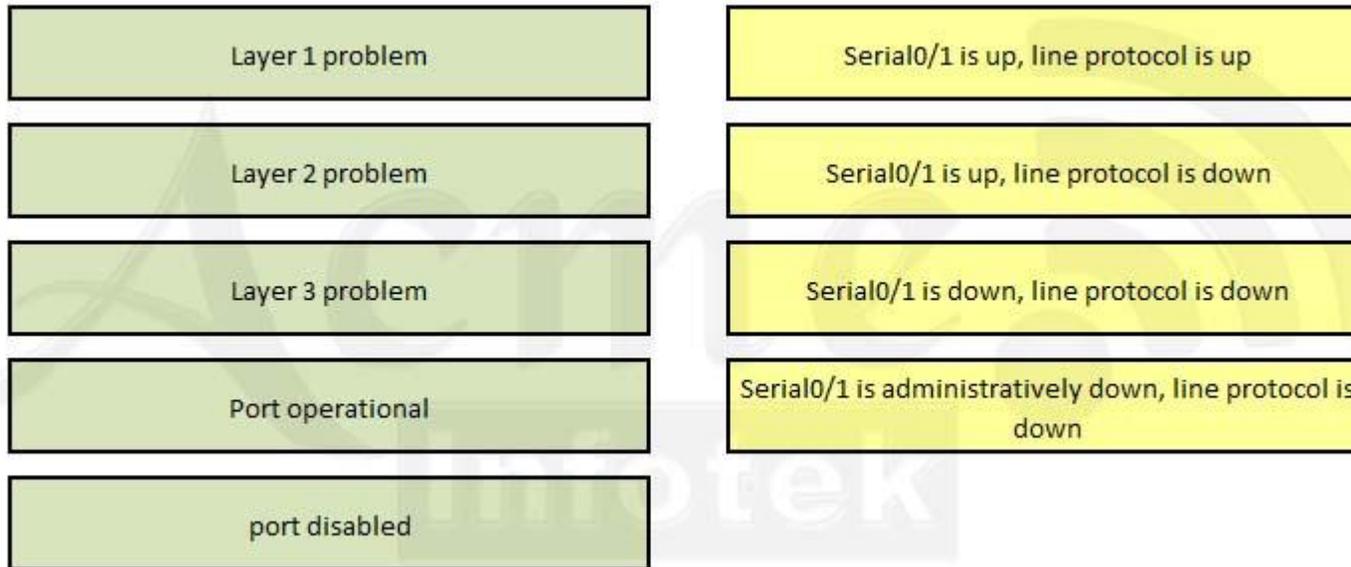
**Section: (none)**

**Explanation**

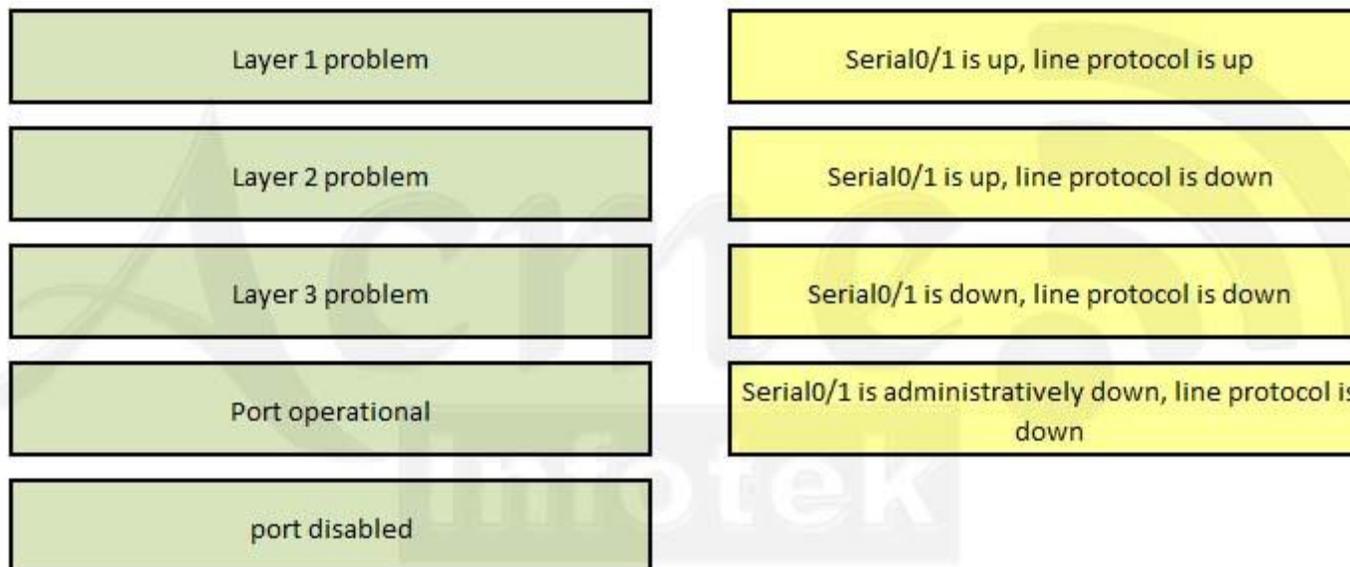
**Explanation/Reference:**

**QUESTION 10**

Drag each category on the left to its corresponding router output on the right. Each router output line is in the result of a show ip interface command. (Not all categories are used.)



**Select and Place:**



Correct Answer:

	Port operational
	Layer 2 problem
Layer 3 problem	Layer 1 problem
	port disabled

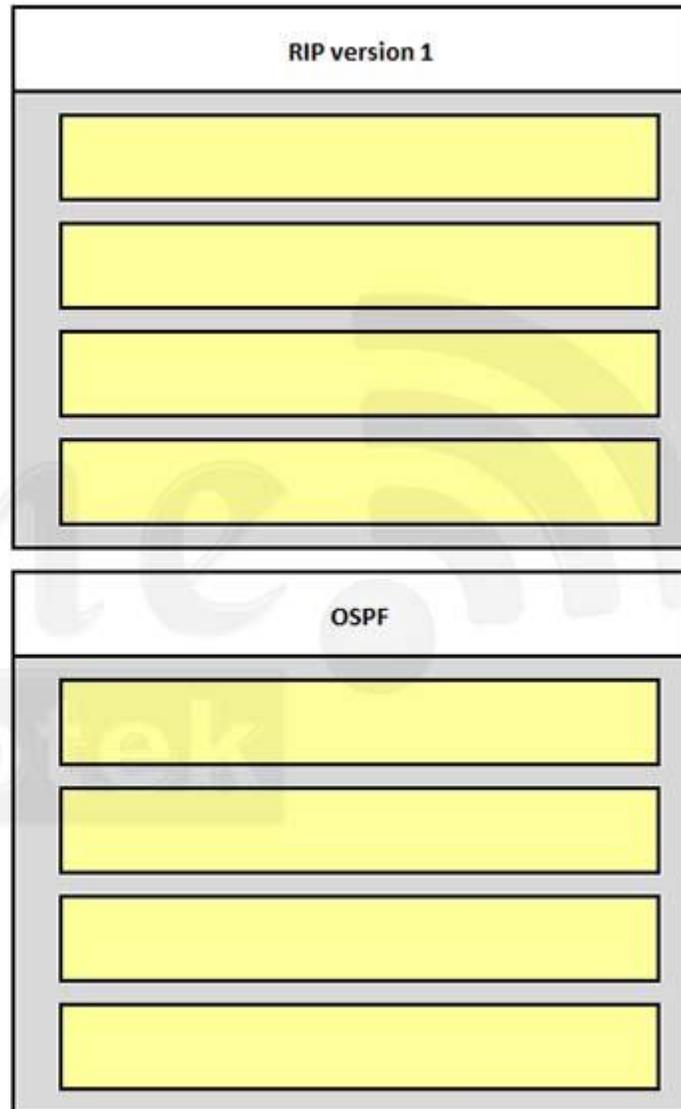
Section: (none)  
Explanation

Explanation/Reference:

**QUESTION 11**

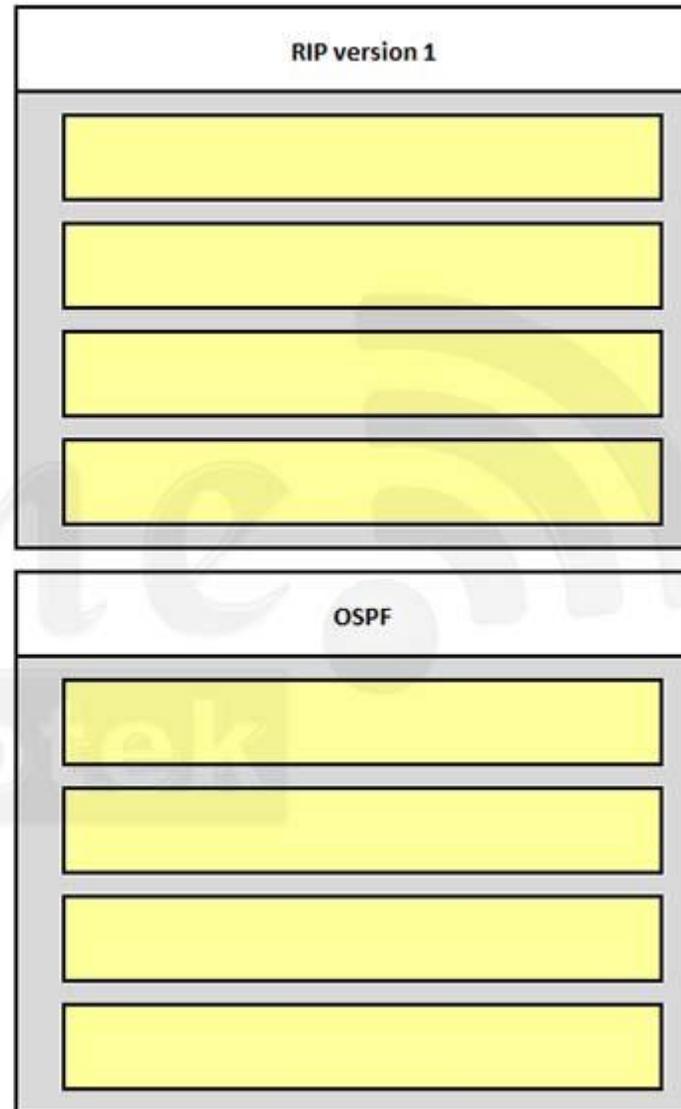
Drag each feature on the left to the appropriate routing protocol on the right.

- fast convergence
- sends frequent updates
- less complex configuration
- susceptible to routing loops
- uses only event-triggered updates
- exchange full routing table in updates
- same topology information held by all routers
- requires more memory and processor power

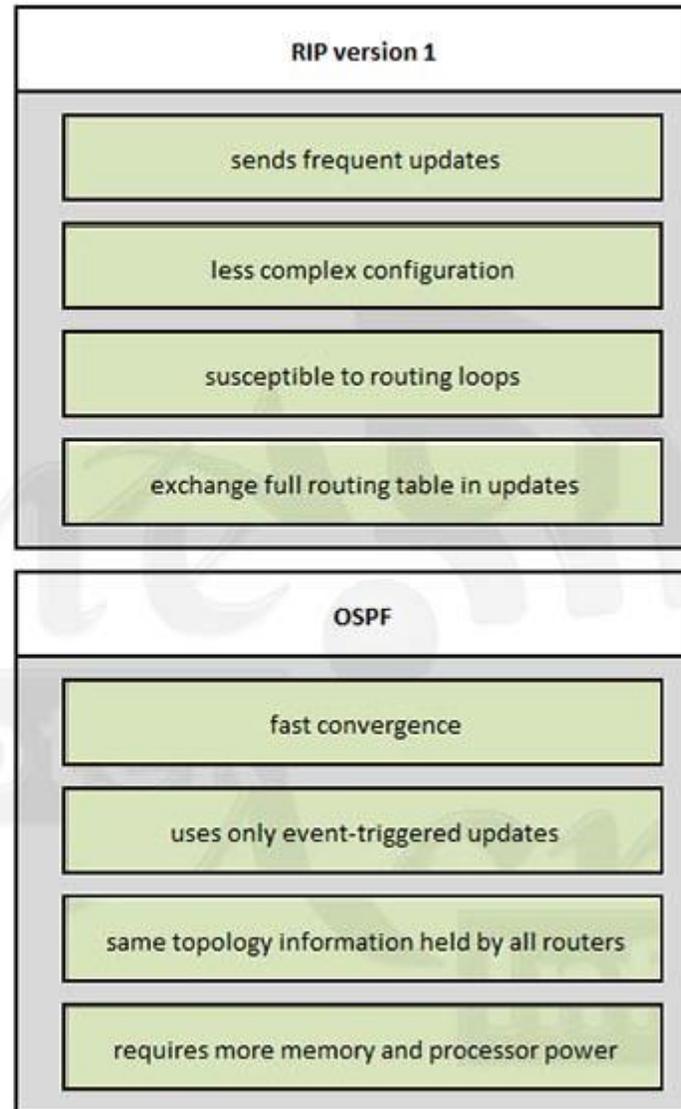


Select and Place:

- fast convergence
- sends frequent updates
- less complex configuration
- susceptible to routing loops
- uses only event-triggered updates
- exchange full routing table in updates
- same topology information held by all routers
- requires more memory and processor power



**Correct Answer:**

**Section: (none)**  
**Explanation**

Explanation/Reference:

**QUESTION 12**

Drag the connection type on the left to the appropriate type of cable used on the right. (Not all options are used.)

router to hub	<b>Crossover</b>
PC to router Fa0/0	
PC to switch Fa0/1	
modem to router auxiliary port	<b>Straight-through</b>
PC serial port to switch console port	
switch1 port Fa0/1 to Switch2 port Fa0/1	
	<b>Rollover</b>

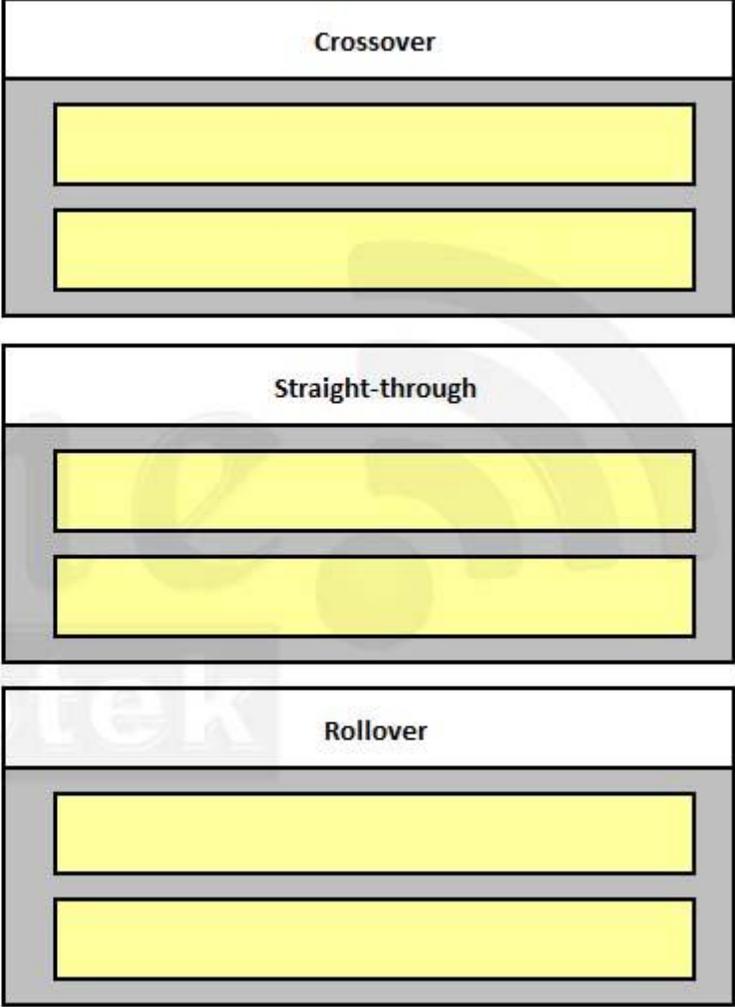
Select and Place:

- router to hub
- PC to router Fa0/0
- PC to switch Fa0/1
- modem to router auxiliary port
- PC serial port to switch console port
- switch1 port Fa0/1 to Switch2 port Fa0/1

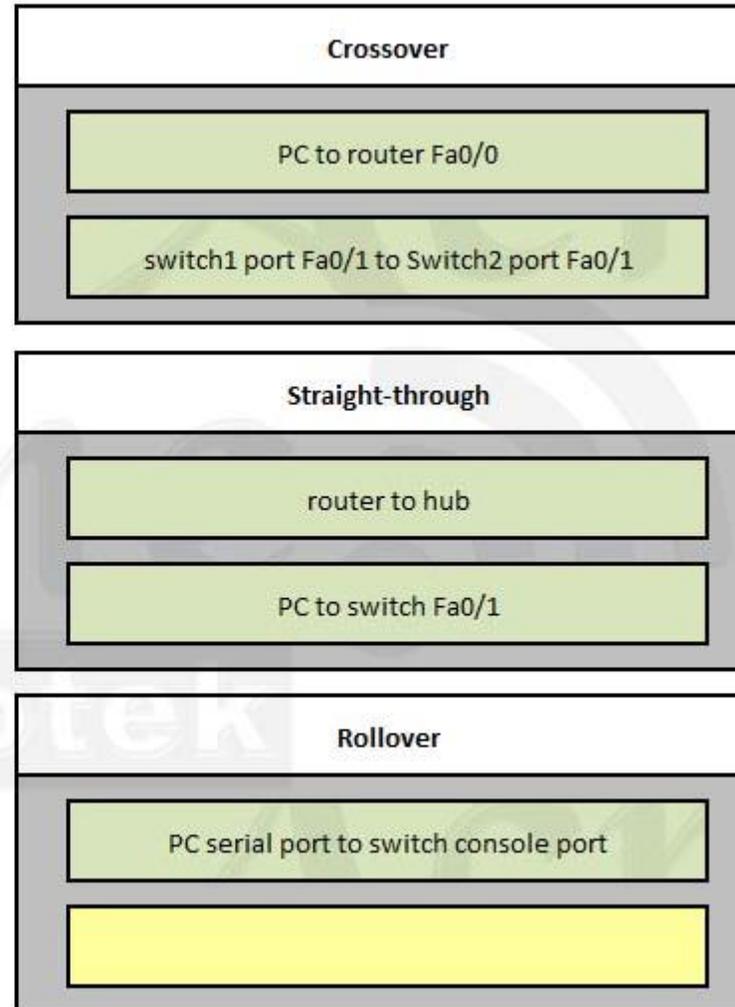
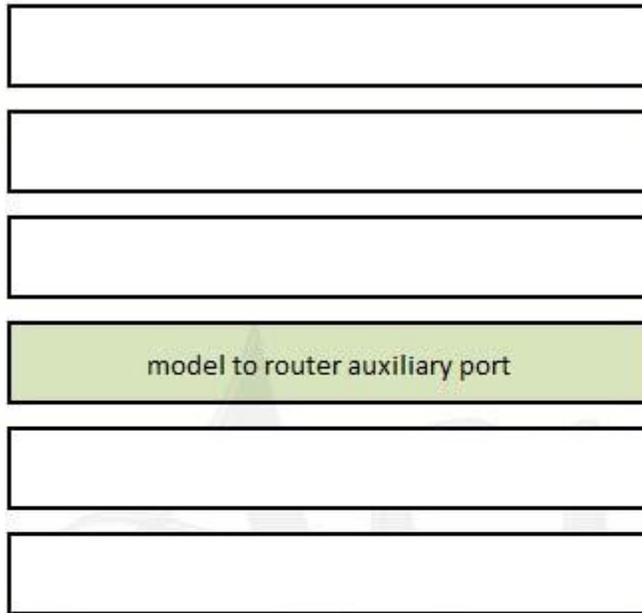
Crossover

Straight-through

Rollover



Correct Answer:



Section: (none)

Explanation

Explanation/Reference:

**QUESTION 13**

Drag the description on the left to the correct router mode on the right.

interactive configuration dialog	user EXEC mode
provide access to all other router commands	privileged EXEC mode
commands that affect interface/process only	global configuration mode
commands that affect the entire system	specific configuration mode
limited to basic monitoring commands	setup mode

Select and Place:

interactive configuration dialog	user EXEC mode
provide access to all other router commands	privileged EXEC mode
commands that affect interface/process only	global configuration mode
commands that affect the entire system	specific configuration mode
limited to basic monitoring commands	setup mode

Correct Answer:

	limited to basic monitoring commands
	provide access to all other router commands
	commands that affect the entire system
	commands that affect interface/process only
	interactive configuration dialog

Section: (none)  
Explanation

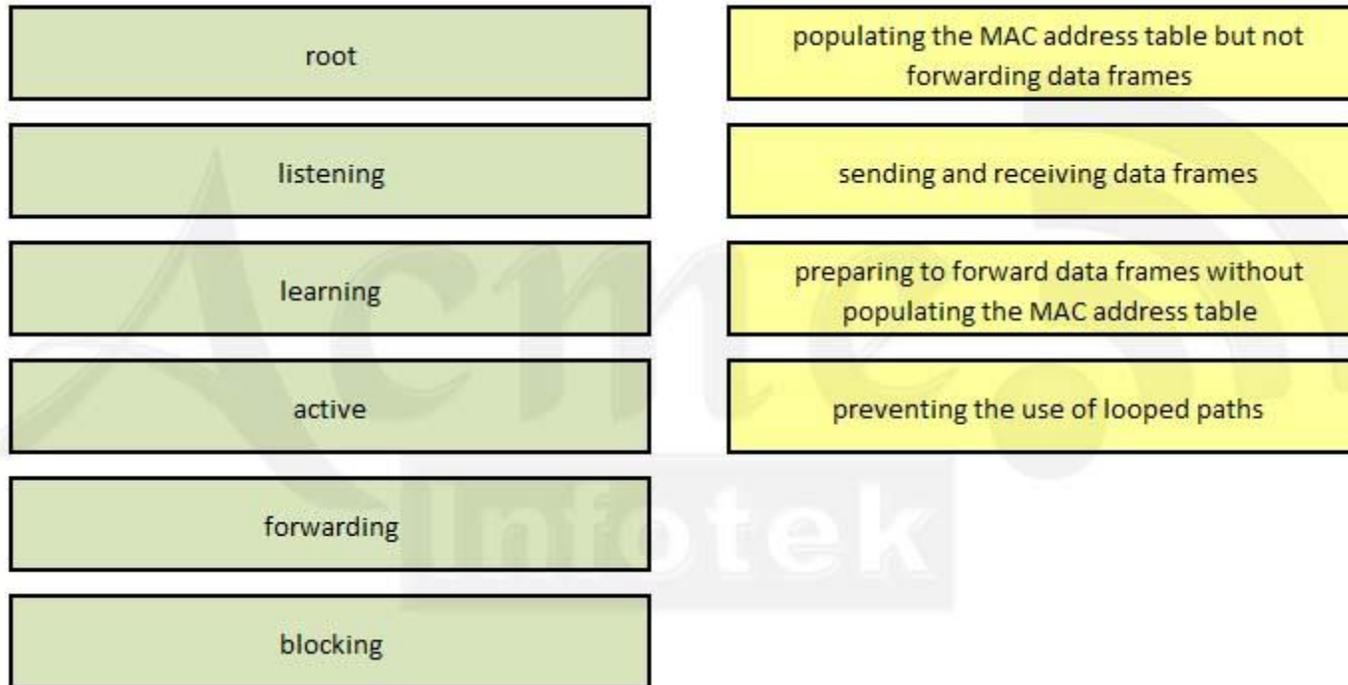
Explanation/Reference:

**QUESTION 14**

Place the Spanning-Tree Protocol port state on its function by dragging the state on the left to the correct target on the right. (Not all options on the left are used.)

root	populating the MAC address table but not forwarding data frames
listening	sending and receiving data frames
learning	preparing to forward data frames without populating the MAC address table
active	preventing the use of looped paths
forwarding	
blocking	

Select and Place:



**Correct Answer:**

root	learning
	forwarding
	listening
active	blocking

Section: (none)

Explanation

Explanation/Reference:

**QUESTION 15**

In order to complete a basic switch configuration, drag each switch IOS command on the left to its purpose on the right.

ip default-gateway	allows access to high-level testing commands, such as <b>debug</b>	Place here
interface vlan 1	allow access to configuration commands that affect the system as a whole	Place here
hostname	sets the system name	Place here
ip address	activates the interface configuration mode for vlan 1	Place here
enable	enables the switch management interface	Place here
no shutdown	sets the switch management ip address	Place here
configure terminal	allows the switch to be managed by remote networks	Place here

Select and Place:

ip default-gateway	allows access to high-level testing commands, such as debug	Place here
interface vlan 1	allow access to configuration commands that affect the system as a whole	Place here
hostname	sets the system name	Place here
ip address	activates the interface configuration mode for vlan 1	Place here
enable	enables the switch management interface	Place here
no shutdown	sets the switch management ip address	Place here
configure terminal	allows the switch to be managed by remote networks	Place here

Correct Answer:

	allows access to high-level testing commands, such as <b>debug</b>	<b>enable</b>
	allow access to configuration commands that affect the system as a whole	<b>configure terminal</b>
	sets the system name	<b>hostname</b>
	activates the interface configuration mode for vlan 1	<b>interface vlan 1</b>
	enables the switch management interface	<b>no shutdown</b>
	sets the switch management ip address	<b>ip address</b>
	allows the switch to be managed by remote networks	<b>ip default-gateway</b>

**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 16**

The Missouri branch office router is connected through its s0 interface to the Alabama Headquarters router s1 interface. The Alabama router has two LANs. Missouri user obtain internet access through the Headquarters router. The network interfaces in the topology are addressed as follows:

Missouri: e0-192.168.35.33/28;  
 Alabama: e0-192.168.35.49/28  
 e1-192.168.35.65/28  
 s1-192.168.35.34/28

The accounting server has the address of 192.168.35.66/28.

Match the access list conditions on the left with the goals on the right.(Not all options on the left are used.)

- deny ip 192.168.35.55 0.0.0.0 host 192.168.35.66
- deny ip 192.168.35.16 0.0.0.15 host 192.168.35.66
- permit ip any any
- permit ip 192.168.35.0 0.0.0.255 host 192.168.35.66

- Block only the users attacked to the e0 interface of the Missouri router from access to the accounting server
- Block a user from the alabama e0 network from access to the accounting server.
- Prevent all users from outside the enterprise network from accessing the accounting server.

Select and Place:

- deny ip 192.168.35.55 0.0.0.0 host 192.168.35.66
- deny ip 192.168.35.16 0.0.0.15 host 192.168.35.66
- permit ip any any
- permit ip 192.168.35.0 0.0.0.255 host 192.168.35.66

- Block only the users attacked to the e0 interface of the Missouri router from access to the accounting server
- Block a user from the alabama e0 network from access to the accounting server.
- Prevent all users from outside the enterprise network from accessing the accounting server.

Correct Answer:

	deny ip 192.168.35.16 0.0.0.15 host 192.168.35.66
	deny ip 192.168.35.55 0.0.0.0 host 192.168.35.66
permit ip any any	permit ip 192.168.35.0 0.0.0.255 host 192.168.35.66

Section: (none)

Explanation

Explanation/Reference:

#### QUESTION 17

A host with the address of 192.168.125.34 /27 needs to be denied access to all hosts outside its own subnet. To accomplish this, complete the command in brackets, [ **access-list deny protocol address mask any** ], by dragging the appropriate options on the left to their correct placeholder on the right.

- 0.0.0.0
- 192.168.125.0
- 192.168.125.32
- 192.168.125.34
- 255.255.255.255
- ip
- tcp
- udp

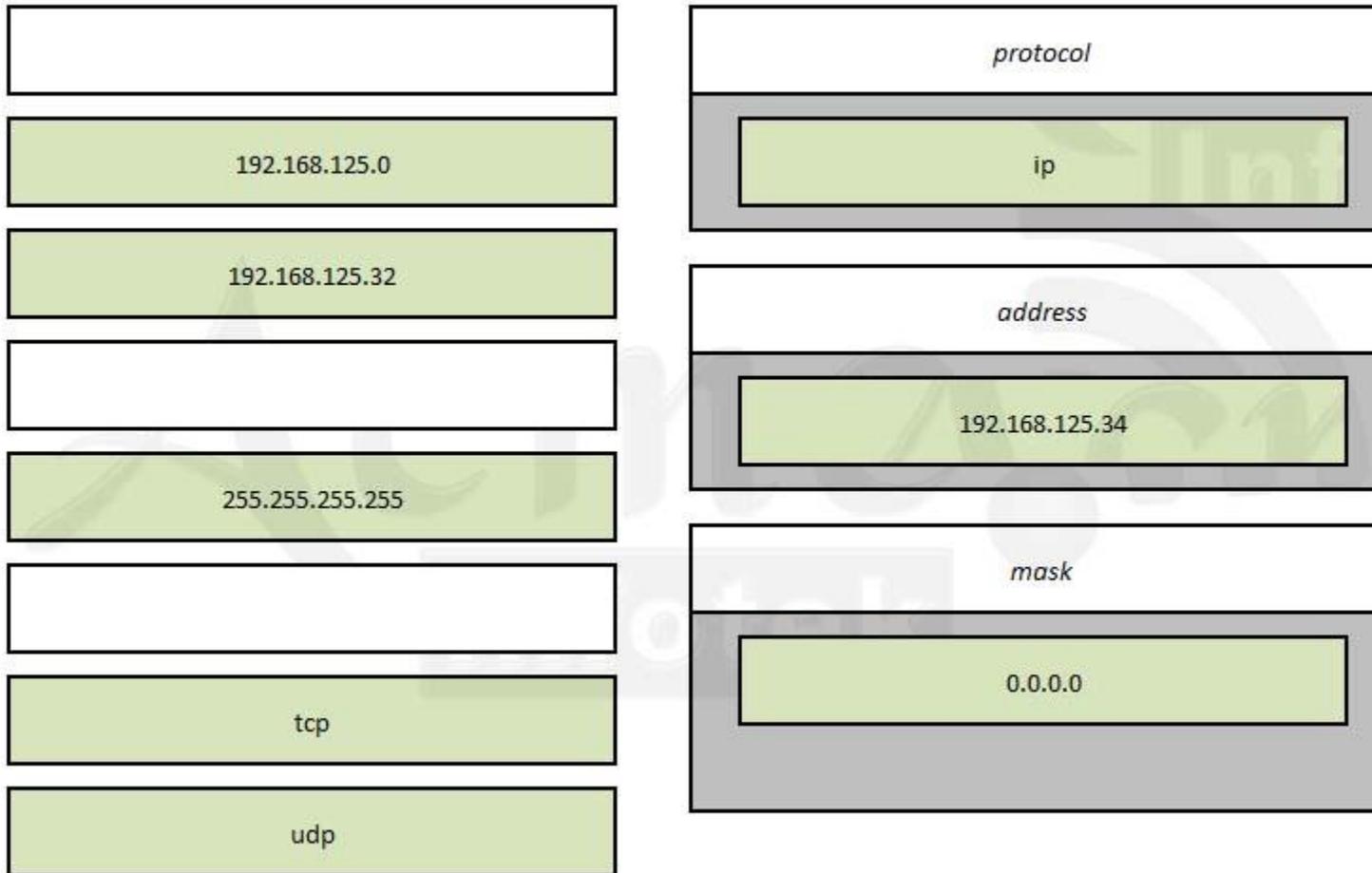
<i>protocol</i>
<input type="text"/>
<i>address</i>
<input type="text"/>
<i>mask</i>
<input type="text"/>

Select and Place:

- 0.0.0.0
- 192.168.125.0
- 192.168.125.32
- 192.168.125.34
- 255.255.255.255
- ip
- tcp
- udp

<i>protocol</i>
<input type="text"/>
<i>address</i>
<input type="text"/>
<i>mask</i>
<input type="text"/>

**Correct Answer:**



Section: (none)

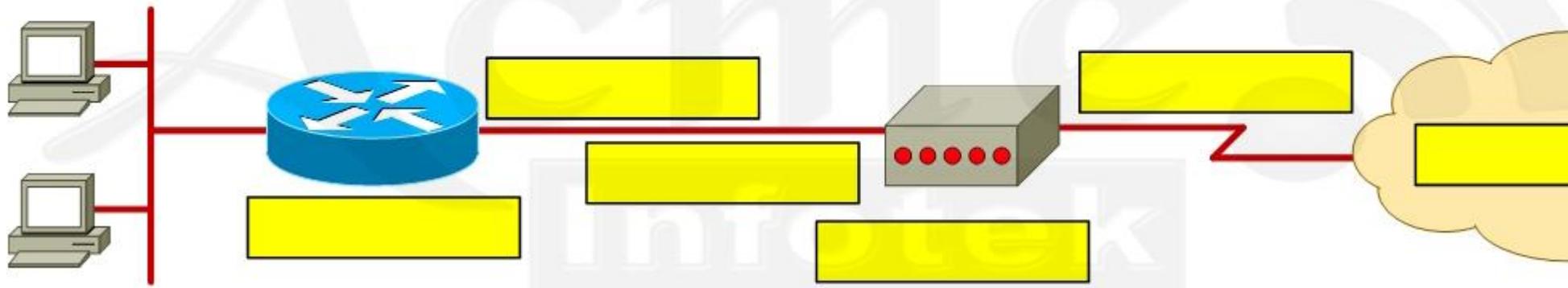
Explanation

Explanation/Reference:

#### QUESTION 18

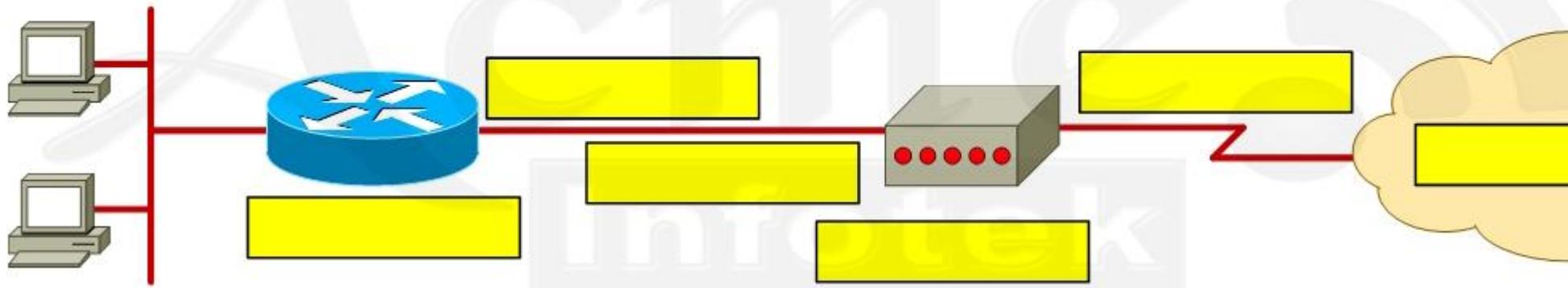
Refer to the exhibit. Complete the network diagram by dragging the correct device name or description to the correct location. Not all the names or descriptions will be used.

Analog Modem Asynchronous	CSU / DSU Synchronous	WAN Service Provider Link	Digital Line
Router	Switch	DCE	DTE

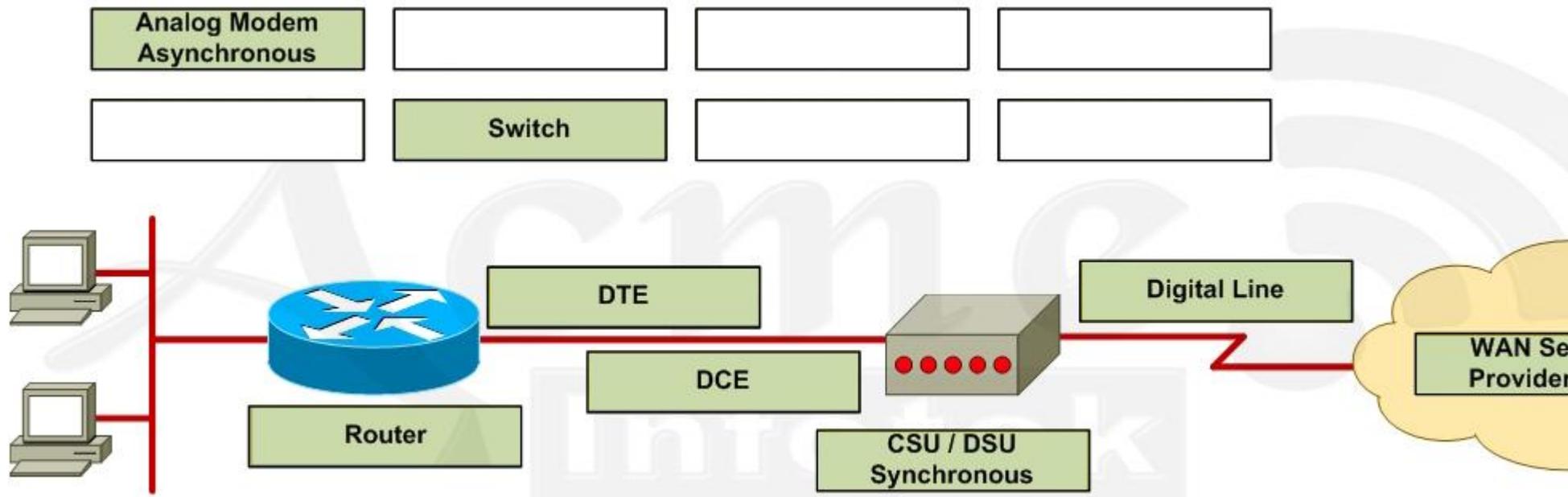


Select and Place:

Analog Modem Asynchronous	CSU / DSU Synchronous	WAN Service Provider Link	Digital Line
Router	Switch	DCE	DTE



Correct Answer:



**Section: (none)**

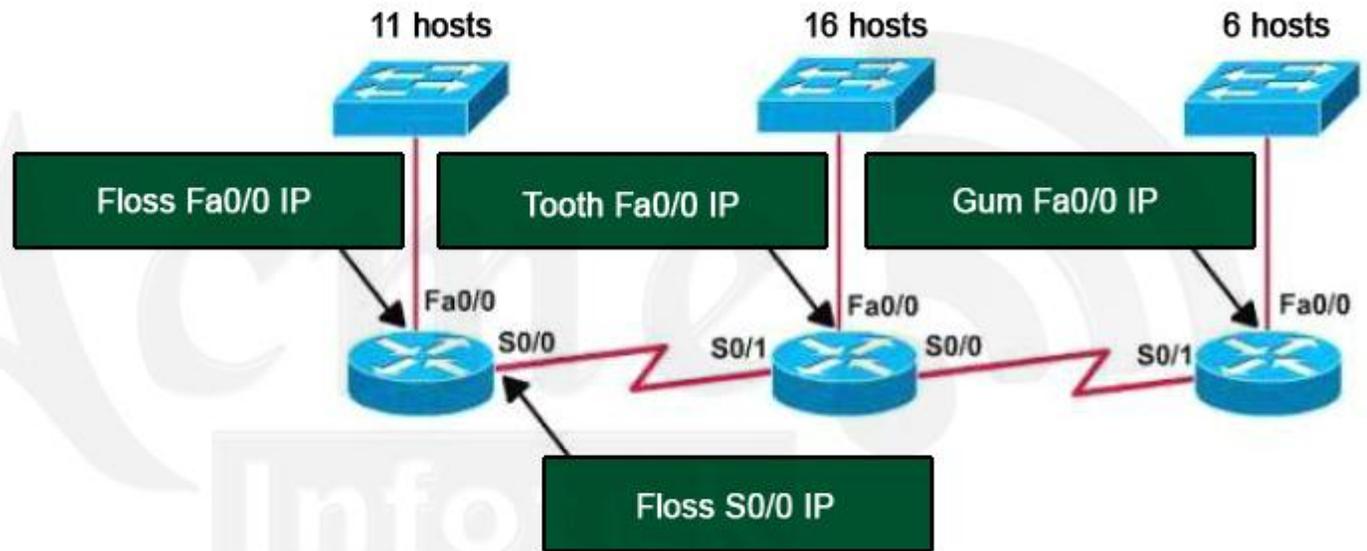
**Explanation**

**Explanation/Reference:**

**QUESTION 19**

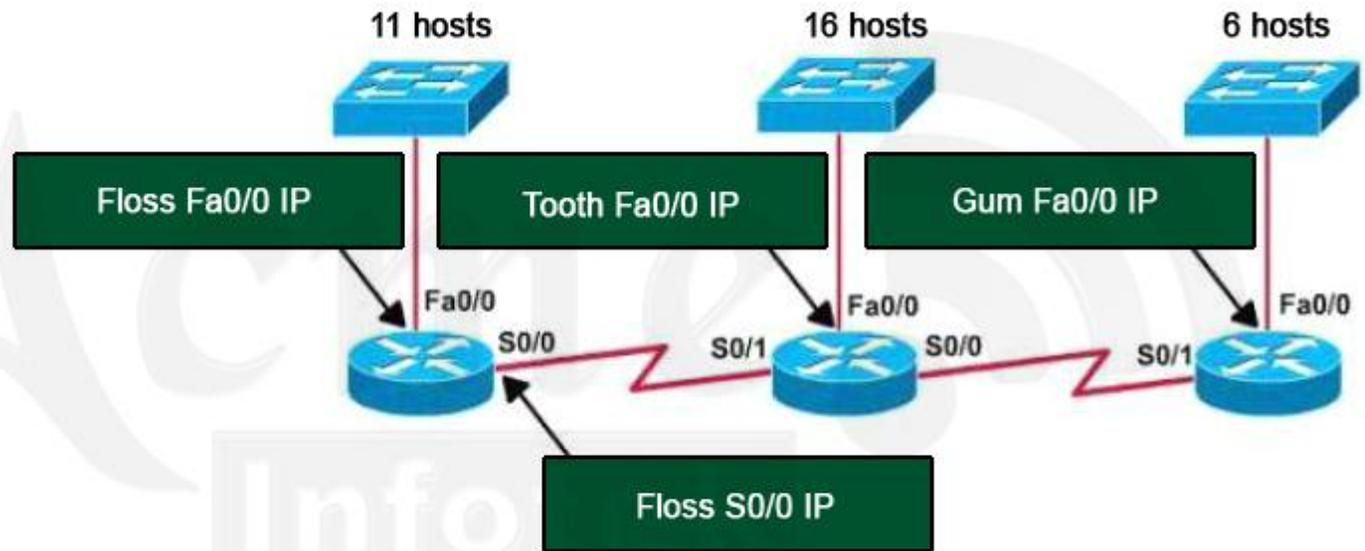
A dental firm is redesigning the network that connects its three locations. The administrator gave the networking team 192.168.164.0 to use for addressing the entire network. After subnetting the address, the team is ready to assign the addresses. The administrator plans to configure ip subnet-zero and use RIP v2 as the routing protocol. As a member of the networking team, you must address the network and at the same time conserve unused addresses for future growth. With those goals in mind, drag the host addresses on the left to the correct router interface. Once of the routers is partially configured. Move your mouse over a router to view its configuration. Not all of the host addresses on the left are necessary.

- 192.168.164.189 /30
- 192.168.164.166 /28
- 192.168.164.149 /27
- 192.168.164.188 /30
- 192.168.164.178 /29
- 192.168.164.255 /26



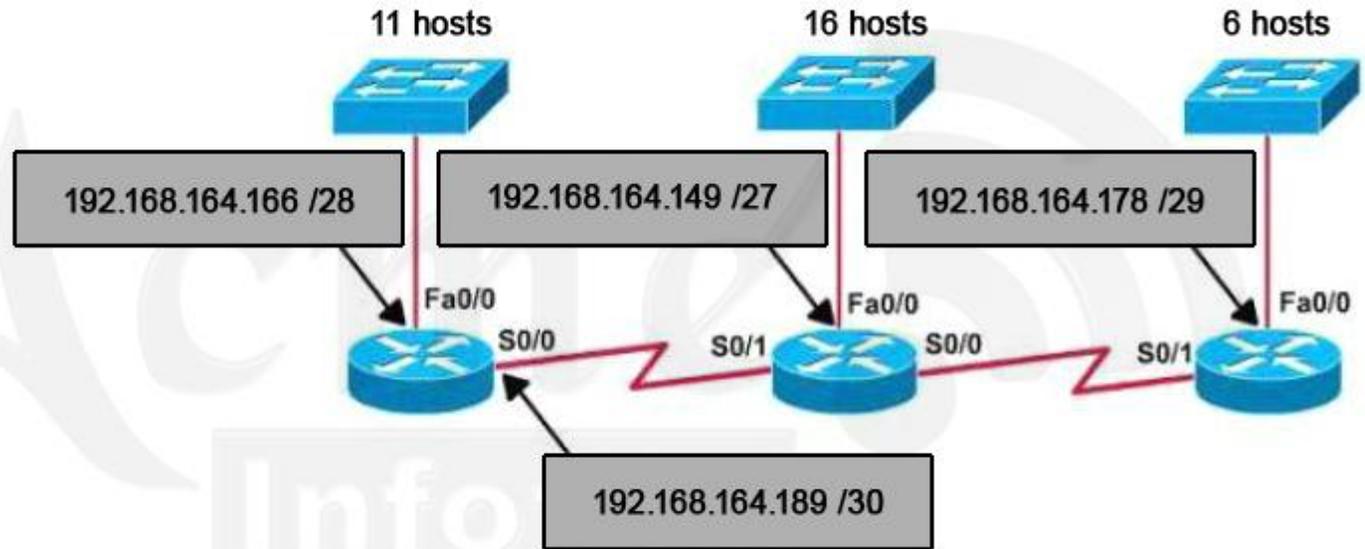
Select and Place:

- 192.168.164.189 /30
- 192.168.164.166 /28
- 192.168.164.149 /27
- 192.168.164.188 /30
- 192.168.164.178 /29
- 192.168.164.255 /26



Correct Answer:

- 
- 
- 
- 192.168.164.188 /30
- 
- 192.168.164.255 /26

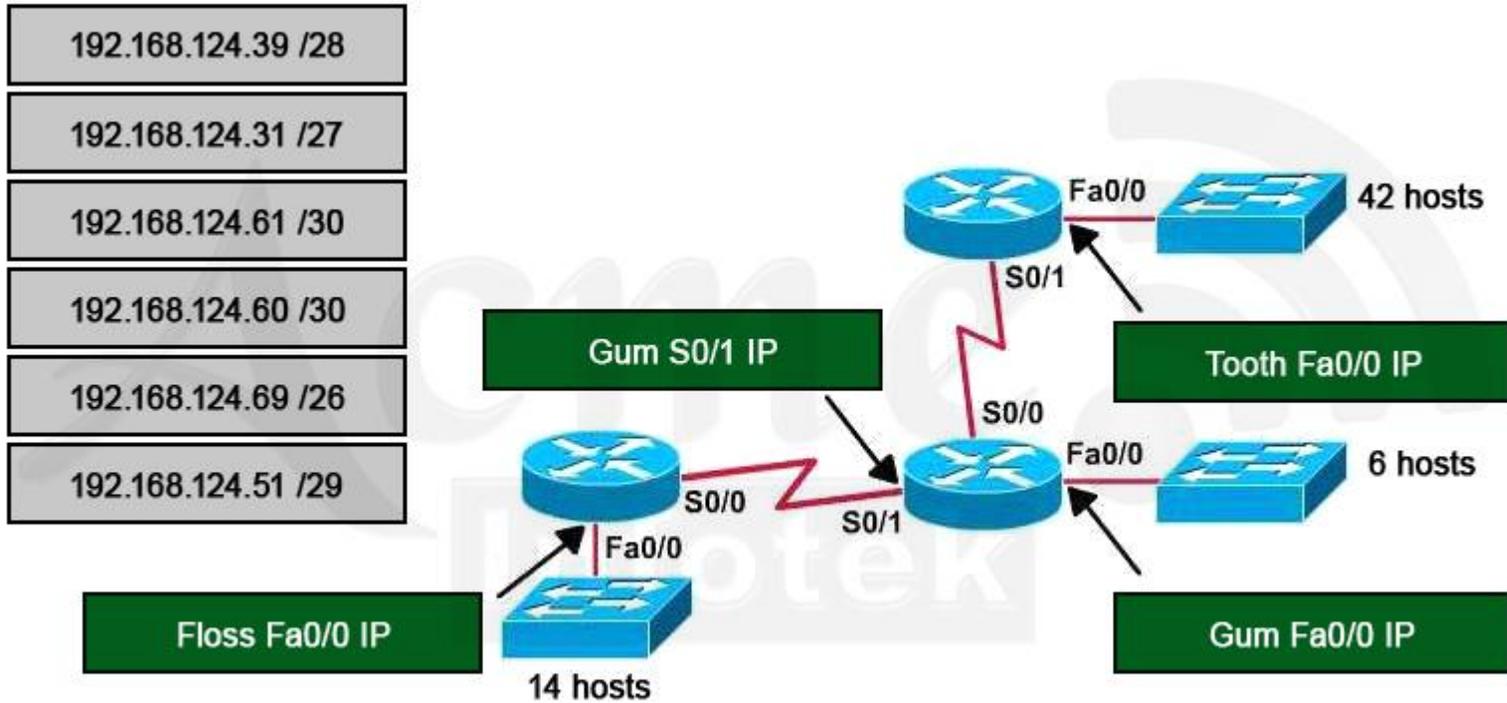


Section: (none)  
Explanation

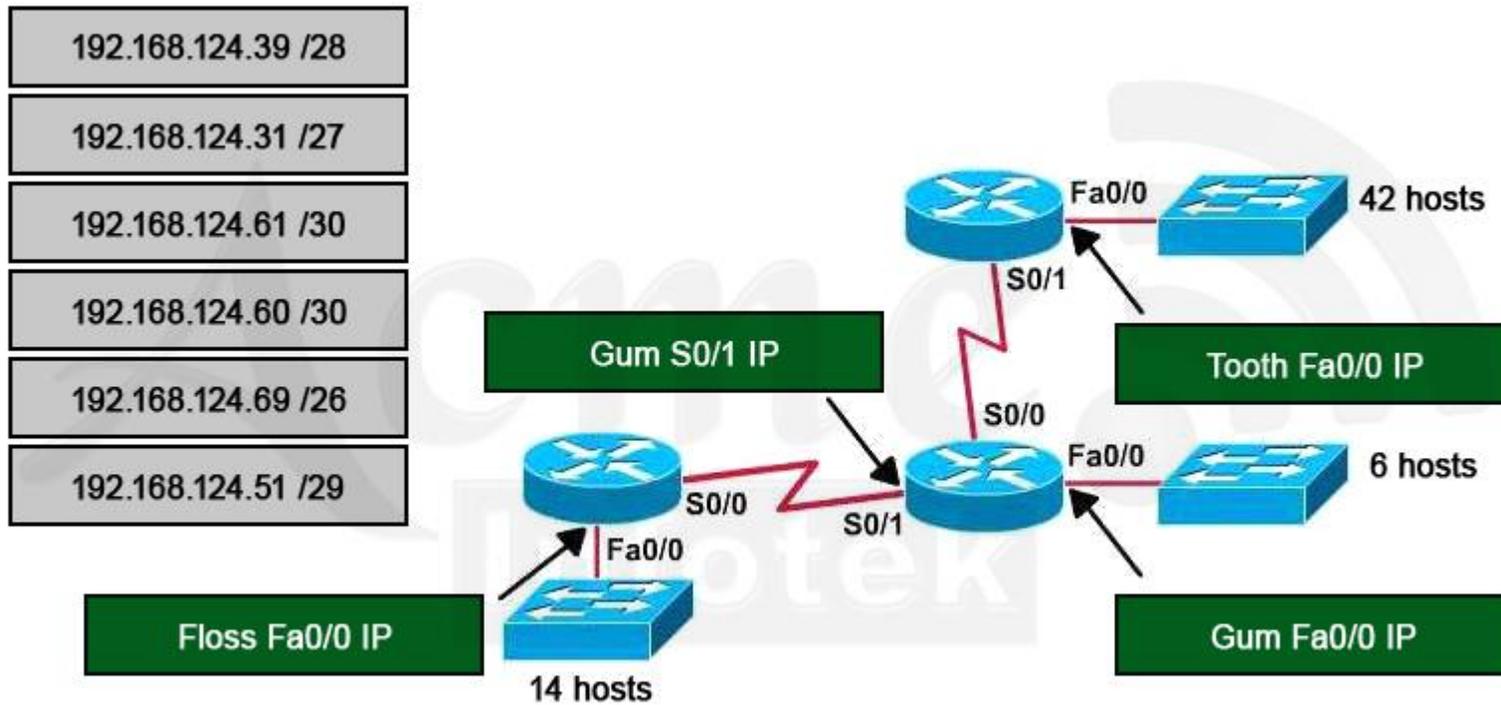
Explanation/Reference:

**QUESTION 20**

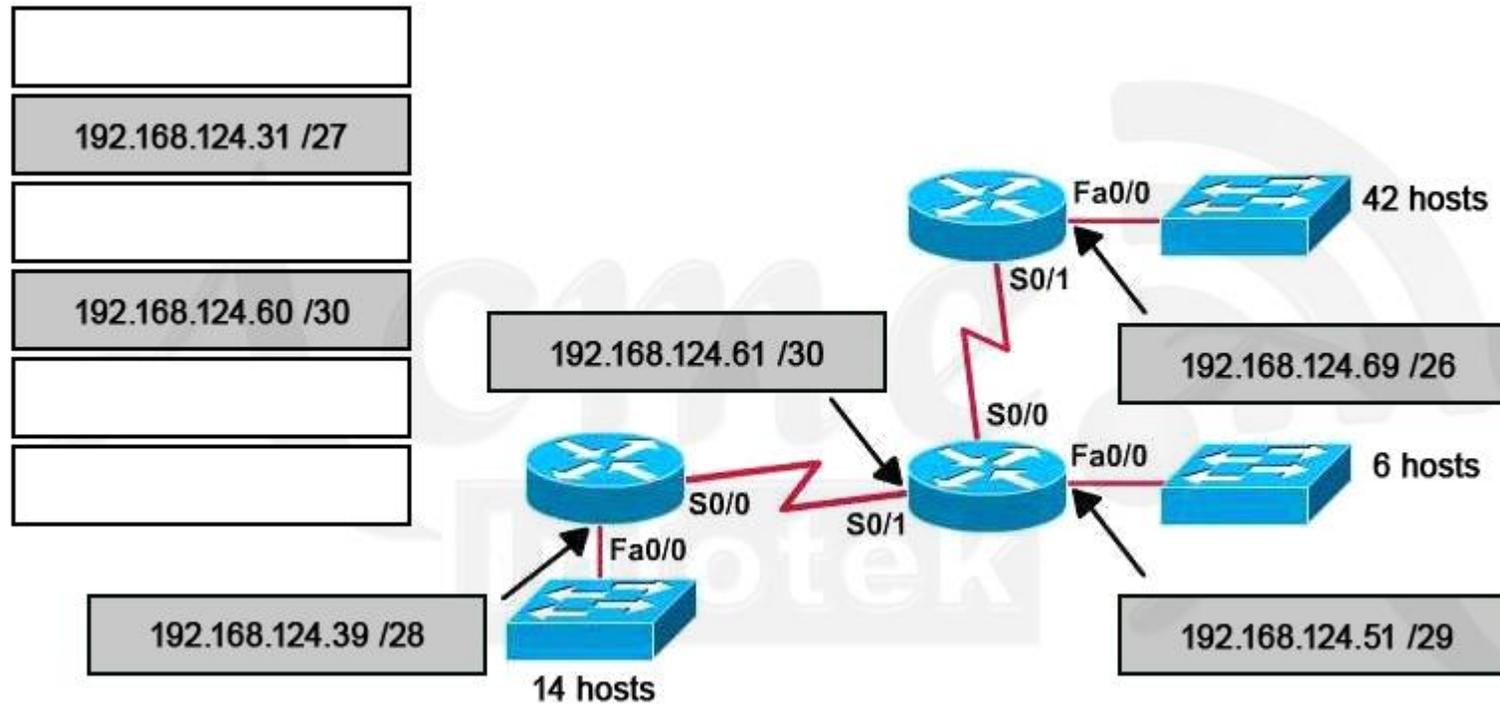
A dental firm is redesigning the network that connects its three locations. The administrator gave the networking team 192.168.164.0 to use for addressing the entire network. After subnetting the address, the team is ready to assign the addresses. The administrator plans to configure ip subnet-zero and use RIP v2 as the routing protocol. As a member of the networking team, you must address the network and at the same time conserve unused addresses for future growth. With those goals in mind, drag the host addresses on the left to the correct router interface. Once one of the routers is partially configured. Move your mouse over a router to view its configuration. Not all of the host addresses on the left are necessary.



Select and Place:



**Correct Answer:**

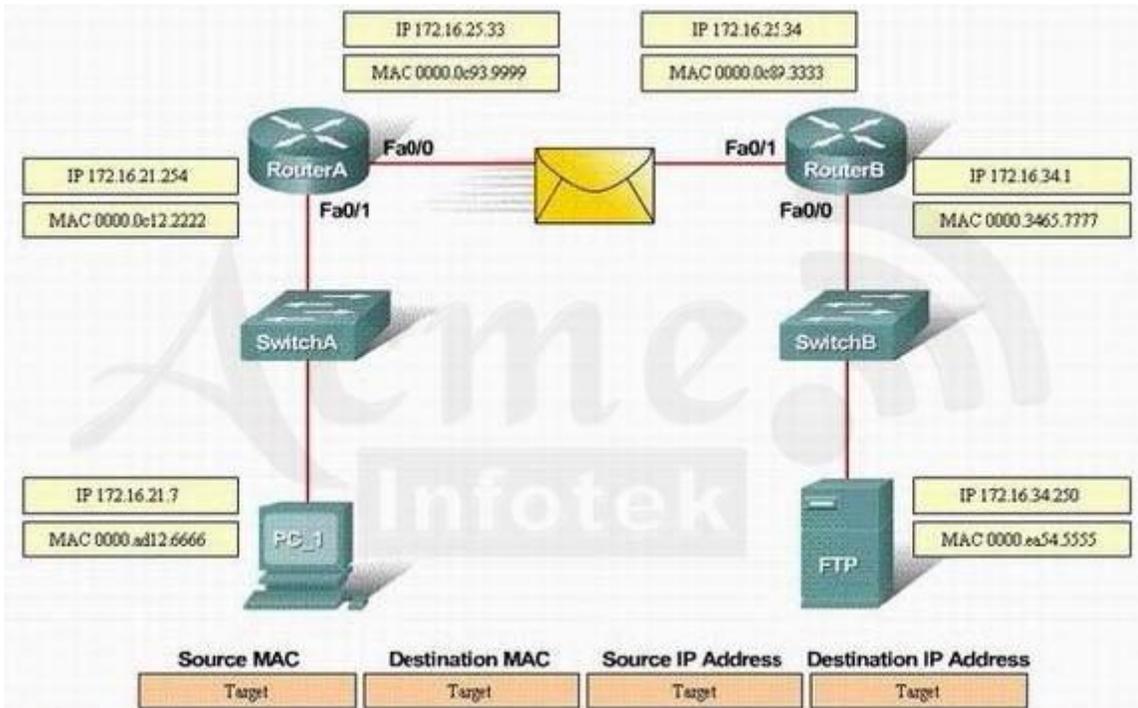


Section: (none)  
Explanation

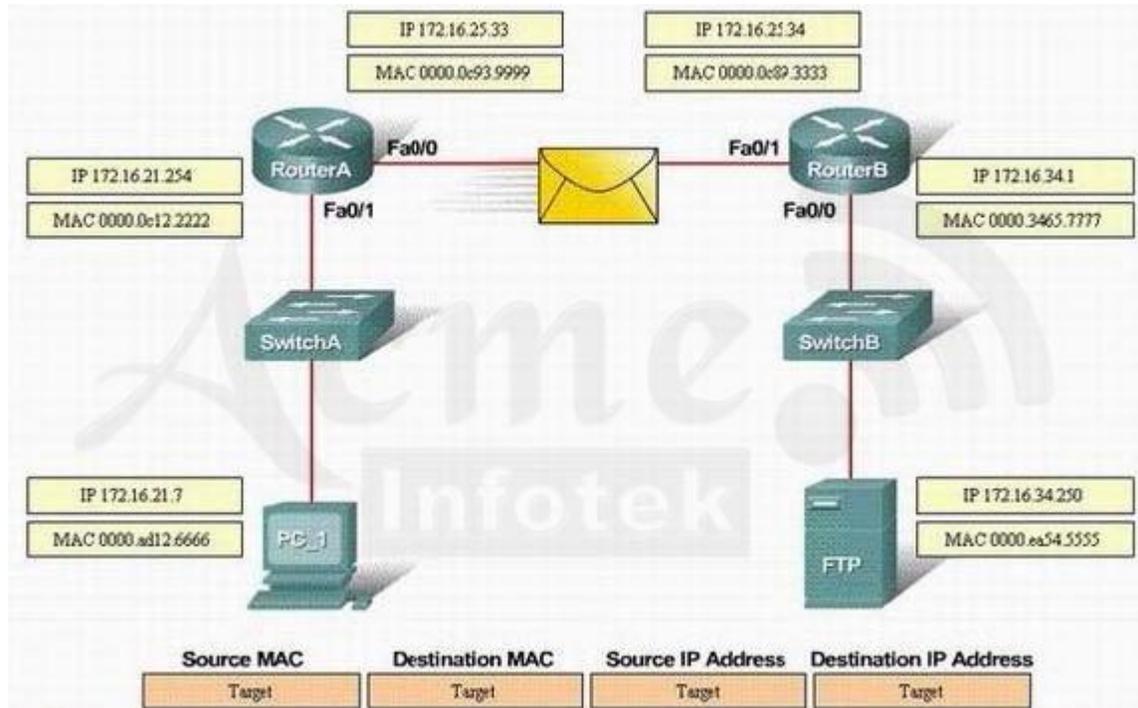
Explanation/Reference:

**QUESTION 21**

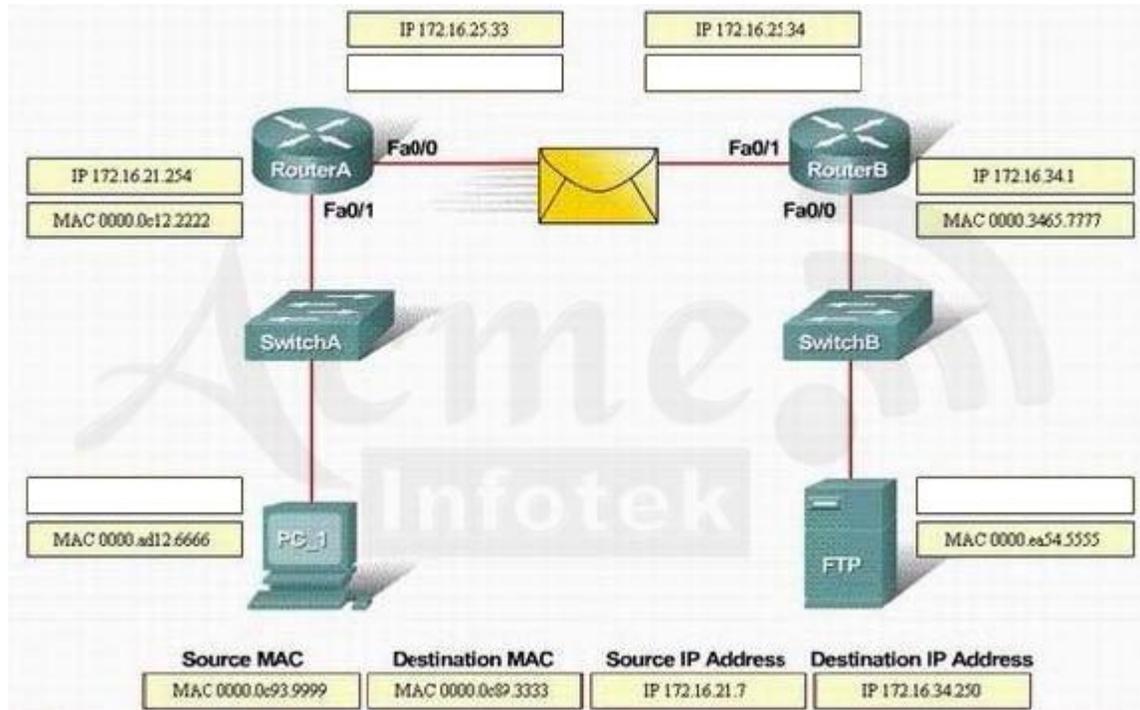
Refer to the exhibit. PC\_1 is sending packets to the FTP server. Consider the packets as they leave RouterA interface Fa0/0 towards RouterB. Drag the correct frame and packet address to their place in the table.



Select and Place:



Correct Answer:



Section: (none)

Explanation

Explanation/Reference:

**QUESTION 22**

A user is unable to connect to the internet. Based on the layered approach to troubleshooting and beginning with lowest layer. Follow the guide and drag the contents to relevant modules

verify URL

verify NIC operation

verify IP configuration

verify Ethernet cable connection

Step 1

Step 2

Step 3

Step 4

Select and Place:

verify URL

verify NIC operation

verify IP configuration

verify Ethernet cable connection

Step 1

Step 2

Step 3

Step 4

Correct Answer:

	verify Ethernet cable connection
	verify NIC operation
	verify IP configuration
	verify URL

**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 23**

Drag the Frame Relay acronym on the left to match its definition on the right. (Not all acronyms are used.)

CIR

DCE

DTE

LMI

PVC

SVC

DLCI

a router is this type of device

the most common type of virtual circuit

provides status message between DTE and DCE devices

identifies the virtual connection between DTE and the switch

Select and Place:

CIR	a router is this type of device
DCE	the most common type of virtual circuit
DTE	provides status message between DTE and DCE devices
LMI	identifies the virtual connection between DTE and the switch
PVC	
SVC	
DLCI	

Correct Answer:

CIR	DTE
DCE	PVC
	LMI
	DLCI
SVC	

Section: (none)  
Explanation

Explanation/Reference:

#### QUESTION 24

All hosts in the same subnet with 172.16.5.118 /26 must be denied telnet access to hosts outside the LAN. To complete the bracket command, [ **access-list listnumber deny tcp 172.16.5.address 0.0.0.mask any eq port** ]. Drag each appropriate option on the left to its proper placeholder on the right. (Not all options are used.)

0
1
23
63
64
80
128
255

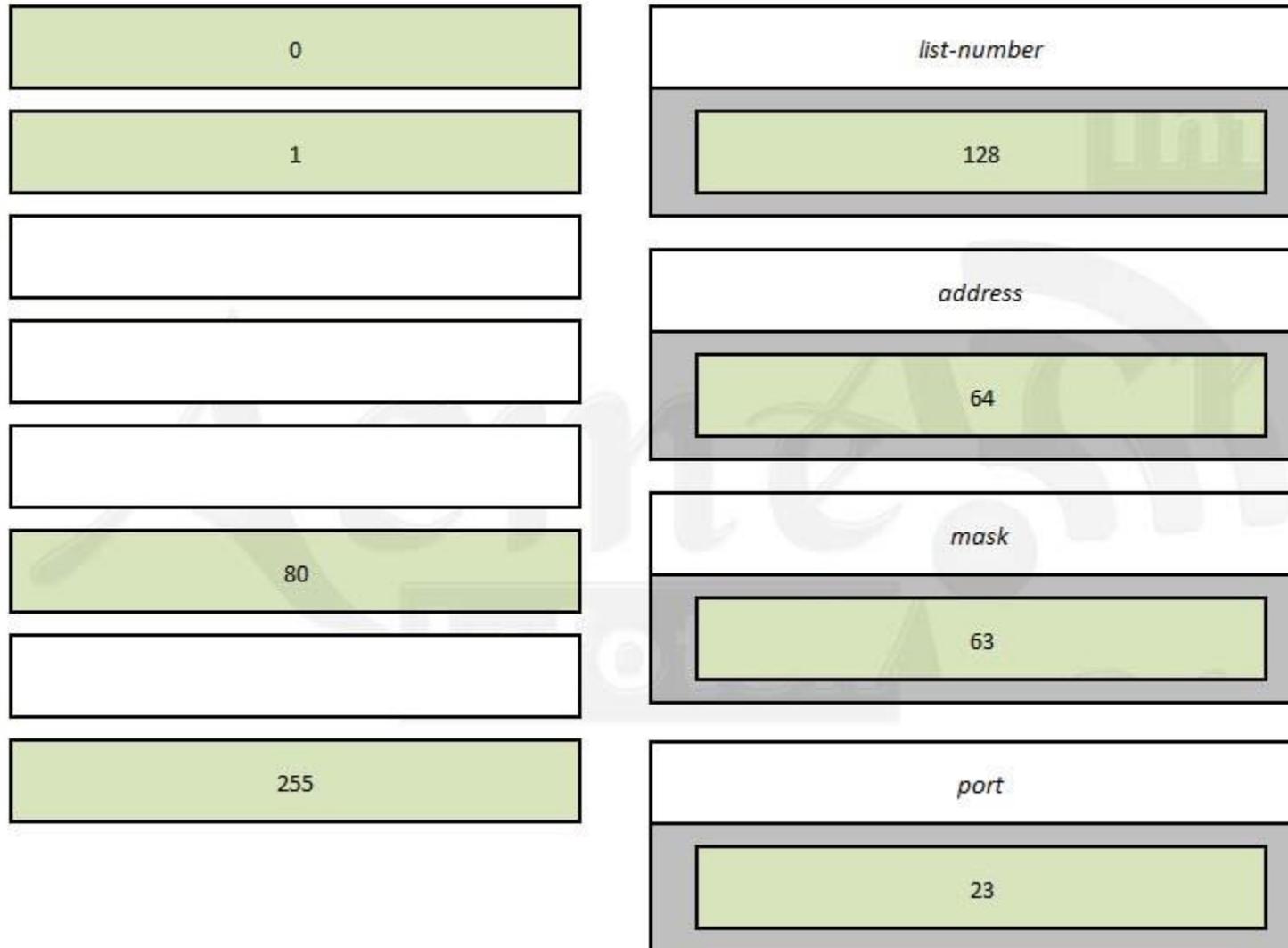
<i>list-number</i>
<input type="text"/>
<i>address</i>
<input type="text"/>
<i>mask</i>
<input type="text"/>
<i>port</i>
<input type="text"/>

Select and Place:

0
1
23
63
64
80
128
255

<i>list-number</i>
<input type="text"/>
<i>address</i>
<input type="text"/>
<i>mask</i>
<input type="text"/>
<i>port</i>
<input type="text"/>

Correct Answer:



**Section: (none)**  
**Explanation**

**Explanation/Reference:**

**QUESTION 25**

Drag the option on the left that best describes the unique advantage and disadvantage of each WAN link type to the correct box on the right.

- low speed
- quality
- more complex
- cost
- limited flexibility
- efficient

*point to point Advantage*

[Yellow box for notes]

*point to point Disadvantage*

[Yellow box for notes]

*Circuit switched Advantage*

[Yellow box for notes]

*Circuit switched Disadvantage*

[Yellow box for notes]

*Packet Switched Advantage*

[Yellow box for notes]

*Packet Switched Disadvantage*

[Yellow box for notes]

Select and Place:

- low speed
- quality
- more complex
- cost
- limited flexibility
- efficient

*point to point Advantage*

[Yellow box for answer]

*point to point Disadvantage*

[Yellow box for answer]

*Circuit switched Advantage*

[Yellow box for answer]

*Circuit switched Disadvantage*

[Yellow box for answer]

*Packet Switched Advantage*

[Yellow box for answer]

*Packet Switched Disadvantage*

[Yellow box for answer]

**Correct Answer:**


*point to point Advantage*

quality

*point to point Disadvantage*

limited flexibility

*Circuit switched Advantage*

cost

*Circuit switched Disadvantage*

low speed

*Packet Switched Advantage*

efficient

*Packet Switched Disadvantage*

more complex

Section: (none)  
Explanation

Explanation/Reference:

**QUESTION 26**

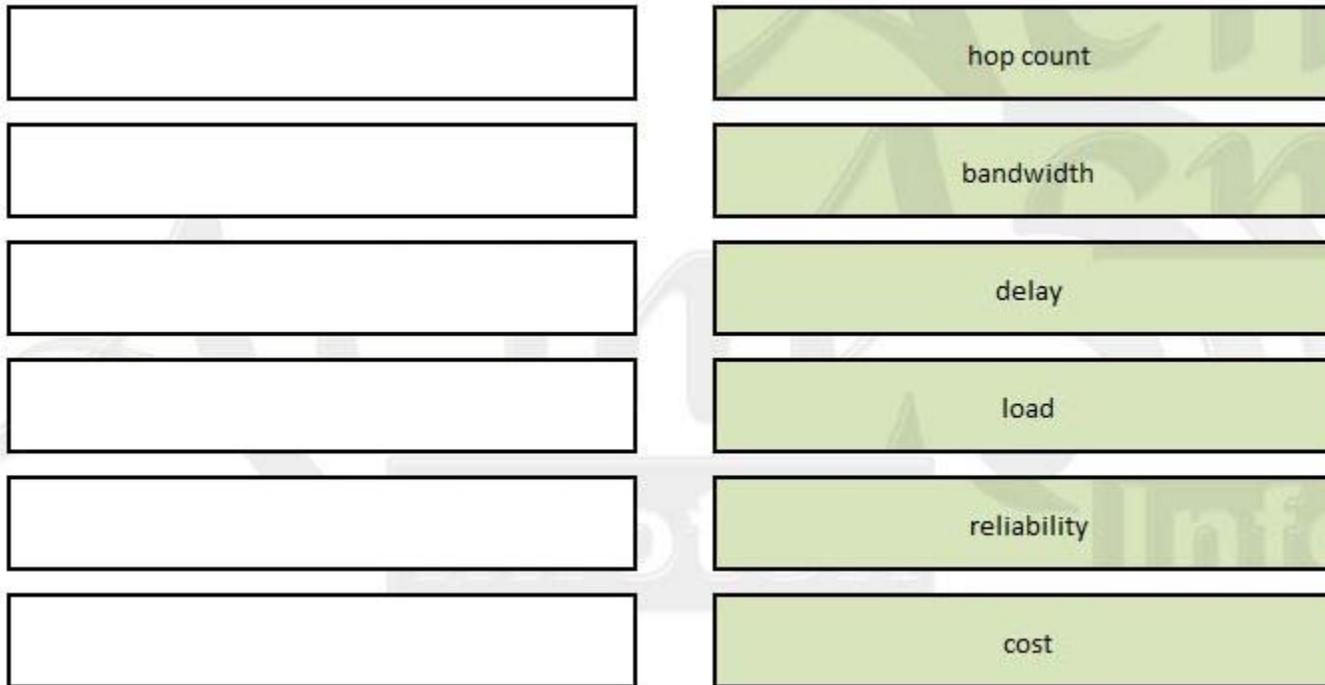
Drag and drop. Match the items on the left with its corresponding definition on the right.

cost	the number of point-to-point links in a transmission path
load	the data capacity of a link
bandwidth	the amount of time required to move a packet from source to destination
hop count	the amount of activity on a network resource
reliability	usually refers to the bit error rate of each network link
delay	a configurable value based by default on the bandwidth of the interface

Select and Place:

cost	the number of point-to-point links in a transmission path
load	the data capacity of a link
bandwidth	the amount of time required to move a packet from source to destination
hop count	the amount of activity on a network resource
reliability	usually refers to the bit error rate of each network link
delay	a configurable value based by default on the bandwidth of the interface

Correct Answer:



**Section: (none)**

**Explanation**

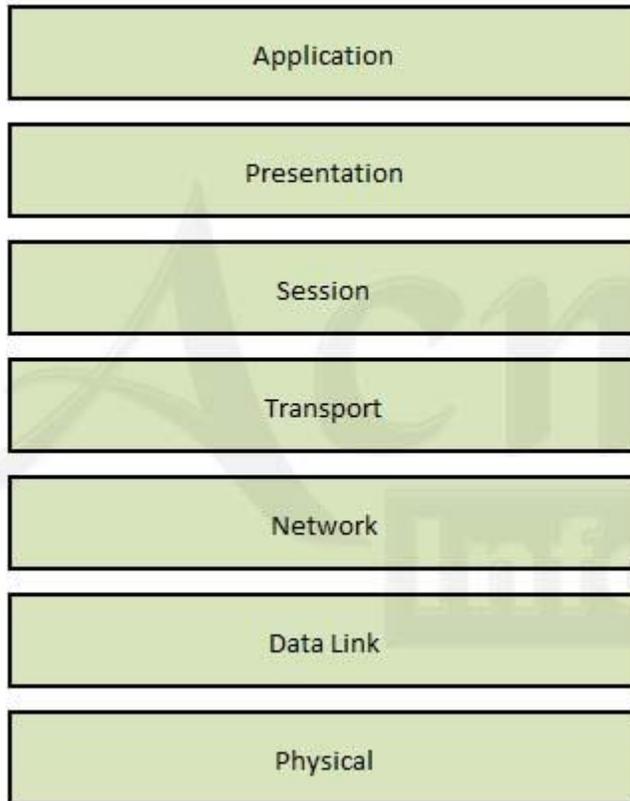
**Explanation/Reference:**

**QUESTION 27**

As a CCNA candidate, you are required to have a firm understanding of the OSI model.

At which layers of the OSI model do Wide Area Networks operate? Please drag the items to the proper locations.

*OSI Model*

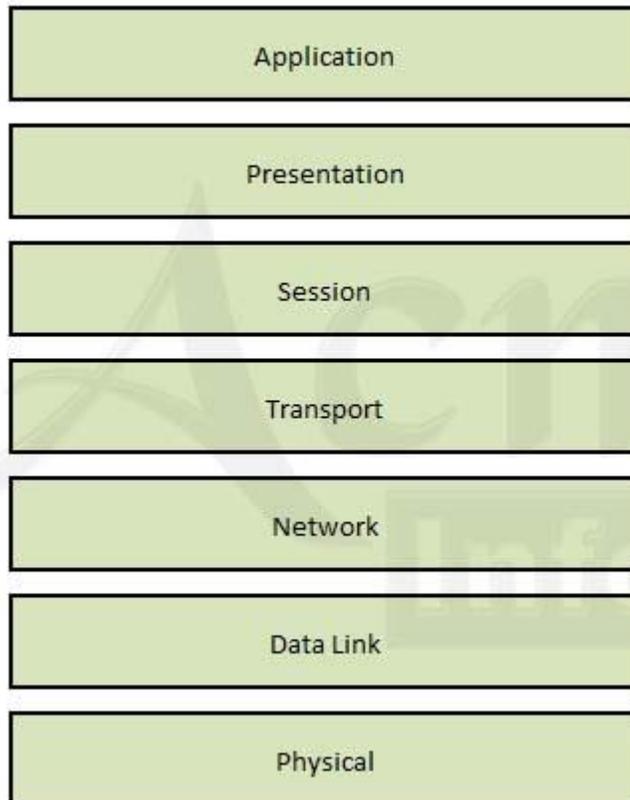


*Correct Choice*



**Select and Place:**

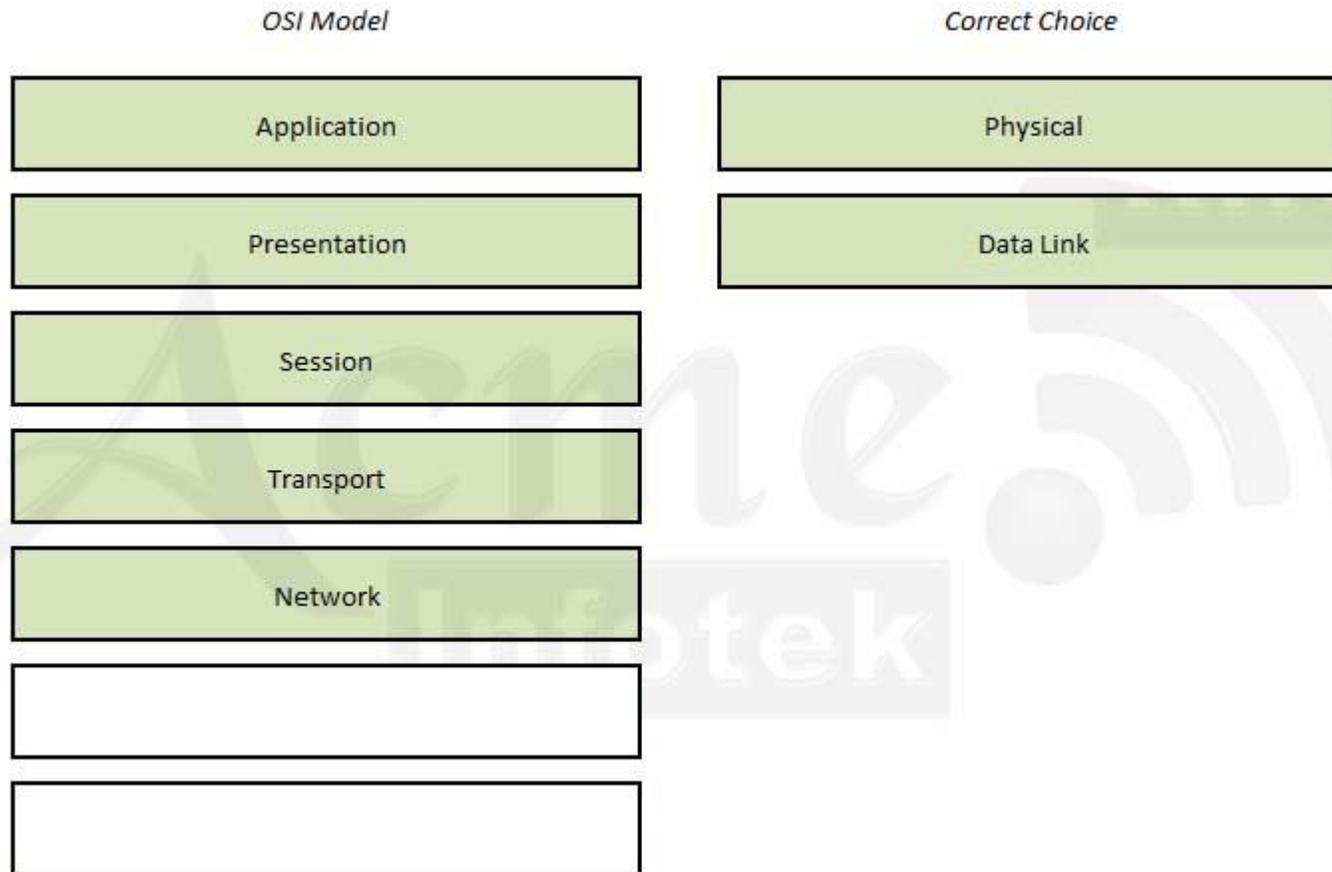
*OSI Model*



*Correct Choice*



**Correct Answer:**



**Section: (none)**  
**Explanation**

**Explanation/Reference:**

**QUESTION 28**

Drag and drop the network user application to the appropriate description of its primary use. (Not all options are used.)

email
web browser
instant message
IP telephony
collaboration
database

provides a way to look at and interact with information on the Internet
allows users to create and send text to other users in real time
allows users to send message and files to users on or outside their network
allows users to store and retrieve information from a central location
creates a space where users can interact on common projects

Select and Place:

email	provides a way to look at and interact with information on the Internet
web browser	allows users to create and send text to other users in real time
instant message	allows users to send message and files to users on or outside their network
IP telephony	allows users to store and retrieve information from a central location
collaboration	creates a space where users can interact on common projects
database	

Correct Answer:

	web browser
	instant message
	email
IP telephony	database
	collaboration

**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 29**

The left describes the types of cables, while the right describes the purposes of the cables. Drag the items on the left to the proper locations. (Not all items can be used.)

- crossover
- null modem
- straight-through
- rollover
- 9-25 pin serial

- switch access port to router
- switch to switch
- PC COM to Switch Console Port

Select and Place:

- crossover
- null modem
- straight-through
- rollover
- 9-25 pin serial

- switch access port to router
- switch to switch
- PC COM to Switch Console Port

Correct Answer:

	straight-through
null modem	crossover
	rollover
9-25 pin serial	

Section: (none)

Explanation

Explanation/Reference:

**QUESTION 30**

Drag the security feature on the left to the specific security risks they help protect against on the right. (Not all options are used.)

- access-group
- console password
- enable secret
- CHAP authentication
- VTY password
- service password-encryption

- remote access to device console
- access to the console 0 line
- access to connected network or resources
- viewing of passwords
- access to privileged mode

**Select and Place:**

- access-group
- console password
- enable secret
- CHAP authentication
- VTY password
- service password-encryption

- remote access to device console
- access to the console 0 line
- access to connected network or resources
- viewing of passwords
- access to privileged mode

**Correct Answer:**

	VTY password
	console password
	access-group
CHAP authentication	service password-encryption
	enable secret

**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 31**

As a CCNA candidate, you need to know EIGRP very well.

Which tables of EIGRP route information are held in RAM and maintained through the use of hello and update packets?  
Please choose two appropriate tables and drag the items to the proper locations.

- Neighbor table
- Query table
- DUAL table
- Topology table
- SPF table
- RTP table
- State table

- Place here
- Place here

Select and Place:

- Neighbor table
- Query table
- DUAL table
- Topology table
- SPF table
- RTP table
- State table

- Place here
- Place here

**Correct Answer:**



**Section: (none)**

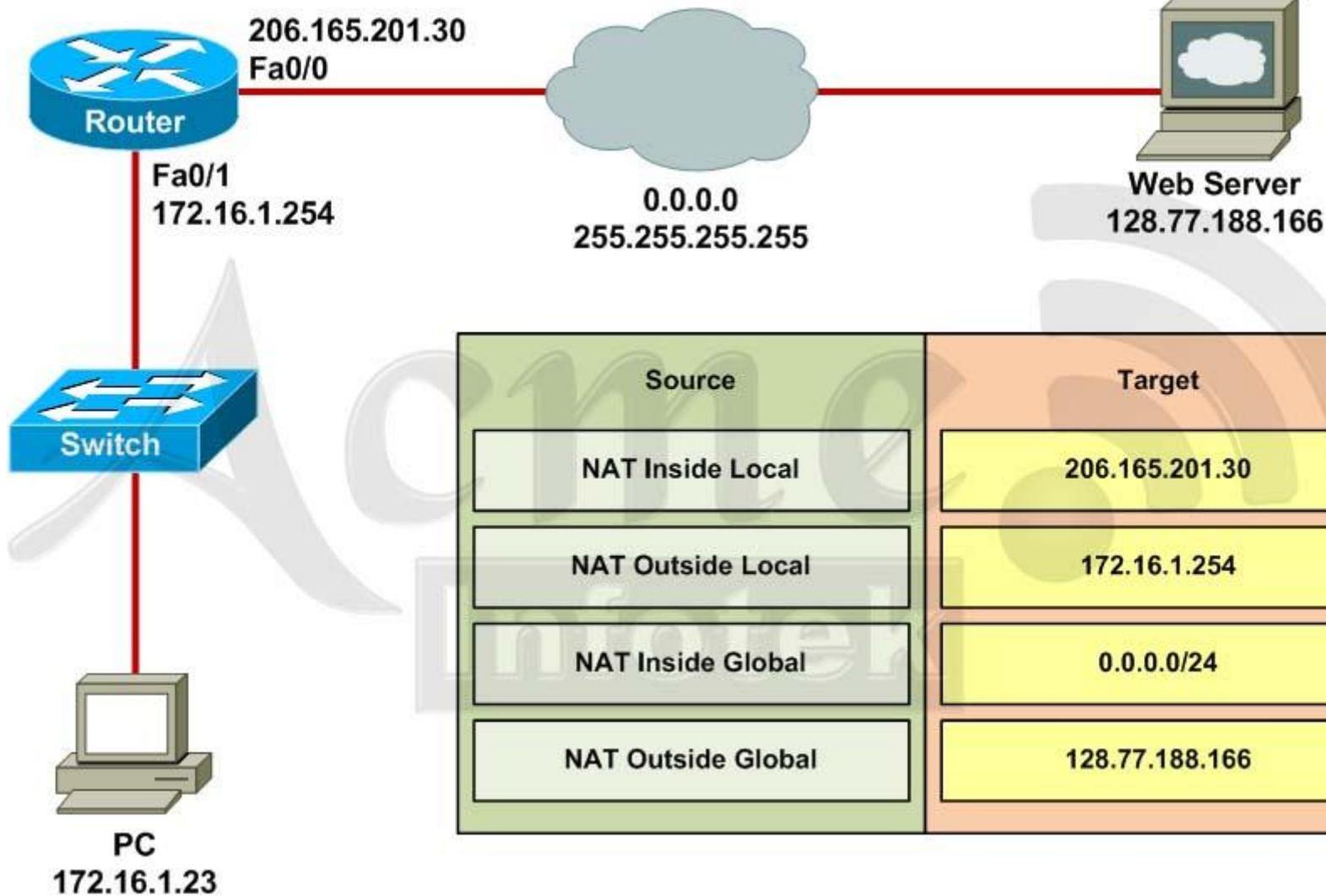
**Explanation**

**Explanation/Reference:**

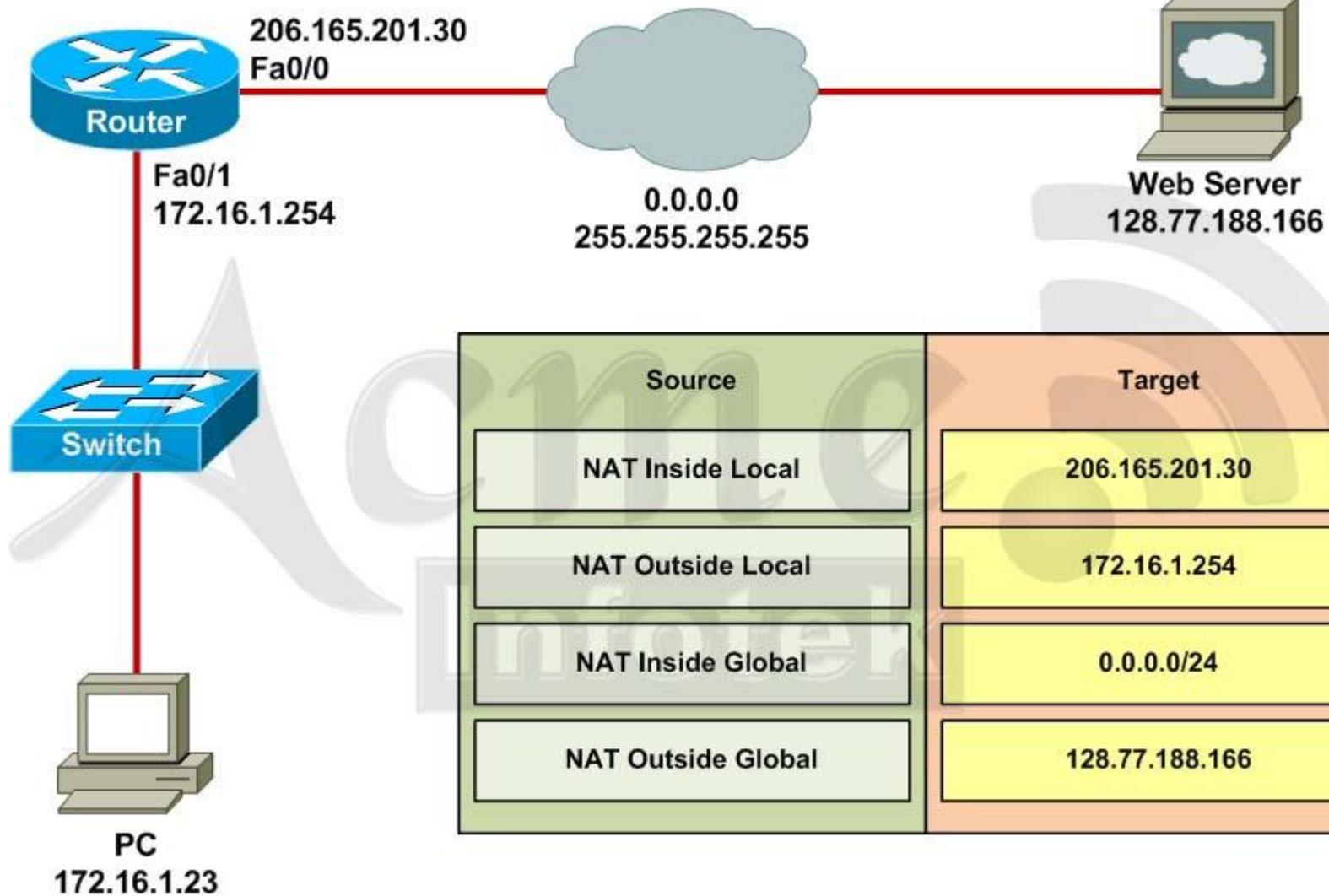
**QUESTION 32**

Refer to the exhibit. Router is configured to use NAT in overload mode. Host PC is sending packets to Web Server. Drag the addresses to fill in the NAT terminology table with their associated IP address values.

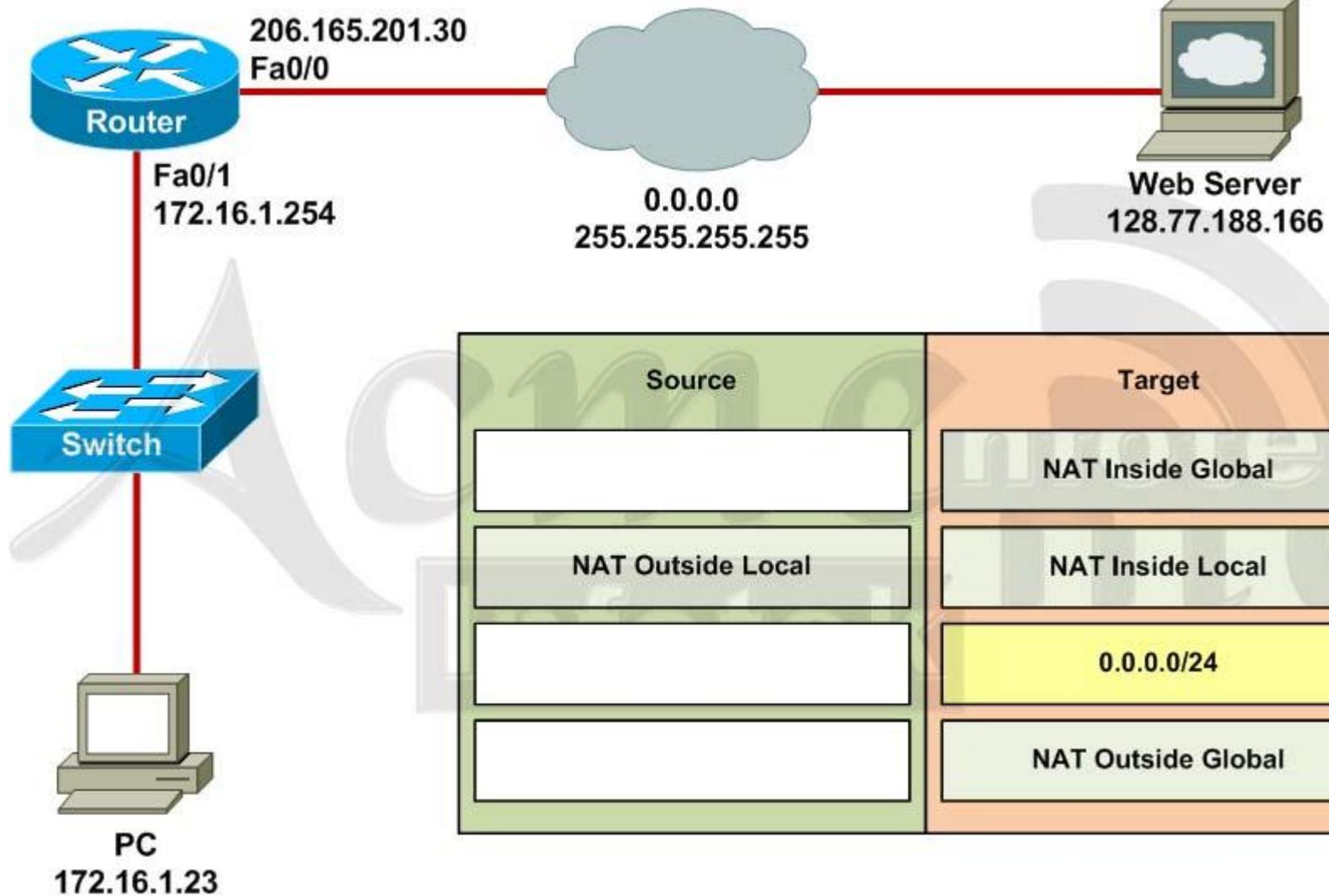
Note: Addresses may be used, none, once, or more.



Select and Place:



Correct Answer:



Section: (none)  
Explanation

Explanation/Reference:

**QUESTION 33**

In order to enhance the security of the enterprise network, the network administrators use ACL(Access Control lists). What are two reasons that the network administrator would use access lists?

To control VTY access into a router	Place here
To filter traffic that originates from the router	Place here
To filter traffic as it passes through a router	
To prevent the virus from entering network	

Select and Place:

To control VTY access into a router	Place here
To filter traffic that originates from the router	Place here
To filter traffic as it passes through a router	
To prevent the virus from entering network	

Correct Answer:

To control VTY access into a router

To filter traffic that originates from the router

To filter traffic as it passes through a router

To prevent the virus from entering network

**Section: (none)**

**Explanation**

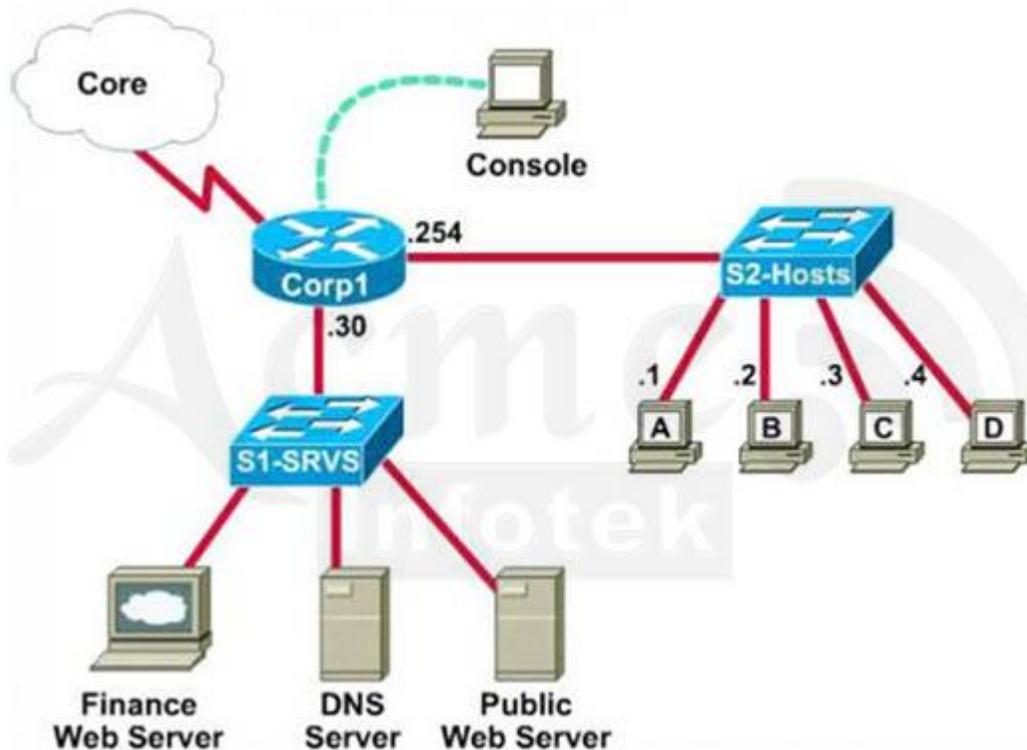
**Explanation/Reference:**

## Exam

### QUESTION 1

A network associate is adding security to the configuration of the Corp1 router. The user on host C should be able to use a web browser to access financial information from the Finance Web Server. No other hosts from the LAN nor the Core should be able to use a web browser to access this server. Since there are multiple resources for the corporation at this location including other resources on the Finance Web Server, all other traffic should be allowed.

The task is to create and apply a numbered access-list with no more than three statements that will allow ONLY host C web access to the Finance Web Server. No other hosts will have web access to the Finance Web Server. All other traffic is permitted.



Access to the Router CLI can be gained by clicking on the appropriate host.

All passwords have been temporarily set to "cisco".

The Core connection uses an IP address of 198.18.196.65

The computers in the Hosts LAN have been assigned addresses of 192.168.33.1 – 192.168.33.254

Host A 192.168.33.1  
Host B 192.168.33.2  
Host C 192.168.33.3  
Host D 192.168.33.4

The servers in the Server LAN have been assigned addresses of 172.22.242.17 – 172.22.242.30

The Finance Web Server is assigned an IP address of 172.22.242.23.

The Public Web Server is assigned an IP address of 172.22.242.17

A. Select to answer this question

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Click the console PC and enter the following commands.

```
Corp1>enable
Password: cisco
```

We should create an access-list and apply it to the interface which is connected to the Server LAN because it can filter out traffic from both Sw-Hosts and Core networks. The Server LAN network has been assigned addresses of 172.22.242.17 - 172.22.242.30 so we can guess the interface connected to them has an IP address of 172.22.242.30 (.30 is the number shown in the figure). Use the "**show ipint brief**" command to check which interface has the IP address of 172.22.242.30.

```
Corp1# show ip int brief
```

Interface	IP-Address	OK?	Method	Status	Protocol
FastEthernet0/0	192.168.33.254	YES	manual	up	up
FastEthernet0/1	172.22.242.30	YES	manual	up	up
Serial0/0	198.18.196.65	YES	manual	up	up

We learn that interface FastEthernet0/1 is the interface connected to Server LAN network. It is the interface we will apply our access-list (for outbound direction)

```
Corp1# configure terminal
```

Our access-list needs to allow host C - 192.168.33.3 to the Finance Web Server 172.22.242.23 via web (port 80)

```
Corp1(config)# access-list 100 permit tcp host 192.168.33.3 host 172.22.242.23 eq 80
```

Deny other hosts access to the Finance Web Server via web

```
Corp1(config)# access-list 100 deny tcp any host 172.22.242.23 eq 80
```

All other traffic is permitted

```
Corp1(config)# access-list 100 permit ip any any
```

Apply this access-list to Fa0/1 interface (outbound direction)

```
Corp1(config)# int fa0/1
Corp1(config-if)# ip access-group 100 out
Corp1(config-if)# end
```

Notice:

We have to apply the access-list to Fa0/1 interface (not Fa0/0 interface) so that the access-list can filter traffic coming from the Core network.

Click on host C and open its web browser. In the address box type **http://172.22.242.23** to check if you are allowed to access Finance Web Server or not. If your configuration is correct then you can access it.

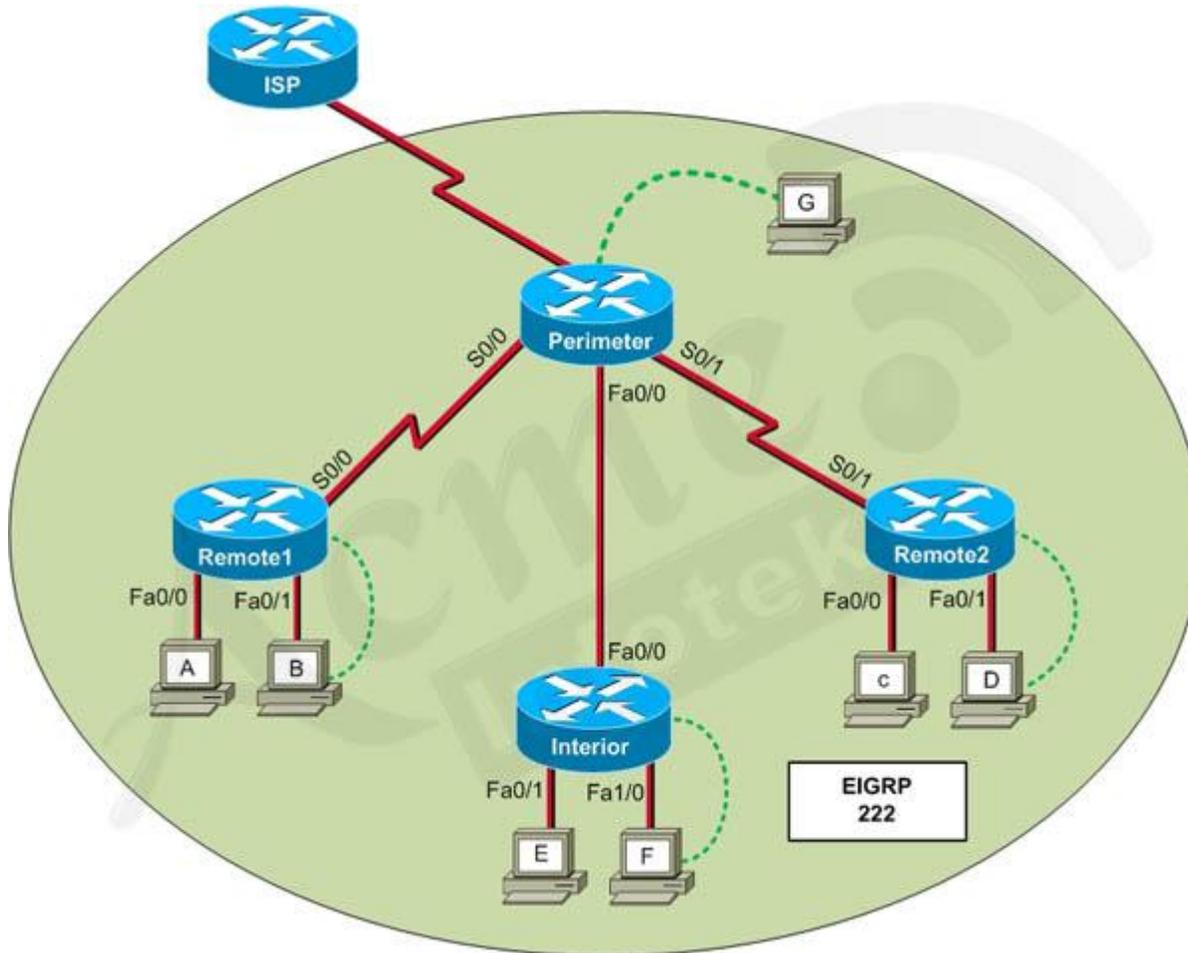
Click on other hosts (A, B and D) and check to make sure you can't access Finance Web Server from these hosts.

Finally, save the configuration

```
Corp1# copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
Corp1#
```

## QUESTION 2

After adding Interior router, no routing updates are being exchanged between Perimeter and the new location. All other inter connectivity and Internet access for the existing locations of the company are working properly.



The Task is to identify the fault(s) and correct the router configurations to provide full connectivity between the routers.

Access to the router CLI can be gained by clicking on the appropriate host.

All passwords on all routers are cisco.

IP Address are listed in the chart below

Perimeter	
Fa0/0	192.168.77.33
S1/0	198.0.18.6
S1/1	192.168.60.25

Interior	
Fa0/0	192.168.77.34
Fa1/0	192.168.60.81
Fa0/1	192.168.60.65

Remote1	
Fa0/0	192.168.60.97
Fa0/1	192.168.60.113
S0/0	192.168.36.14

Remote2	
Fa0/0	192.168.60.129
Fa0/1	192.168.60.145
S0/1	192.168.60.26

A. [Click here to answer this question](#)

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**Commands**

First we should check the configuration of the **Interior** Router.

Click the console PC “**F**” and enter the following commands.

```
Interior> enable
Password: cisco
Interior# show running-config
Building configuration...

Current configuration : 770 bytes
!
version 12.2
no service timestamps log datetime msec
no service timestamps debug datetime msec
```

```
no service password-encryption
!
hostname Interior
!
enable secret 5 1mERr$hx5rVt7rPNoS4wqbXKX7m0
!
interface FastEthernet0/0
 ip address 192.168.77.34 255.255.255.252
 duplex auto
 speed auto
!
interface FastEthernet0/1
 ip address 192.168.60.65 255.255.255.240
 duplex auto
 speed auto
!
interface FastEthernet1/0
 ip address 192.168.60.81 255.255.255.240
 duplex auto
 speed auto
!
router eigrp 22
 network 192.168.77.0
 network 192.168.60.0
 no auto-summary
!
ip classless
!
line con 0
line vty 0 4
 login
!
end
Interior#
```

From the output above, we know that this router was wrongly configured with an autonomous number (AS) of 22. When the AS numbers among routers are mismatched, no adjacency is formed.  
(You should check the AS numbers on other routers for sure)

To solve this problem, we simply re-configure router Interior router with the following commands:

```
Interior# conf t
Interior(config)# no router eigrp 22
Interior(config)# router eigrp 222
```

```
Interior(config-router)# network 192.168.60.0
Interior(config-router)# network 192.168.77.0
Interior(config-router)# no auto-summary
Interior(config-router)# end
Interior# copy running-config startup-config
```

Second we should check the configuration of the **Perimeter** Router.

Click the console PC “**G**” and enter the following commands.

```
Perimeter> enable
Password: cisco
Perimeter# show running-config
Building configuration...

Current configuration : 1029 bytes
!
version 12.2
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Perimeter
!
enable secret 5 1mERr$hx5rVt7rPNoS4wqbXKX7m0
!
interface FastEthernet0/0
 ip address 192.168.77.33 255.255.255.252
 duplex auto
 speed auto
!
interface Serial0/0
 ip address 192.168.36.13 255.255.255.252
 clock rate 64000
!
interface Serial0/1
 ip address 192.168.60.25 255.255.255.252
 clock rate 64000
!
interface Serial1/0
 ip address 198.0.18.6 255.255.255.0
!
```

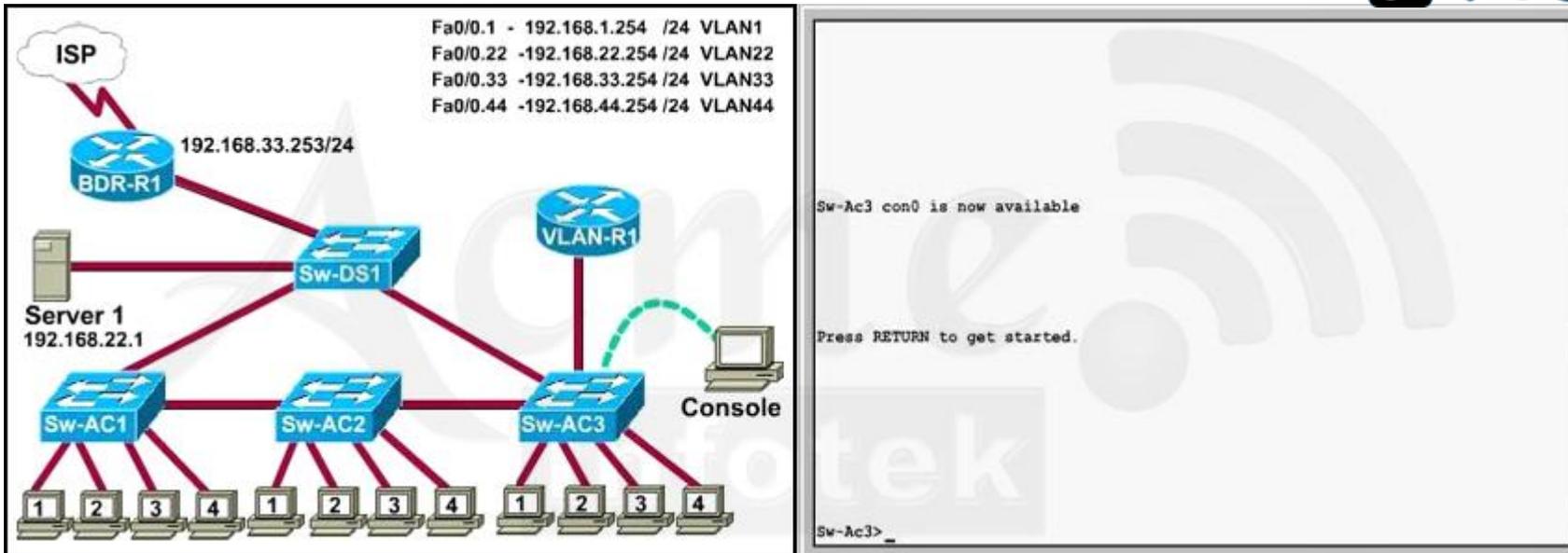
```
interface Serial1/1
 no ip address
 shutdown
!
interface Serial1/2
 no ip address
 shutdown
!
interface Serial1/3
 no ip address
 shutdown
!
router eigrp 222
 network 192.168.36.0
 network 192.168.60.0
 network 192.168.85.0
 network 198.0.18.0
 no auto-summary
!
ip classless
ip route 0.0.0.0 0.0.0.0 198.0.18.5
!
line con 0
line vty 0 4
 login
!
end
Perimeter#
```

Notice that it is missing a definition to the network Interior. Therefore we have to add it so that it can recognize Interior router

```
Perimeter# conf t
Perimeter(config)# router eigrp 222
Perimeter(config-router)# network 192.168.77.0
Perimeter(config-router)# end
Perimeter# copy running-config startup-config
```

Now the whole network will work well. You should check again with ping command from router Interior to other routers!

### QUESTION 3



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.

**show mac-address-table (exhibit):**

```
Sw-Ac3#show mac-address-table
Mac Address Table
```

```

VLAN MAC Address Type Ports

A11 000f.2485.8900 STATIC CPU
A11 0100.0ccc.cccc STATIC CPU
A11 0100.0ccc.cccd STATIC CPU
A11 0100.0cdd.dddd STATIC CPU
1 0009.e8b2.c28c DYNAMIC FA0/12
1 000a.b7e9.8360 DYNAMIC FA0/3
1 000f.2485.8b49 DYNAMIC FA0/9
22 0009.e8b2.c28c DYNAMIC FA0/12
22 000a.b7e9.8360 DYNAMIC FA0/3
22 0010.5a0c.ffba DYNAMIC FA0/8
33 0009.e8b2.c28c DYNAMIC FA0/12
33 000a.b7e9.8360 DYNAMIC FA0/3
33 000c.ce8d.8860 DYNAMIC FA0/12
33 0010.5a0c.fd86 DYNAMIC FA0/6
33 0010.5a0c.feae DYNAMIC FA0/12
33 0010.5a0c.ff9f DYNAMIC FA0/1
44 0009.e8b2.c28c DYNAMIC FA0/12
--More--
```

show int trunk (exhibit):

```
Sw-Ac3#show int trunk
Port Mode Encapsulation Status Native vlan
Fa0/3 on 802.1q trunking 1
Fa0/9 desirable 802.1q trunking 1
Fa0/12 desirable 802.1q trunking 1

Port Vlans allowed on trunk
Fa0/9 1-4094
Fa0/12 1-4094

Port Vlans allowed and active in management domain
Fa0/9 1
Fa0/12 1

Port Vlans in spanning tree forwarding state and not pruned
Fa0/9 none
Fa0/12 none
```

**show cdp neighbors (exhibit):**

```
Sw-Ac3#show cdp neighbors
Capability Codes: R - Router, T - Trans Bridge, B - Source Route Bridge
 S - Switch, H - Host, I - IGMP, r - Repeater, P - Phone

Device ID Local Intrfce Holdtme Capability Platform Port ID
Sw-DS1 Fas 0/12 136 S I WS-C2950G- Fas 0/12
Sw-AC2 Fas 0/9 170 S I WS-C2950G- Fas 0/9
VLAN-R1 Fas 0/3 157 R 2620 Fas 0/0.1
```

**show spanning-tree vlan 1 (exhibit):**

```
Sw-Ac3#show spanning-tree vlan 1
```

```
VLAN0001
```

```
Spanning tree enabled protocol ieee
```

```
Root ID Priority 24577
Address 0009.e8b2.c280
Cost 19
Port 12(FastEthernet0/12)
Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec
```

```
Bridge ID Priority 32769 (priority 32768 sys-id-ext 1)
Address 000f.2485.8900
Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec
Aging Time 300
```

Interface	Role	Sts	Cost	Prio.Nbr	Type
Fa0/3	Desg	FWD	19	128.2	P2p
Fa0/9	Desg	FWD	19	128.9	P2p
Fa0/12	Root	FWD	19	128.12	P2p

```
show vtp status (exhibit):
```

```
Sw-Ac3#show vtp status
VTP Version : 2
Configuration Revision : 5
Maximum VLANs supported locally : 255
Number of existing VLANs : 7
VTP Operating Mode : Client
VTP Domain Name : home-office
VTP Pruning Mode : Enabled
VTP V2 Mode : Disabled
VTP Traps Generation : Disabled
MD5 digest : 0x7D 0x5A 0xA6 0x0E 0x9A 0x72 0xA0 0x3A
Configuration last modified by 163.5.8.3 at 3-1-93 00:30:40
Sw-Ac3#
```

```
show vlan brief (exhibit):
```

```
Sw-AC3#show vlan brief
```

VLAN	Name	Status	Ports
1	default	active	Fa0/16
22	Servers	active	
33	Management	active	Fa0/1, Fa0/2, Fa0/5, Fa0/6, Fa0/7
44	Production	active	Fa0/4, Fa0/8, Fa0/10, Fa0/11
99	no-where	active	Fa0/13, Fa0/14, Fa0/15, Fa0/17, Fa0/18, Fa0/19, Fa0/20 , Fa0/21 Fa0/22, Fa0/23, Fa0/24 Gi0/1, Gi0/2
1002	fddi-default	active	
1003	token-ring-default	active	
1004	fddinet-default	active	
1005	trnet-default	active	

```
Sw-AC3#
```

Hot Area:

**1** What interface did Sw-AC3 associate with source MAC address 0010.5a0c.ffba ?

**2**

- 3**  Fa0/1
- Fa0/3
- 4**  Fa0/6
- Fa0/8
- 5**  Fa0/9
- Fa0/12

**1** What ports on Sw-AC3 are operating as trunks (choose three)?

**2**

- 3**  Fa0/1
- Fa0/3
- 4**  Fa0/4
- Fa0/6
- 5**  Fa0/9
- Fa0/12

**1** What kind of router is VLAN-R1?

**2**

- 3**  1720
- 1841
- 4**  2611
- 5**  2620

**Correct Answer:**

**1** What interface did Sw-AC3 associate with source MAC address 0010.5a0c.ffba ?

**2**

- 3**  Fa0/1
- Fa0/3
- 4**  Fa0/6
- Fa0/8
- 5**  Fa0/9
- Fa0/12

**1** What ports on Sw-AC3 are operating as trunks (choose three)?

**2**

- 3**  Fa0/1
- Fa0/3
- 4**  Fa0/4
- Fa0/6
- 5**  Fa0/9
- Fa0/12

**1** What kind of router is VLAN-R1?

**2**

- 3**  1720
- 1841
- 4**  2611
- 5**  2620

**Section: (none)**

**Explanation**

**Explanation/Reference:**