Exam CISCO-640-802 v12

1. What are two reasons that a network administrator would use access lists? (Choose two.)

A: to control vty access into a router
B: to control broadcast traffic through a router
C: to filter traffic as it passes through a router
D: to filter traffic that originates from the router
E: to replace passwords as a line of defense against security incursions
Correct Answers: A, C

2. 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 Answers: C

3. 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
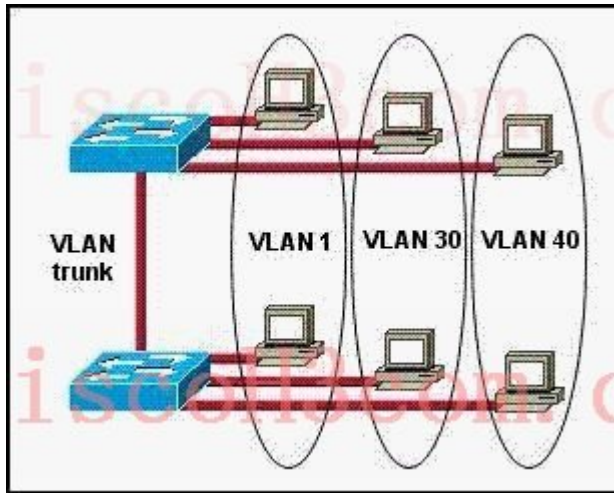B: null SSID
C: cordless phones
D: mismatched SSID
E: metal file cabinets
F: antenna type or direction
Correct Answers: C, E, F

4. Refer to the exhibit. How many broadcast domains exist in the exhibited topology?

A: one
B: two
C: three
D: four
E: five
F: six
Correct Answers: C

5.Hotspot

This item contains several questions that you must answer. You can view these questions by clicking on the corresponding button to the left. Changing questions can be accomplished by clicking the numbers to the left of each question. In order to complete the questions, you will need to refer to the topology.

To gain access to the topology, click on the topology button at the bottom of the screen. When you have finished viewing the topology, you can return to your questions by clicking on the Questions button to the left.

Each of the windows can be minimized by clicking on the [-]. You can also reposition a window by dragging it by the title bar.

Scenario

Refer to the topology. The diagram represents a small network with a single connection to the Internet. Using the information shown, answer the five questions shown on the Questions tab.

Topology

Question #1

If the router R1 has a packet with a destination address 192.168.1.255, what describes the operation of the network?

○ R1 will forward the packet out all interfaces.

○ R1 will drop this packet because this it is not a valid IP address.

○ As R1 forwards the frame containing this packet, Sw-A will add 192.168.1.255 to its MAC table.

○ R1 will encapsulate the packet in a frame with a destination MAC address of FF-FF-FF-FF-FF-FF.

○ 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.

Question #2

Users on the 192.168.1.0 /24 network must access files located on the Server 1. What route could be configured on router R1 for file requests to reach the server?

○ ip route 0.0.0.0 0.0.0.0 s0/0/0

○ ip route 0.0.0.0 0.0.0.0 209.165.200.226

○ ip route 209.165.200.0 255.255.255.0 192.168.1.250

○ ip route 192.168.1.0 255.255.255.0 209.165.100.250

Question #3

When a packet is sent from Host 1 to Server 1, in how many different frames will the packet be encapsulated as it is sent across the internetwork?

○ 0

○ 1

○ 2

○ 3

○ 4

Question #4

What must be configured on the network in order for users on the Internet to view web pages located on Web Server 2?

- ○ On router R2, configure a default static route to the 192.168.1.0 network.
- ○ On router R2, configure DNS to resolve the URL assigned to Web Server 2 to the 192.168.1.10 address.
- ○ On router R1, configure NAT to translate an address on the 209.165.100.0/24 network to 192.168.1.10.
- ○ On router R1, configure DHCP to assign a registered IP address on the 209.165.100.0/24 network to Web Server 2.

Question #5

The router address 192.168.1.250 is the default gateway for both the Web Server 2 and Host 1. What is the correct subnet mask for this network?

- ○ 255.255.255.0
- ○ 255.255.255.192
- ○ 255.255.255.250
- ○ 255.255.255.252

Hotspot question. Click on the correct location or locations in the exhibit.

Correct Answers:

Instructions

This item contains several questions that you must answer. You can view these questions by clicking on the corresponding button to the left. Changing questions can be accomplished by clicking the numbers to the left of each question. In order to complete the questions, you will need to refer to the topology.

To gain access to the topology, click on the topology button at the bottom of the screen. When you have finished viewing the topology, you can return to your questions by clicking on the Questions button to the left.

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Scenario

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- ☑ R1 will forward the packet out all interfaces.
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- ○ R1 will encapsulate the packet in a frame with a destination MAC address of FF-FF-FF-FF-FF-FF.
- ○ 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.

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Users on the 192.168.1.0 /24 network must access files located on the Server 1. What route could be configured on router R1 for file requests to reach the server?

- ○ ip route 0.0.0.0 0.0.0.0 s0/0/0
- ○ ip route 0.0.0.0 0.0.0.0 209.165.200.226
- ☑ ip route 209.165.200.0 255.255.255.0 192.168.1.250
- ○ ip route 192.168.1.0 255.255.255.0 209.165.100.250

Question #3

When a packet is sent from Host 1 to Server 1, in how many different frames will the packet be encapsulated as it is sent across the internetwork?

- ○ 0
- ○ 1
- ○ 2
- ☑ 3
- ○ 4

Question #4

What must be configured on the network in order for users on the Internet to view web pages located on Web Server 2?

☐ On router R2, configure a default static route to the 192.168.1.0 network.

○ On router R2, configure DNS to resolve the URL assigned to Web Server 2 to the 192.168.1.10 address.

○ On router R1, configure NAT to translate an address on the 209.165.100.0/24 network to 192.168.1.10.

○ On router R1, configure DHCP to assign a registered IP address on the 209.165.100.0/24 network to Web Server 2.

Question #5

The router address 192.168.1.250 is the default gateway for both the Web Server 2 and Host 1. What is the correct subnet mask for this network?

○ 255.255.255.0

○ 255.255.255.192

○ 255.255.255.250

☐ 255.255.255.252

6.Refer to the exhibit. What two facts can be determined from the WLAN diagram? (Choose two.)
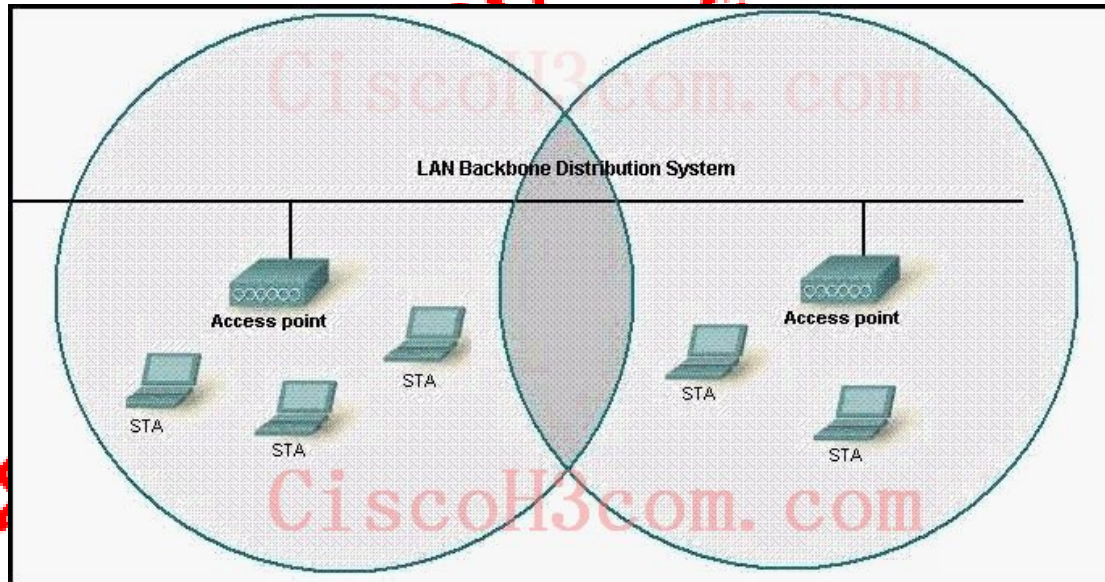
A:The area of overlap of the two cells represents a basic service set (BSS).

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 Answers: B, E

7. 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 Answers: E

8. Which type of attack is characterized by a flood of packets that are requesting a TCP connection to a server?

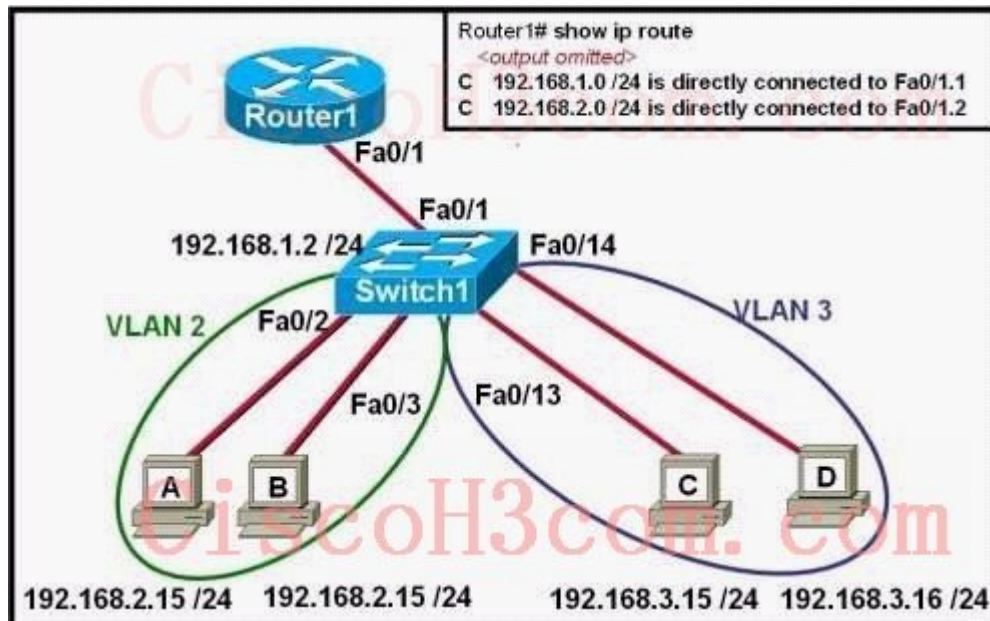A: denial of service
B: brute force
C: reconnaissance
D: Trojan horse
Correct Answers: A

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 Answers: B, C

10. 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?

```
Router1# show ip route
<output omitted>
C    192.168.1.0 /24 is directly connected to Fa0/1.1
C    192.168.2.0 /24 is directly connected to Fa0/1.2
```

A: 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
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# vlan database
Switch1(vlan)# vtp v2-mode
Switch1(vlan)# vtp domain cisco
Switch1(vlan)# vtp server
D: Switch1(config)# interface fastethernet 0/1
Switch1(config-if)# switchport mode trunk
Switch1(config-if)# switchport trunk encapsulation isl
Correct Answers: A

11. For security reasons, the network administrator needs to prevent pings into the corporate networks from hosts outside the internetwork. Which protocol should be blocked with access control lists?

A: IP
B: ICMP
C: TCP
D: UDP
Correct Answers: B

12. 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 Answers: B, D

13. Refer to the exhibit. The access list has been configured on the S0/0 interface of router RTB in the outbound direction. Which two packets, if routed to the interface, will be denied? (Choose two.)

access-list 101 deny tcp 192.168.15.32 0.0.0.15 any eq telnet

access-list 101 permit ip any any
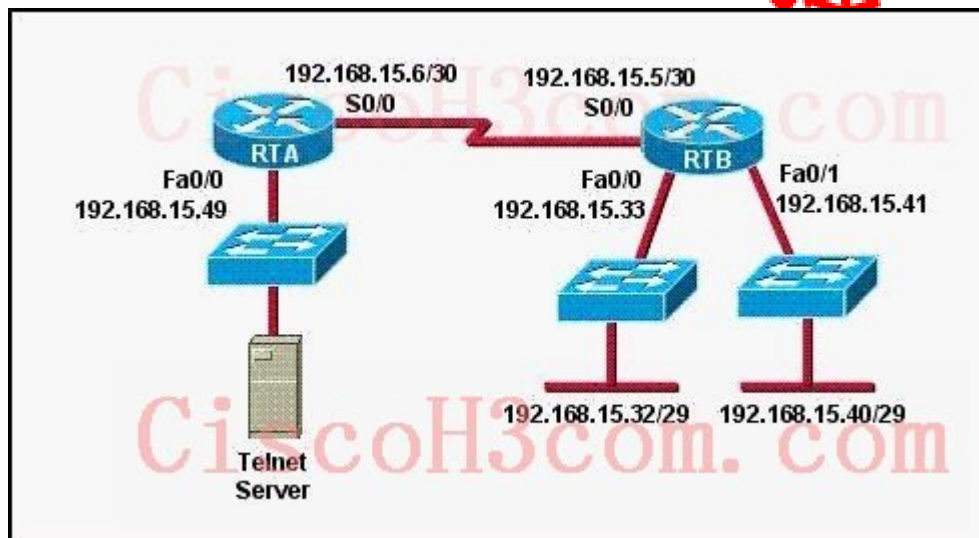
A:source ip address:, 192.168.15.5; destination port: 21

B:source ip address:, 192.168.15.37 destination port: 21

C:source ip address:, 192.168.15.41 destination port: 21

D:source ip address:, 192.168.15.36 destination port: 23

E:source ip address:, 192.168.15.46; destination port: 23

F:source ip address:, 192.168.15.49 destination port: 23

Correct Answers: D, E

14. 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 Answers: B, E

15. 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?
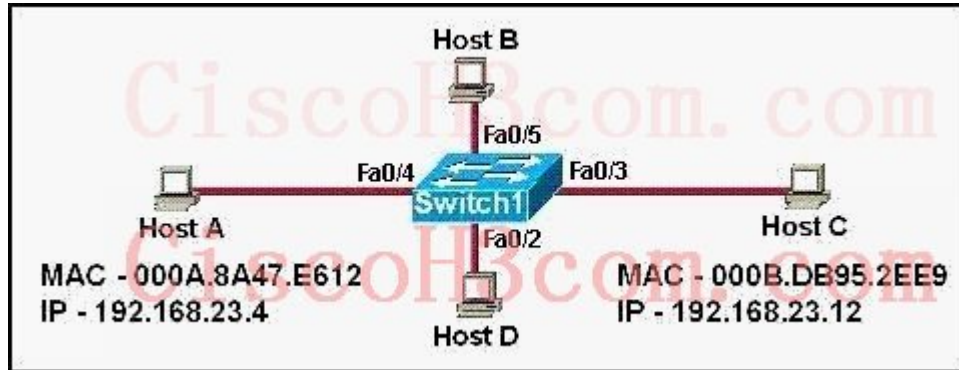
A: Switch1 will add 192.168.23.4 to the switching table.
B: Switch1 will add 192.168.23.12 to the switching table.
C: Switch1 will add 000A.8A47.E612 to the switching table.
D: Switch1 will add 000B.DB95.2EE9 to the switching table.
Correct Answers: C

16. 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?
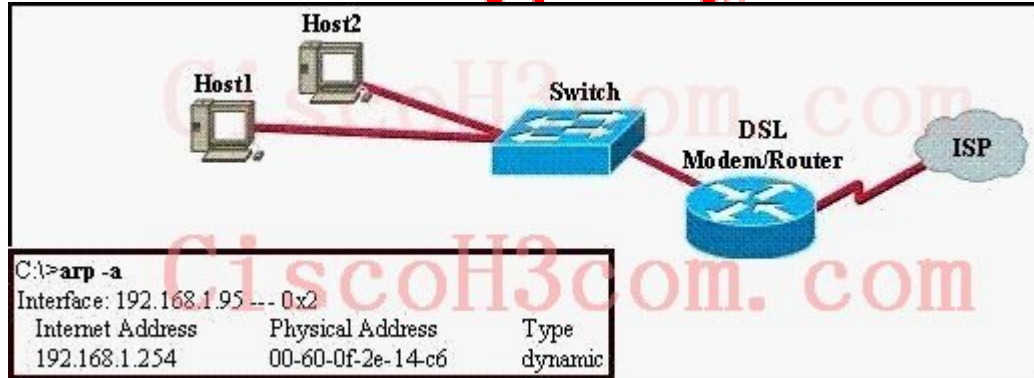
A: send a unicast ARP packet to the DSL modem/router
B: send unicast ICMP packets to the DSL modem/router
C: send Layer 3 broadcast packets to which the DSL modem/router responds
D: send a Layer 2 broadcast that is received by Host2, the switch, and the DSL modem/router
Correct Answers: B

17. Refer to the exhibit. What is the most efficient summarization that R1 can use to advertise its networks to R2?
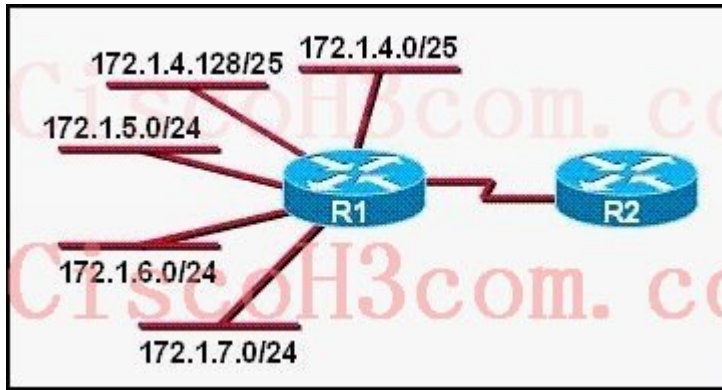
A: 172.1.0.0/22
B: 172.1.0.0/21
C: 172.1.4.0/22
D: 172.1.4.0/24
172.1.5.0/24
172.1.6.0/24
172.1.7.0/24
E: 172.1.4.0/25
172.1.4.128/25
172.1.5.0/24
172.1.6.0/24
172.1.7.0/24

Correct Answers: C

18. LAB

The following have already been configured on the router:
- The basic router configuration
- The appropriate interfaces have been configured for NAT inside and NAT outside.
- The appropriate static routes have also been configured (since the company will be a stub network, no routing protocol will be required)
- All passwords have been temporarily set to "cisco".

The task is to complete the NAT configuration using all IP addresses assigned by the ISP to provide Internet access for the hosts in the Weaver LAN. Functionality can be tested by clicking on the host provided for testing.

Configuration information
  router name - Weaver
  inside global addresses-198.18.184.105 198.18.184.110/29
  inside local addresses - 192.168.100.17 - 192.168.100.30/28
  number of inside hosts - 14
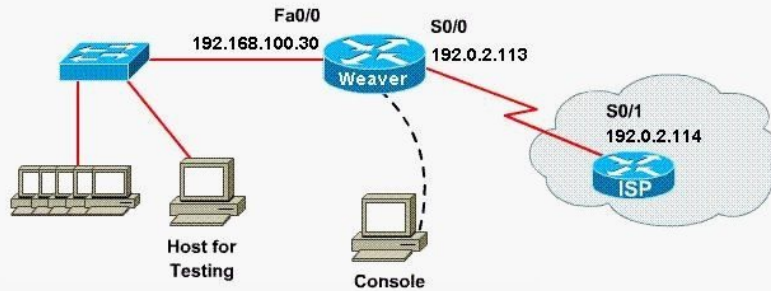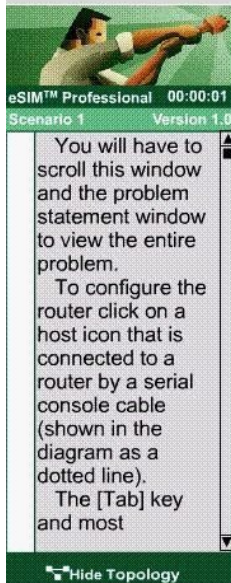

19. Which spread spectrum technology does the 802.11b standard define for operation?

A: IR
B: DSSS
C: FHSS
D: DSSS and FHSS
E: IR, FHSS, and DSSS

Correct Answers: B

20. 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?
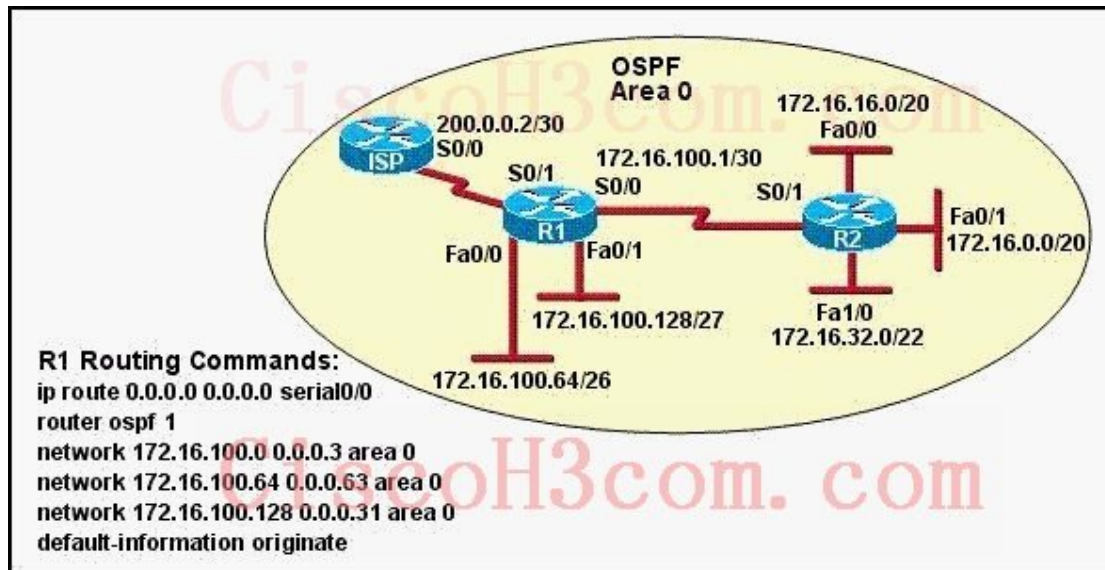
A: Any packet destined for a network that is not directly connected to router R1 will be dropped.

B: Any packet destined for a network that is not directly connected to router R2 will be dropped immediately.

C: 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.

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 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.

Correct Answers: E

21. 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 Answers: C

22. 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?

```
interface Serial1
  ip address 200.2.2.18 255.255.255.252
  ip nat outside
!
interface FastEthernet0
  ip address 10.10.0.1 255.255.255.0
  ip nat inside
  speed auto
!
ip nat pool test 199.99.9.40 199.99.9.62 netmask 255.255.255.224
ip nat inside source list 1 pool test

ip route 0.0.0.0 0.0.0.0 200.2.2.17
!
access-list 1 permit 10.10.0.0 0.0.0.255
```

S1: 200.2.2.18/30
Fa0: 10.10.0.1/24

10.10.0.0

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 Answers: D

23. A company is installing IP phones. The phones and office computers connect to the same device. To ensure maximum throughput for the phone data, the company needs to make sure that the phone traffic is on a different network from that of the office computer data traffic. What is the best network device to which to directly connect the phones and computers, and what technology should be implemented on this device? (Choose two.)

A:hub
B:router
C:switch
D:STP
E:subinterfaces
F:VLAN
Correct Answers: C, F

24. Refer to the exhibit. Which statement describes DLCI 17?
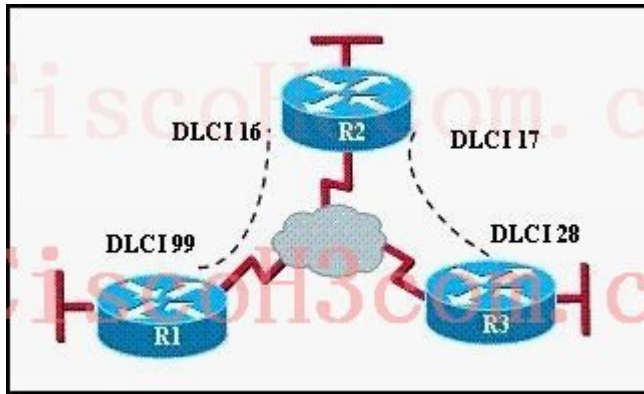
A: DLCI 17 describes the ISDN circuit between R2 and R3.

B: DLCI 17 describes a PVC on R2. It cannot be used on R3 or R1.

C: DLCI 17 is the Layer 2 address used by R2 to describe a PVC to R3.

D: DLCI 17 describes the dial-up circuit from R2 and R3 to the service provider.

Correct Answers: C

25. Which routing protocol by default uses bandwidth and delay as metrics?

A: RIP

B: BGP

C: OSPF

D: EIGRP

Correct Answers: D

26. Refer to the output from the show running-config command in the exhibit. What should the administrator do to allow the workstations connected to the FastEthernet 0/0 interface to obtain an IP address?

```
R1-ABC# show running-config
Current configuration:
!
version 12.1
hostname ABC
!
ip subnet-zero
ip name-server 192.16.1.1
ip dhcp excluded-address 10.90.201.1
!
ip dhcp pool ABC_DHCP
    network 10.90.201.0 255.255.255.0
    default-router 10.90.201.1
    dns-server 192.31.7.152
!
interface  FastEthernet 0/0
    no ip directed-broadcast
    ip nat inside
!
interface Serial 0/0
    description to ISP circuit ID ALDS1-3456AX4743-00
    ip address 192.31.7.38 255.255.255.255.252
    ip nat outside
!
ip nat inside source list 14 interface serial 0/0 overload
ip classless
ip route 0.0.0.0 0.0.0.0 192.31.7.37
!
access-list 14 permit 10.90.201.0 0.0.0.255
<output omitted>
```

A: Apply access-group 14 to interface FastEtherent 0/0.

B: Add access-list 14 permit any any to the access list configuration.

C: Configure the IP address of the FastEtherent 0/0 interface to 10.90.201.1.

D: Add an interface description to the FastEthernet 0/0 interface configuration.

Correct Answers: C

27.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.)
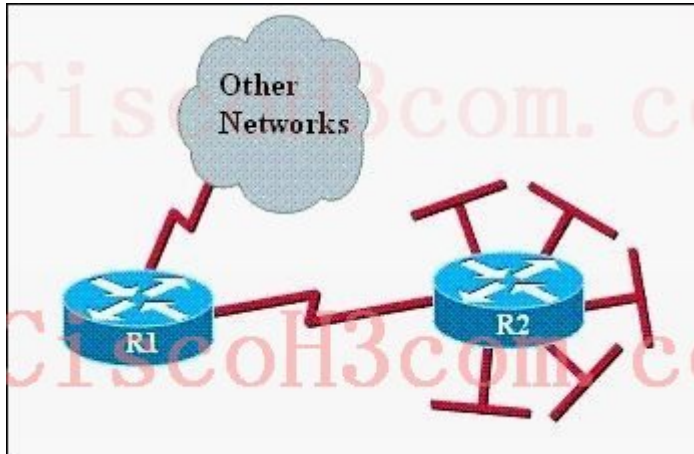
A:192.168.194.160
B:192.168.183.41
C:192.168.159.2
D:192.168.183.255
E:192.168.179.4
F:192.168.184.45

Correct Answers: B, E

28. 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?
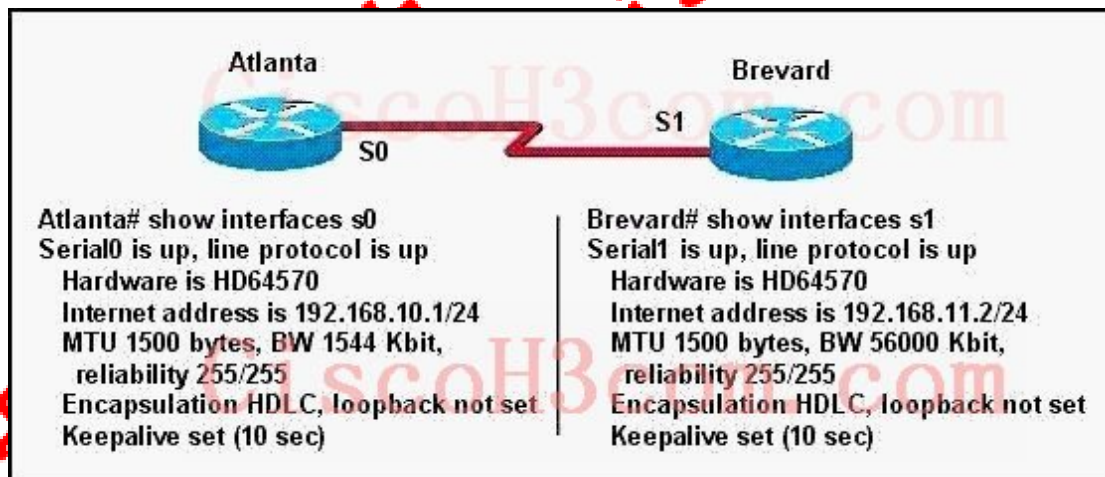
A: A loopback is not set.

B: The IP address is incorrect.

C: The subnet mask is incorrect.

D: The serial line encapsulations are incompatible.

E: The maximum transmission unit (MTU) size is too large.

F: The bandwidth setting is incompatible with the connected interface.

Correct Answers: B

29. Refer to the exhibit. The partial frame shown in the exhibit displays select header information as it arrives at the destination host. Which graphic represents the correct header information in the responding frame returned to the remote host?

Destination	Source	Destination	Source	Destination	Source	SYN	ACK
000d.56ad.a313	000a.8a47.e612	192.168.14.1	192.168.14.2	23	42335	1	0

○ A.

Destination	Source	Destination	Source	Destination	Source	SYN	ACK
000a.8a47.e612	000d.56ad.a313	192.168.14.2	192.168.14.1	23	42335	0	1

○ B.

Destination	Source	Destination	Source	Destination	Source	SYN	ACK
000a.8a47.e612	000d.56ad.a313	192.168.14.2	192.168.14.1	23	42336	1	1

○ C.

Destination	Source	Destination	Source	Destination	Source	SYN	ACK
000d.56ad.a313	000a.8a47.e612	192.168.14.1	192.168.14.2	42335	23	0	1

○ D.

Destination	Source	Destination	Source	Destination	Source	SYN	ACK
000a.8a47.e612	000d.56ad.a313	192.168.14.2	192.168.14.1	42335	23	1	1

○ E.

Destination	Source	Destination	Source	Destination	Source	SYN	ACK
000d.56ad.a313	000a.8a47.e612	192.168.14.2	192.168.14.1	42336	23	0	0

Please Input correct Answer here:

Correct Answers: D

30. Refer to the exhibit. Which switch provides the spanning-tree designated port role for the network segment that services the printers?
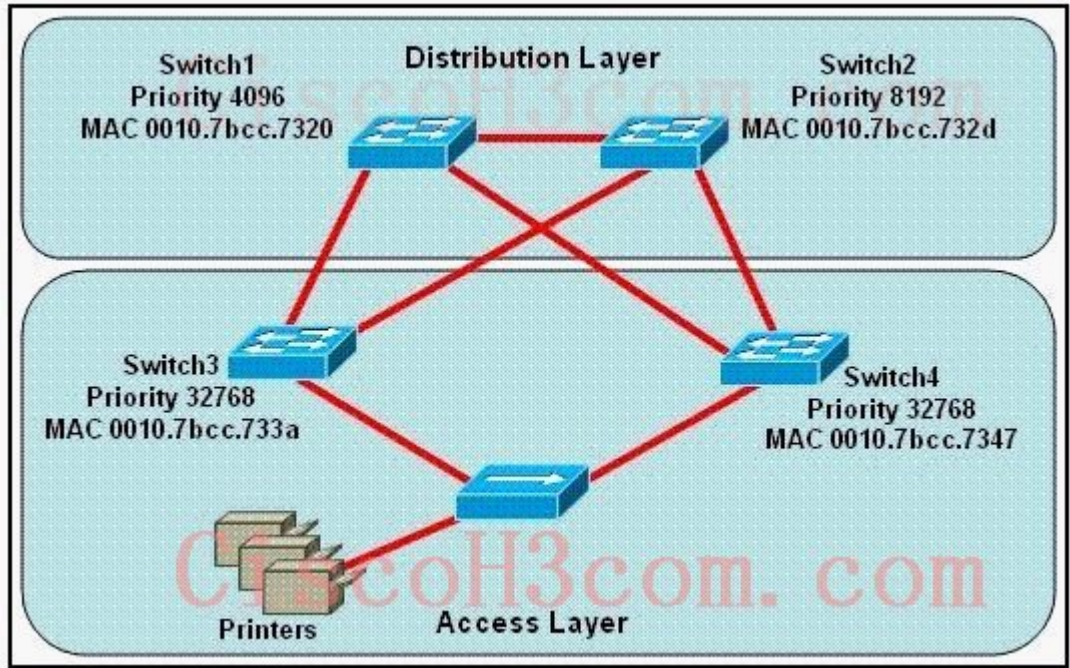
A: Switch1

B: Switch2

C: Switch3

D: Switch4

Correct Answers: C

31. 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 flood the data out all of its ports except the port from which the data originated.

C: Switch-1 will send an ARP request out all its ports except the port from which the data originated.

D: Switch-1 will forward the data to its default gateway.

Correct Answers: B

32. 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: 255.255.255.0
B: 255.255.255.240
C: 255.255.255.248
D: 255.255.255.252
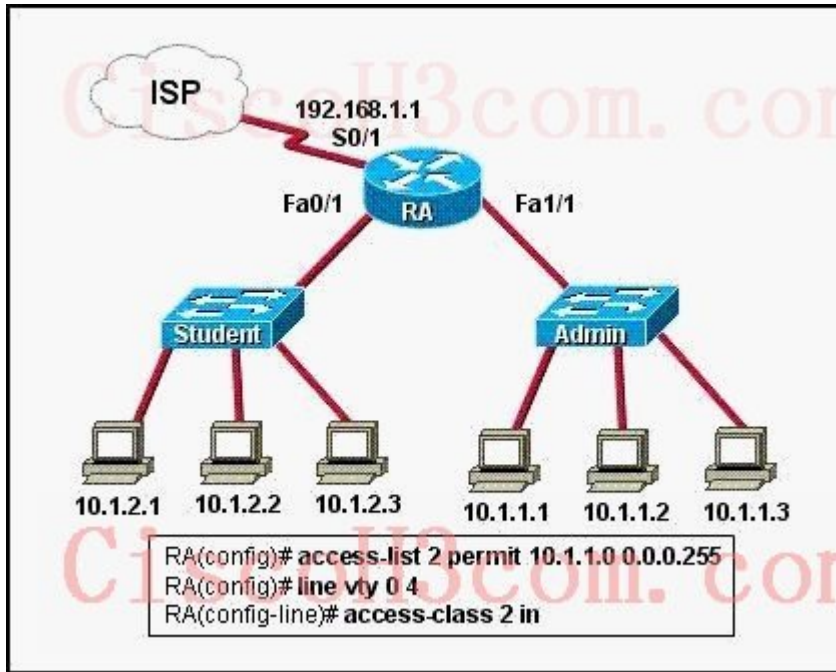E: 255.255.255.254
Correct Answers: D

33. LAB

34. Refer to the exhibit. 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 Answers: B

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

A:amount of RAM

B:bridge priority

C:IOS version

D:IP address

E:MAC address

F:speed of the links

Correct Answers: B, E

36.Drop

In order to complete a basic switch configuration, drag each switch IOS command on the left to its purpose on the right.

| Left (commands)	Right (purposes)
ip default-gateway	allows access to high-level testing commands, such as **debug**
interface vlan 1	allows access to configuration commands that affect the system as a whole
hostname	sets the system name
ip address	activates the interface configuration mode for VLAN 1
enable	enables the switch management interface
no shutdown	sets the switch management IP address
configure terminal	allows the switch to be managed from remote networks

Drag and drop question. Drag the items to the proper locations.

Correct Answers:

In order to complete a basic switch configuration, drag each switch IOS command on the left to its purpose on the right.

Left (commands)	Right (answers)
ip default-gateway	enable
interface vlan 1	configure terminal
hostname	hostname
ip address	interface vlan 1
enable	no shutdown
no shutdown	ip address
configure terminal	ip default-gateway

37. Refer to the exhibit. The two exhibited 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.)
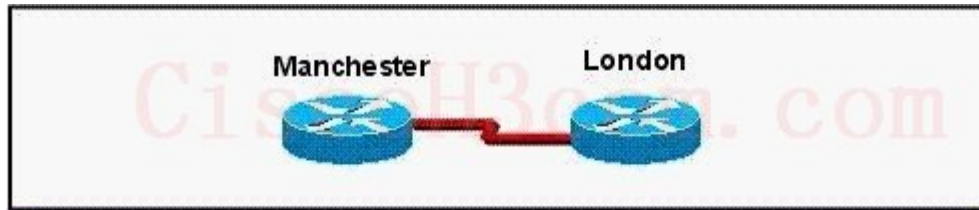
```
Manchester# sh cdp entry *
-------------------------
Device ID: London
Entry address (es):
  IP address: 10.1.1.2
Platform: cisco 2610, Capabilities: Router
Interface: Serial0/0, Port ID (outgoing port): Serial0/1
Holdtime : 125 sec

<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 Answers: A, C, E

38.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 Answers: E

39.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, 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.

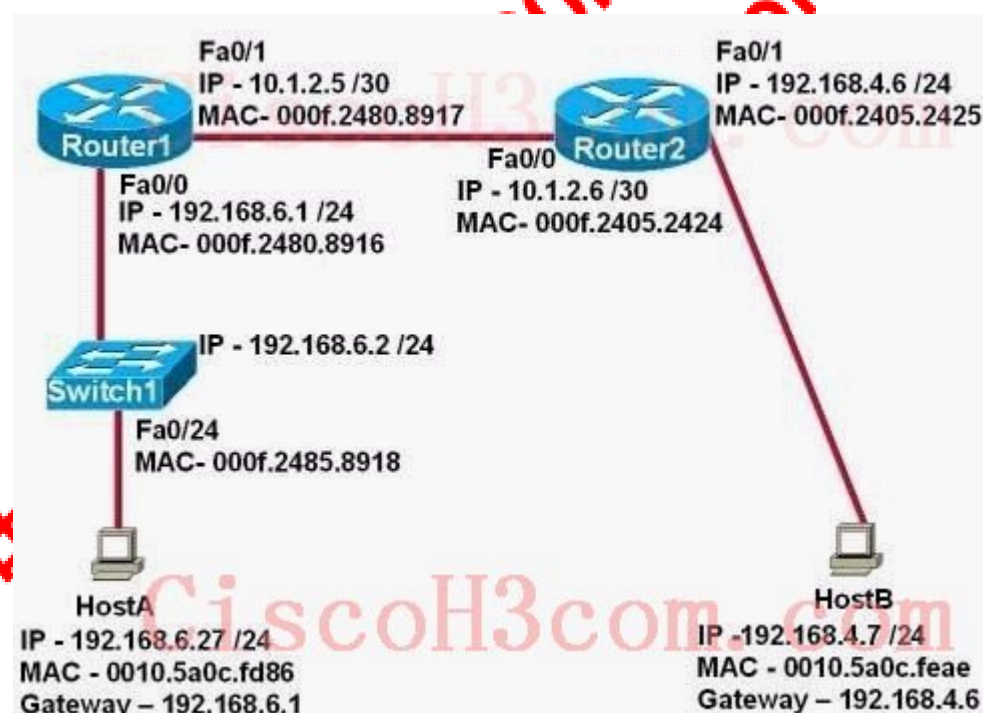C: The VTP domain name is not correctly configured.

D: VTP pruning mode is disabled.

E: VTP V2 mode is disabled.

F: VTP traps generation is disabled.

Correct Answers: C

40. 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.feae	dynamic

○ F.

Interface Address	Physical Address	Type
192.168.6.2	000f.2485.8918	dynamic

Please Input correct Answer
here:

Correct Answers: D

41. In order to allow the establishment of a Telnet session with a router, which set of commands must be configured?

A: router(config)# line console 0
router(config-line)# enable password cisco
B: router(config)# line console 0

router(config-line)# enable secret cisco

router(config-line)# login

C: router(config)# line console 0

router(config-line)# password cisco

router(config-line)# login

D: router(config)# line vty 0

router(config-line)# enable password cisco

E: router(config)# line vty 0

router(config-line)# enable secret cisco

router(config-line)# login

F: router(config)# line vty 0

router(config-line)# password cisco

router(config-line)# login

Correct Answers: F

42. LAB

43. 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.)
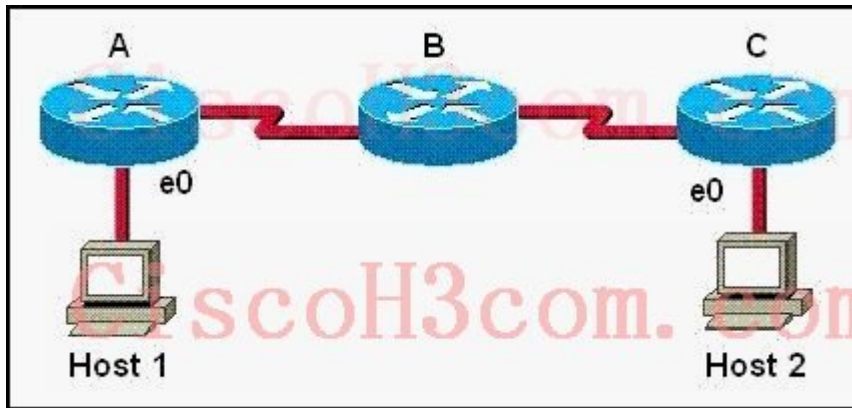
A:Router C will use ICMP to inform Host 1 that Host 2 cannot be reached.

B:Router C will use ICMP to inform Router B that Host 2 cannot be reached.

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 Destination Unreachable message type.

E:Router C will send a Router Selection message type.

F:Router C will send a Source Quench message type.

Correct Answers: A, D

44. Refer to the exhibit. Assuming that the router is configured with the default settings, what type of router interface is this?


```
R1#show interfaces  <<output omitted>>
<<output omitted>> is up, line protocol is up
Hardware is Lance, address is 0010.7b80.bfa6 (bia 0010.7b80.bfa6)
MTU 1500 bytes, BW 100000 Kbit, DLY 1000 usec, rely 255/255, load 1/255
Encapsulation ARPA, loopback not set, keepalive set (10 sec)
ARP type: ARPA, ARP Timeout 04:00:00

<<output omitted>>
```

A: Ethernet

B: FastEthernet

C: Gigabit Ethernet

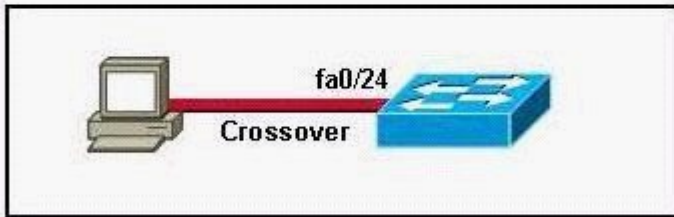D: asynchronous serial

E: synchronous serial

Correct Answers: B

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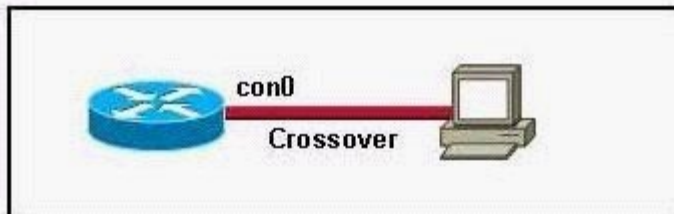
☐ A.

☐ B.

☐ C.

☐ D.

☐ E.

Please Input correct Answer
here: [   ]

Correct Answers: D E

46.On point-to-point networks, OSPF hello packets are addressed to which address?

A: 127.0.0.1

B: 172.16.0.1
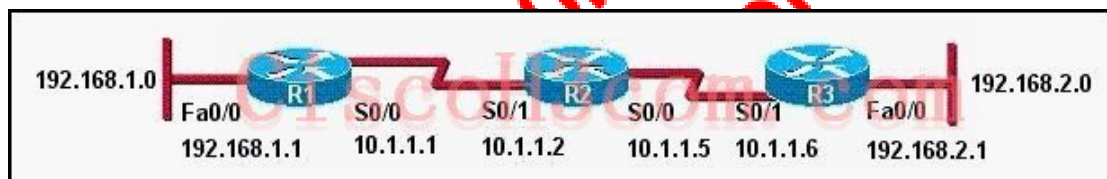C: 192.168.0.5
D: 223.0.0.1
E: 224.0.0.5
F: 254.255.255.255
Correct Answers: E

47. 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 Answers: A

48. 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:All routers will reference their topology database to determine if any backup routes to the 192.168.1.0 network are known.
B: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.
C: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.
D: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.
E: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.
Correct Answers: C, D

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

A: 10 Mbps
B: 11 Mbps
C: 54 Mbps

D: 100 Mbps

Correct Answers: B

50. 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 Answers: A, C

51. 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.)
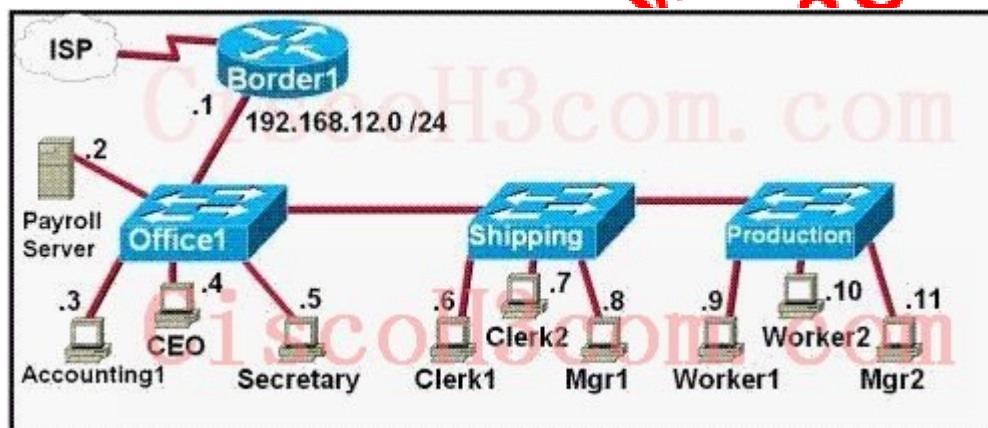
A:access lists
B:encrypted router passwords
C:STP
D:VLANs
E:VTP
F:wireless LANs

Correct Answers: A, D

52. 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 establishes a static route to the 192.168.2.0 network.
C:It configures the router to send any traffic for an unknown destination to the

172.16.3.0 network.

D:It configures the router to send any traffic for an unknown destination out the interface with the address 192.168.2.4.

E:It uses the default administrative distance.

F:It is a route that would be used last if other routes to the same destination exist.

Correct Answers: A, E

53.Hotspot

Question #1

If the router R1 has a packet with a destination address 192.168.1.255, what describes the operation of the network?

○ R1 will forward the packet out all interfaces.

○ R1 will drop this packet because this it is not a valid IP address.

○ As R1 forwards the frame containing this packet, Sw-A will add 192.168.1.255 to its MAC table.

○ R1 will encapsulate the packet in a frame with a destination MAC address of FF-FF-FF-FF-FF-FF.

○ 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.

Question #2

Users on the 192.168.1.0 /24 network must access files located on the Server 1. What route could be configured on router R1 for file requests to reach the server?

○ ip route 0.0.0.0 0.0.0.0 s0/0/0

○ ip route 0.0.0.0 0.0.0.0 209.165.200.226

○ ip route 209.165.200.0 255.255.255.0 192.168.1.250

○ ip route 192.168.1.0 255.255.255.0 209.165.100.250

Question #3

When a packet is sent from Host 1 to Server 1, in how many different frames will the packet be encapsulated as it is sent across the internetwork?

○ 0

○ 1

○ 2

○ 3

○ 4

Question #4

What must be configured on the network in order for users on the Internet to view web pages located on Web Server 2?

- ○ On router R2, configure a default static route to the 192.168.1.0 network.
- ○ On router R2, configure DNS to resolve the URL assigned to Web Server 2 to the 192.168.1.10 address.
- ○ On router R1, configure NAT to translate an address on the 209.165.100.0/24 network to 192.168.1.10.
- ○ On router R1, configure DHCP to assign a registered IP address on the 209.165.100.0/24 network to Web Server 2.

Question #5

The router address 192.168.1.250 is the default gateway for both the Web Server 2 and Host 1. What is the correct subnet mask for this network?

- ○ 255.255.255.0
- ○ 255.255.255.192
- ○ 255.255.255.250
- ○ 255.255.255.252

Hotspot question. Click on the correct location or locations in the exhibit.
Correct Answers:

Instructions

This item contains several questions that you must answer. You can view these questions by clicking on the corresponding button to the left. Changing questions can be accomplished by clicking the numbers to the left of each question. In order to complete the questions, you will need to refer to the topology.

To gain access to the topology, click on the topology button at the bottom of the screen. When you have finished viewing the topology, you can return to your questions by clicking on the Questions button to the left.

Each of the windows can be minimized by clicking on the [-]. You can also reposition a window by dragging it by the title bar.

Scenario

Refer to the topology. The diagram represents a small network with a single connection to the Internet. Using the information shown, answer the five questions shown on the Questions tab.

Topology

209.165.100.250 /24
S0/0/0
ISP
209.165.100.200 /24
R1
R2
Fa0/0
192.168.1.250 /24
Server 1
209.165.200.226 /24
SW-A
Web Server 2
192.168.1.10 /24
Host 1
192.168.1.106 /24

Question #1

If the router R1 has a packet with a destination address 192.168.1.255, what describes the operation of the network?

- ☑ R1 will forward the packet out all interfaces.
- ○ R1 will drop this packet because this it is not a valid IP address.
- ○ As R1 forwards the frame containing this packet, Sw-A will add 192.168.1.255 to its MAC table.
- ○ R1 will encapsulate the packet in a frame with a destination MAC address of FF-FF-FF-FF-FF-FF.
- ○ 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.

Question #2

Users on the 192.168.1.0 /24 network must access files located on the Server 1. What route could be configured on router R1 for file requests to reach the server?

- ○ ip route 0.0.0.0 0.0.0.0 s0/0/0
- ○ ip route 0.0.0.0 0.0.0.0 209.165.200.226
- ☑ ip route 209.165.200.0 255.255.255.0 192.168.1.250
- ○ ip route 192.168.1.0 255.255.255.0 209.165.100.250

Question #3

When a packet is sent from Host 1 to Server 1, in how many different frames will the packet be encapsulated as it is sent across the internetwork?

- ○ 0
- ○ 1
- ○ 2
- ☑ 3
- ○ 4

Question #4

What must be configured on the network in order for users on the Internet to view web pages located on Web Server 2?

☑ On router R2, configure a default static route to the 192.168.1.0 network.

○ On router R2, configure DNS to resolve the URL assigned to Web Server 2 to the 192.168.1.10 address.

○ On router R1, configure NAT to translate an address on the 209.165.100.0/24 network to 192.168.1.10.

○ On router R1, configure DHCP to assign a registered IP address on the 209.165.100.0/24 network to Web Server 2.

Question #5

The router address 192.168.1.250 is the default gateway for both the Web Server 2 and Host 1. What is the correct subnet mask for this network?

○ 255.255.255.0

○ 255.255.255.192

○ 255.255.255.250

☑ 255.255.255.252

54. Which type of attack is characterized by a flood of packets that are requesting a TCP connection to a server?

A: denial of service

B: brute force

C: reconnaissance

D: Trojan horse

Correct Answers: A

55. The network shown in the diagram is experiencing connectivity problems. Which of the following will correct the problems? (Choose two.)
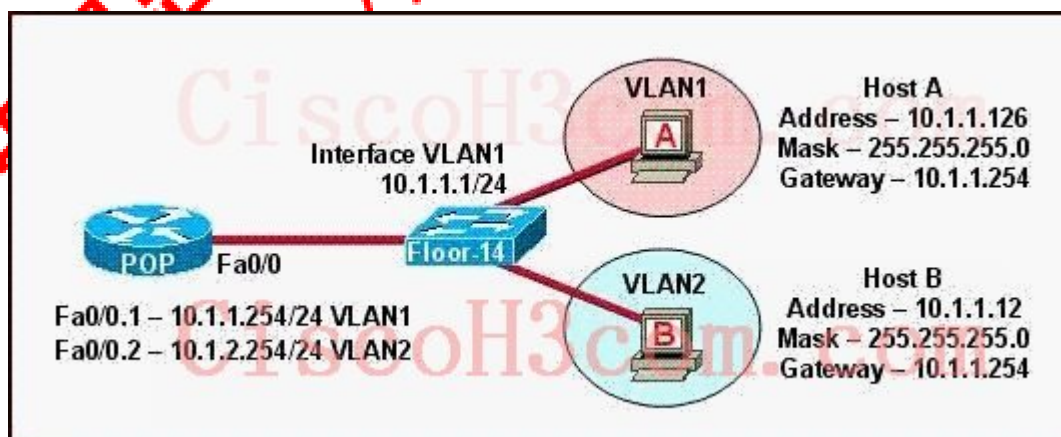
A:Configure the gateway on Host A as 10.1.1.1.

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 Answers: B, D

56.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 Answers: A, C, E

57.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 Answers: B

58.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 Answers: A

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

A: 10 Mbps
B: 11 Mbps

C: 54 Mbps

D: 100 Mbps

Correct Answers: B

60. Which two statements best describe the wireless security standard that is defined by WPA? (Choose two.)

A:It specifies use of a static encryption key that must be changed frequently to enhance

B:It requires use of an open authentication method.

C:It specifies the use of dynamic encryption keys that change each time a client establishes a connection.

D:It requires that all access points and wireless devices use the same encryption key.

E:It includes authentication by PSK.

Correct Answers: C, E

security.

61. Refer to the exhibit. Router1 was just successfully rebooted. Identify the current OSPF router ID for Router1.


```
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
```

A: 190.172.32.10

B: 208.149.23.162

C: 208.149.23.194

D: 220.173.149.10

Correct Answers: C

62. What can a network administrator utilize by using PPP Layer 2 encapsulation? (Choose three.)

A:VLAN support

B:compression

C:authentication

D:sliding windows

E:multilink support

F:quality of service

Correct Answers: B, C, E

63. LAB

Printers, Inc. is redesigning the network that connects its three locations. The administrator gave the networking team 192.168.151.0 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. 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.
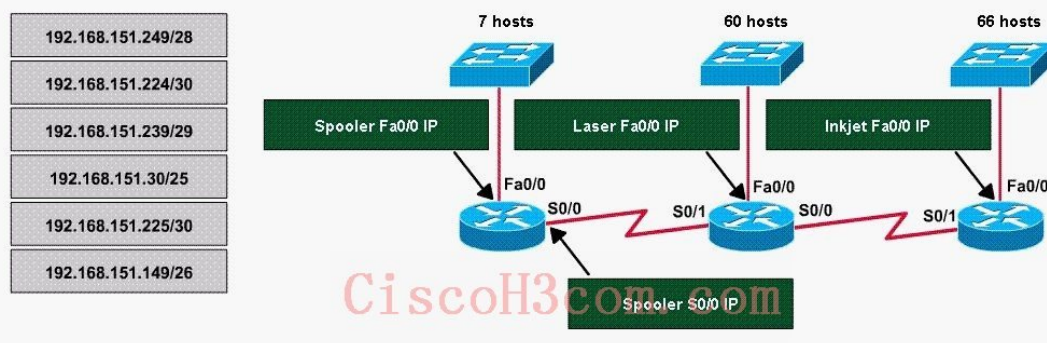
64. Refer to the exhibit. What is the meaning of the term dynamic as displayed in the output of the show frame-relay map command shown?

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 DLCI 100 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 DLCI 100 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 Answers: E

65. What is the function of the Cisco IOS command ip nat inside source static 10.1.1.5 172.35.16.5?

A: It creates a global address pool for all outside NAT transactions.

B: It establishes a dynamic address pool for an inside static address.

C: It creates dynamic source translations for all inside local PAT transactions.

D: It creates a one-to-one mapping between an inside local address and an inside global address.

E: It maps one inside source address to a range of outside global addresses.

Correct Answers: D

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

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

A: It configures SSH globally for all logins.

B: It tells the router or switch to try to establish an SSh connection first and if that fails to use Telnet.

C: It configures the virtual terminal lines with the password 030752180500.

D: It configures a Cisco network device to use the SSH protocol on incoming communications via the virtual terminal ports.

E: It allows seven failed login attempts before the VTY lines are temporarily shutdown.

Correct Answers: D

67. Refer to the exhibit. When PC1 sends an ARP request for the MAC address of PC2, network performance slows dramatically, and the switches detect an unusually high number of broadcast frames. What is the most likely cause of this?
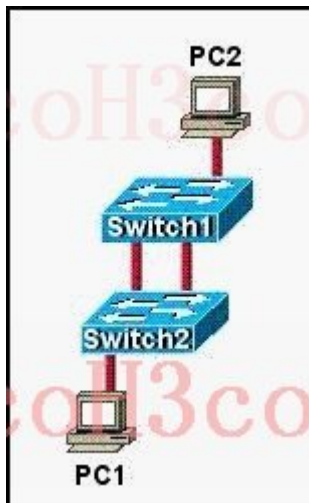
A: The portfast feature is not enabled on all switch ports.

B: The PCs are in two different VLANs.

C: Spanning Tree Protocol is not running on the switches.

D: PC2 is down and is not able to respond to the request.

E: The VTP versions running on the two switches do not match.

Correct Answers: C

68. 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 Answers: E

69. 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.)
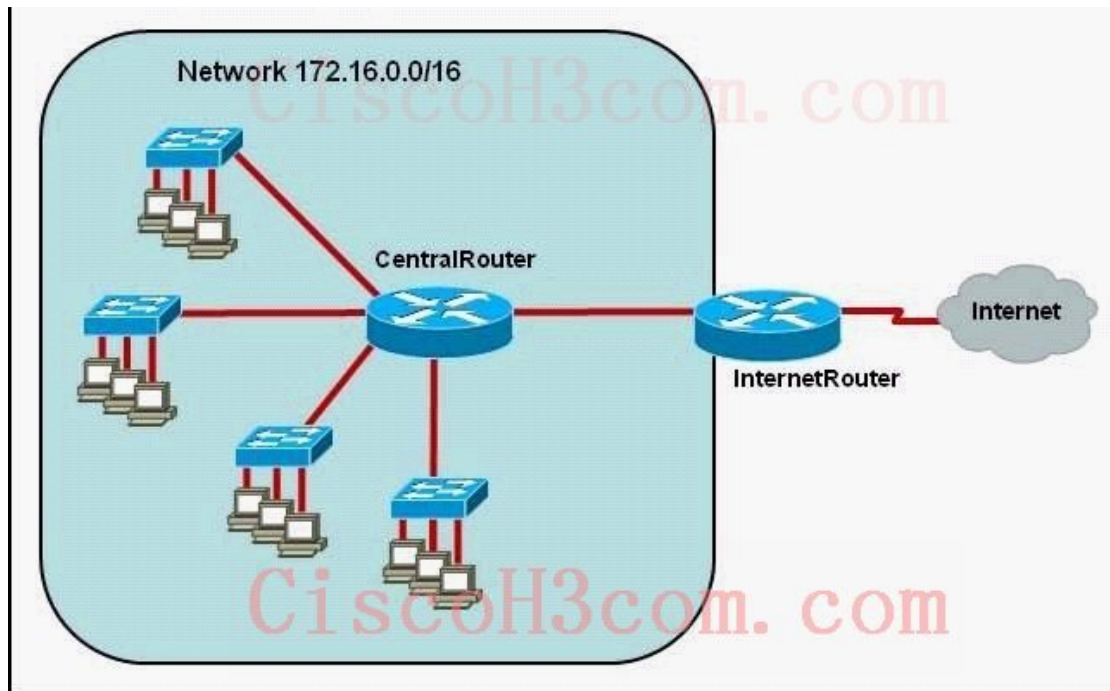
A:a dynamic routing protocol on InternetRouter to advertise all routes to CentralRouter.

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 Answers: C, F

70. 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 Answers: A, D

71. Refer to the exhibit. What is the meaning of the output MTU 1500 bytes?

```
Router#  show interfaces ethernet 0
Ethernet0 is up, line protocol is up
   Hardware is QUICC Ethernet, address is 00c0.ab73.dead (bia 0010.7bcc.7321)
   MTU 1500 bytes, BW 10000 Kbit, DLY 1000 usec,
      reliability 255/255, txload 1/255, rxload 1/255
   Encapsulation ARPA, loopback not set
   Keepalive set (10 sec)
<output omitted>
Router#
```

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 Answers: E

72. 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: TFTP server, Flash, NVRAM
B: ROM, NVRAM, TFTP server
C: NVRAM, TFTP server, ROM
D: Flash, TFTP server, ROM
E: Flash, NVRAM, ROM
Correct Answers: D

73. Refer to the output from the show running-config command in the exhibit. What should the administrator do to allow the workstations connected to the FastEthernet 0/0 interface to obtain an IP address?

```
R1-ABC# show running-config
Current configuration:
!
version 12.1
hostname ABC
!
ip subnet-zero
ip name-server 192.16.1.1
ip dhcp excluded-address 10.90.201.1
!
ip dhcp pool ABC_DHCP
    network 10.90.201.0 255.255.255.0
    default-router 10.90.201.1
    dns-server 192.31.7.152
!
interface  FastEthernet 0/0
    no ip directed-broadcast
    ip nat inside
!
interface Serial 0/0
    description to ISP circuit ID ALDS1-3456AX4743-00
    ip address 192.31.7.38 255.255.255.255.252
    ip nat outside
!
ip nat inside source list 14 interface serial 0/0 overload
ip classless
ip route 0.0.0.0 0.0.0.0 192.31.7.37
!
access-list 14 permit 10.90.201.0 0.0.0.255
<output omitted>
```

A: Apply access-group 14 to interface FastEthernet 0/0.
B: Add access-list 14 permit any any to the access list configuration.
C: Configure the IP address of the FastEtherent 0/0 interface to 10.90.201.1.
D: Add an interface description to the FastEthernet 0/0 interface configuration.
Correct Answers: C

74.In which circumstance are multiple copies of the same unicast frame likely to be transmitted in a switched LAN?

A: during high traffic periods
B: after broken links are re-established
C: when upper-layer protocols require high reliability
D: in an improperly implemented redundant topology
E: when a dual ring topology is in use
Correct Answers: D

75.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 Answers: B, D

76. 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.)
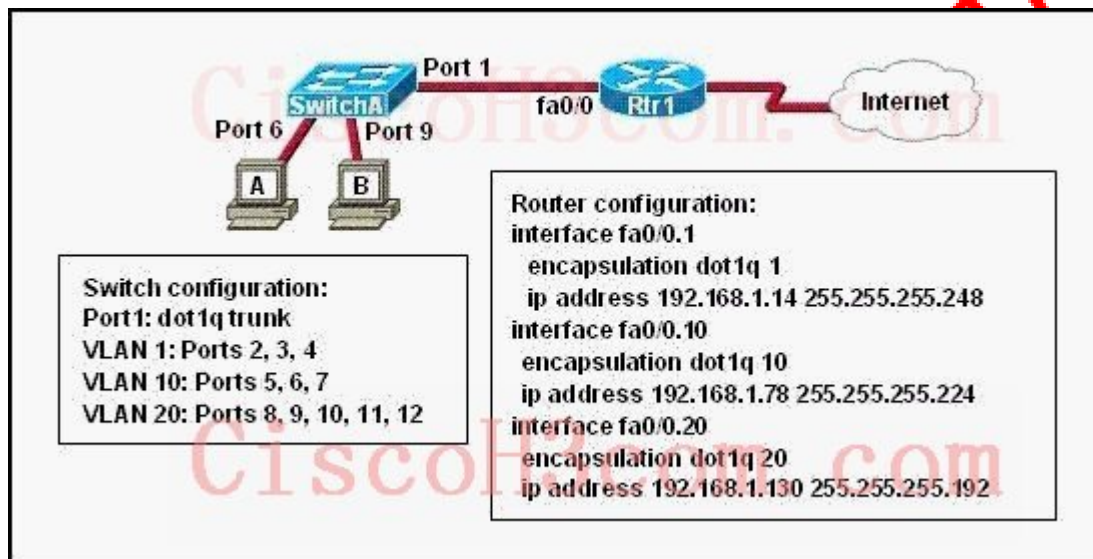
A:host 1 IP address: 192.168.1.79

B:host 1 IP address: 192.168.1.64

C:host 1 default gateway: 192.168.1.78

D:host 2 IP address: 192.168.1.128

E:host 2 default gateway: 192.168.1.129

F:host 2 IP address: 192.168.1.190

Correct Answers: A, C, F

77. 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 Answers: B, D, F

78. 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.

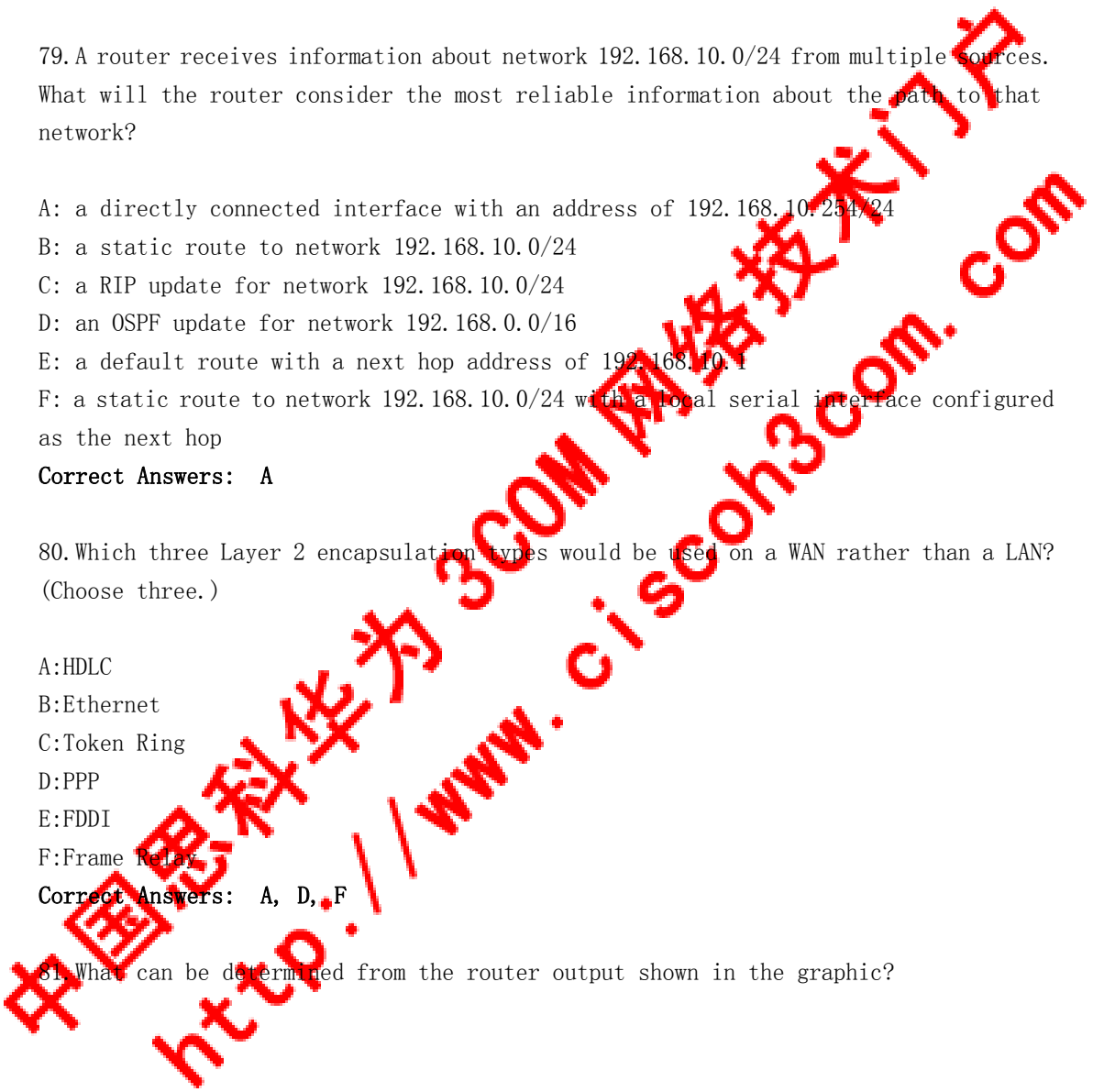F:A router is commonly considered a DCE device.

Correct Answers: A, D, E

79. 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?
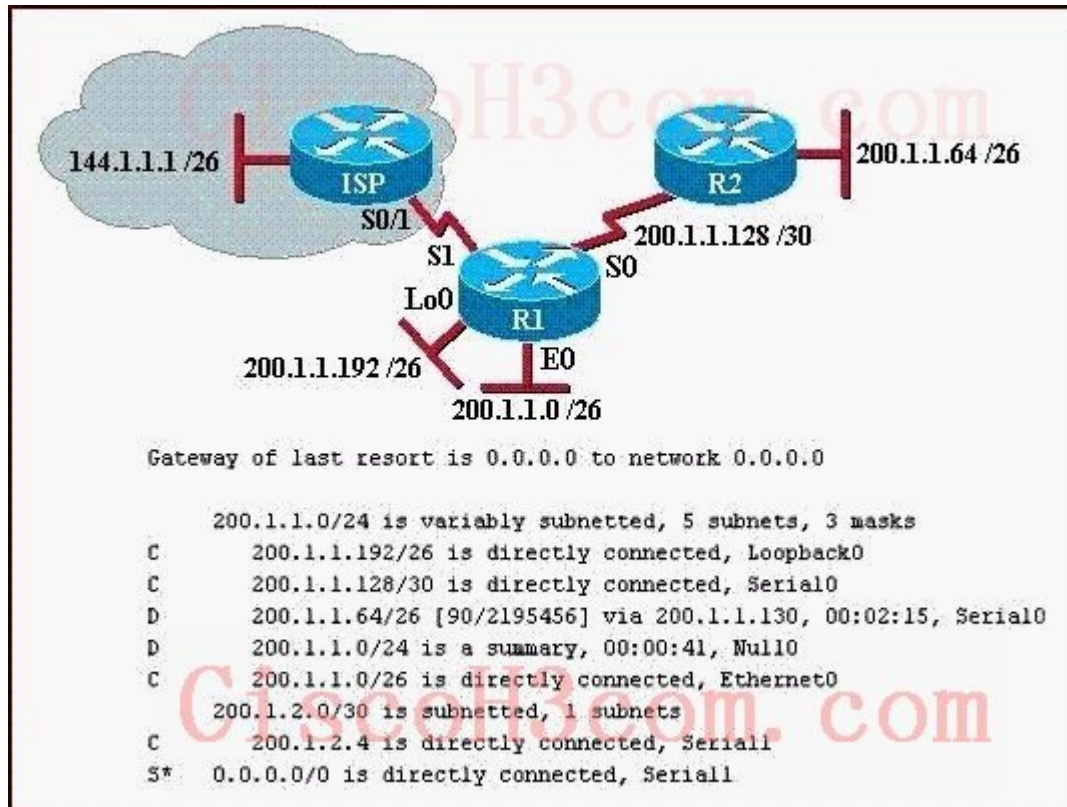
A: a directly connected interface with an address of 192.168.10.254/24

B: a static route to network 192.168.10.0/24

C: a RIP update for network 192.168.10.0/24

D: an OSPF update for network 192.168.0.0/16

E: a default route with a next hop address of 192.168.10.1

F: a static route to network 192.168.10.0/24 with a local serial interface configured as the next hop

Correct Answers: A

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 Answers: A, D, F

81. What can be determined from the router output shown in the graphic?

Gateway of last resort is 0.0.0.0 to network 0.0.0.0

        200.1.1.0/24 is variably subnetted, 5 subnets, 3 masks
C   200.1.1.192/26 is directly connected, Loopback0
C   200.1.1.128/30 is directly connected, Serial0
D   200.1.1.64/26 [90/2195456] via 200.1.1.130, 00:02:15, Serial0
D   200.1.1.0/24 is a summary, 00:00:41, Null0
C   200.1.1.0/26 is directly connected, Ethernet0
        200.1.2.0/30 is subnetted, 1 subnets
C   200.1.2.4 is directly connected, Serial1
S*   0.0.0.0/0 is directly connected, Serial1

A: 200.1.1.64 is a default route.

B: The output shows that there are three default routes.

C: The output came from router R2.

D: The output came from a router that has four physical interfaces.

E: EIGRP is in use in this network.

Correct Answers: E

82. 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 Answers: C

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

Fa0/1
IP - 10.1.2.5 /30
MAC- 000f.2480.8917

Fa0/1
IP - 192.168.4.6 /24
MAC- 000f.2405.2425

Router1

Fa0/0
Router2

Fa0/0
IP - 10.1.2.6 /30
MAC- 000f.2405.2424

Fa0/0
IP - 192.168.6.1 /24
MAC- 000f.2480.8916

IP - 192.168.6.2 /24
Switch1

Fa0/24
MAC- 000f.2485.8918

HostA
IP - 192.168.6.27 /24
MAC - 0010.5a0c.fd86
Gateway – 192.168.6.1

HostB
IP -192.168.4.7 /24
MAC - 0010.5a0c.feae
Gateway – 192.168.4.6

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.feae	dynamic

F.

Interface Address	Physical Address	Type
192.168.6.2	000f.2485.8918	dynamic

Please Input correct Answer

here:

Correct Answers: D

84.Drop

In order to complete a basic switch configuration, drag each switch IOS command on the left to its purpose on the right.

Left commands	Purposes (right)
ip default-gateway	allows access to high-level testing commands, such as **debug**
interface vlan 1	allows access to configuration commands that affect the system as a whole
hostname	sets the system name
ip address	activates the interface configuration mode for VLAN 1
enable	enables the switch management interface
no shutdown	sets the switch management IP address
configure terminal	allows the switch to be managed from remote networks

Drag and drop question. Drag the items to the proper locations.

Correct Answers:

In order to complete a basic switch configuration, drag each switch IOS command on the left to its purpose on the right.

Left commands	Correct order (right)
ip default-gateway	enable
interface vlan 1	configure terminal
hostname	hostname
ip address	interface vlan 1
enable	no shutdown
no shutdown	ip address
configure terminal	ip default-gateway

85.Drop

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 users obtain Internet access through the Headquarters router. The network interfaces in the topology are addressed as follows: **Missouri:** e0 - 192.168.35.17/28; s0 - 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	Block only the users attached to the e0 interface of the Missouri router from access to the accounting server.
deny ip 192.168.35.16 0.0.0.15 host 192.168.35.66	Block a user from the Alabama e0 network from access to the accounting server.
permit ip any any	Prevent all users from outside the enterprise network from accessing the accounting server.
permit ip 192.168.35.0 0.0.0.255 host 192.168.35.66	

CiscoH3com. com

Drag and drop question. Drag the items to the proper locations.

Correct Answers:

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 users obtain Internet access through the Headquarters router. The network interfaces in the topology are addressed as follows: **Missouri:** e0 - 192.168.35.17/28; s0 - 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 |
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
permit ip 192.168.35.0 0.0.0.255 host 192.168.35.66	

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86. LAB

87. Why will a switch never learn a broadcast address?

A: Broadcasts only use network layer addressing.

B: A broadcast frame is never forwarded by a switch.

C: A broadcast address will never be the source address of a frame.

D: Broadcast addresses use an incorrect format for the switching table.

E: Broadcast frames are never sent to switches.

Correct Answers: C

88. Refer to the graphic. Host A has established a connection with the HTTP server attached to interface E0 of the xyz router. Which of the following statements describe the information contained in protocol data units sent from host A to this server? (Choose three.)
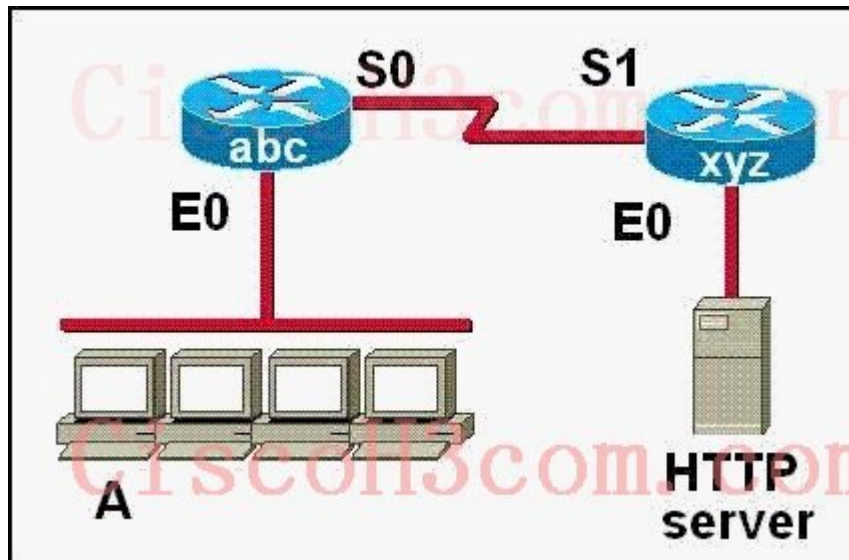
A:The destination port number in a segment header will have a value of 80.

B:The destination port number in a segment header will have a unique value greater than or equal to 1023.

C:The destination address of a frame will be the MAC address of the HTTP server interface.

D:The destination address of a frame will be the MAC address of the E0 interface of the abc router.

E:The destination IP address of a packet will be the IP address of the E0 interface of the abc router.

F:The destination IP address of a packet will be the IP address of the network interface of the HTTP server.

Correct Answers: A, D, F

89.What are two reasons a network administrator would use CDP? (Choose two.)

A:to verify the type of cable interconnecting two devices

B:to determine the status of network services on a remote device

C:to obtain VLAN information from directly connected switches

D:to verify Layer 2 connectivity between two devices when Layer 3 fails

E:to obtain the IP address of a connected device in order to telnet to the device

F:to determine the status of the routing protocols between directly connected routers

Correct Answers: D, E

90.What is the purpose of the command shown below?

vtp password Fl0r1da

A: It is used to validate the sources of VTP advertisements sent between switches.

B: It is used to access the VTP server to make changes to the VTP configuration.

C: It allows two VTP servers to exist in the same domain, each configured with different passwords.

D: It is the password required when promoting a switch from VTP client mode to VTP server mode.

E: It is used to prevent a switch newly added to the network from sending incorrect VLAN information to the other switches in the domain.

Correct Answers: A

91. 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 Answers: C, E, F

92. A network administrator needs to force a high-performance switch that is located in the MDF to become the root bridge for a redundant path switched network. What can be done to ensure that this switch assumes the role as root bridge?

A: Establish a direct link from the switch to all other switches in the network.
B: Assign the switch a higher MAC address than the other switches in the network have.
C: Configure the switch so that it has a lower priority than other switches in the network.
D: Configure the switch for full-duplex operation and configure the other switches for half-duplex operation.
E: Connect the switch directly to the MDF router, which will force the switch to assume the role of root bridge.

Correct Answers: C

93. Refer to the exhibit. Given the output of the Floor3 switch, what statement describes the operation of this switch?

```
Floor3# show vtp status
    VTP Version                       : 2
    Configuration Revision            : 1
    Maximum VLANs supported locally : 250
    Number of existing VLANs          : 8
    VTP Operating Mode                : Client
    VTP Domain Name                   : XYZ
    VTP Pruning Mode                  : Disabled
    VTP V2 Mode                       : Disabled
    VTP Traps Generation              : Disabled
```

A: VTP is disabled on this switch.

B: The switch can create, change, and delete VLANs.

C: The switch learns VLAN information but does not save it to NVRAM.

D: The switch can create VLANs locally but will not forward this information to other switches.

E: The switch learns VLAN information and updates the local VLAN data base in NVRAM.

Correct Answers: C

94. What is the effect of the following access list condition?

access-list 101 permit ip 10.25.30.0 0.0.0.255 any

A: permit all packets matching the first three octets of the source address to all destinations

B: permit all packets matching the last octet of the destination address and accept all source addresses

C: permit all packets from the third subnet of the network address to all destinations

D: permit all packets matching the host bits in the source address to all destinations

E: permit all packets to destinations matching the first three octets in the destination address

Correct Answers: A

95. 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?
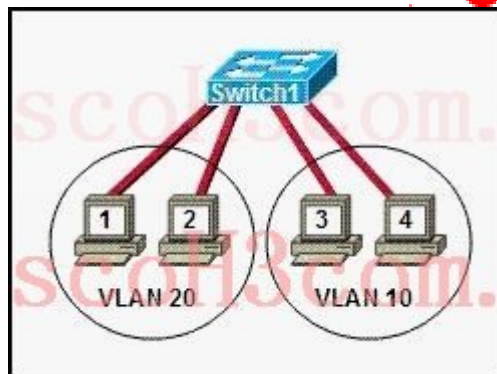
A: a switch with a trunk link that is configured between the switches

B: a router with an IP address 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 router with subinterfaces configured on the physical interface that is connected to the switch

Correct Answers: D

96. LAB

A network associate is configuring a router for the Weaver company to provide Internet access. The ISP has provided the company with six public IP addresses of 198.18.227.25 198.18.227.30. The company has 30 hosts that need to access the Internet simultaneously. The hosts in the company LAN have been assigned private space addresses in the range of 192.168.107.33 - 192.168.107.62.

The following have already been configured on the router:
- The basic router configuration
- The appropriate interfaces have been configured for NAT inside and NAT outside.

eSIM™ Professional   00:00:01
Scenario 1   Version 1.0

You will have to scroll this window and the problem statement window to view the entire problem.
To configure the router click on a host icon that is connected to a router by a serial console cable (shown in the diagram as a dotted line).
The [Tab] key and most

Hide Topology

97. Why would a network administrator configure port security on a switch?

A: to prevent unauthorized Telnet access to a switch port

B: to limit the number of Layer 2 broadcasts on a particular switch port

C: to prevent unauthorized hosts from accessing the LAN

D: to protect the IP and MAC address of the switch and associated ports

E: to block unauthorized access to the switch management interfaces over common TCP ports

Correct Answers: C

98. The show interfaces serial 0/0 command resulted in the output shown in the graphic.
What are possible causes for this interface status? (Choose three.)

A:The interface is shut down.

B:No keepalive messages are received.

C:The clockrate 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 Answers: B, C, F

99. 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.)
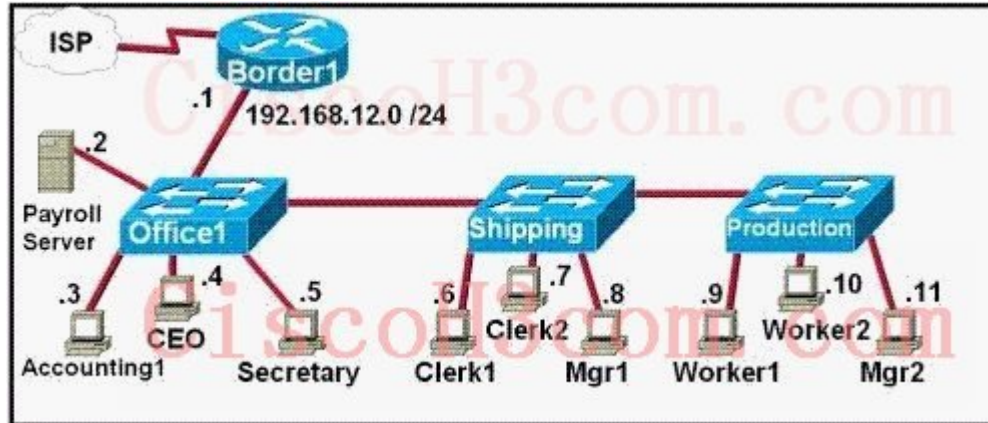
A:access lists

B:encrypted router passwords

C:STP

D:VLANs

E:VTP

F:wireless LANs

Correct Answers: A, D

100. 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. 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 Answers: D

101. On which types of network will OSPF elect a backup designated router?

A: point-to-point and multiaccess

B: point-to-multipoint and multiaccess

C: point-to-point and point-to-multipoint

D: nonbroadcast and broadcast multipoint

E: nonbroadcast and broadcast multiaccess

Correct Answers: E

102. This graphic shows the results of an attempt to open a Telnet connection to router ACCESS1 from router Remote27. Which of the following command sequences will correct this problem?

```
Remote27#
Remote27#telnet access1
Trying ACCESS1 (10.0.0.1)... Open


Password required, but none set

[Connection to access1 closed by foreign host]
Remote27#
```

A: ACCESS1(config)# line console 0

ACCESS1(config-line)# password cisco

B: Remote27(config)# line console 0

Remote27(config-line)# login

Remote27(config-line)# password cisco

C: ACCESS1(config)# line vty 0 4

ACCESS1(config-line)# login

ACCESS1(config-line)# password cisco

D: Remote27(config)# line vty 0 4

Remote27(config-line)# login
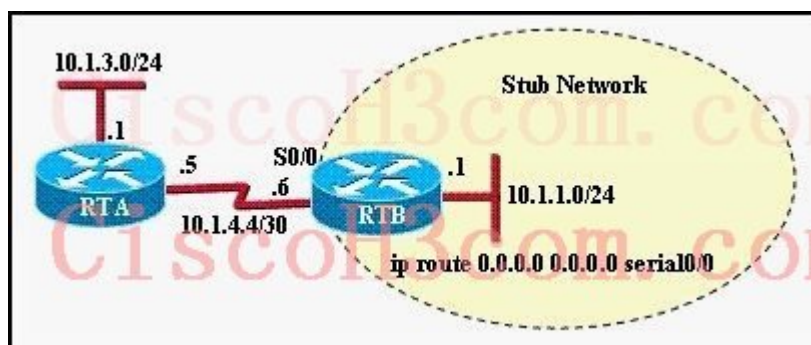
Remote27(config-line)# password cisco

E: ACCESS1(config)# enable password cisco

F: Remote27(config)# enable password cisco

Correct Answers: C

103. Refer to the exhibit. Subnet 10.1.3.0/24 is unknown to router RTB. Which router command will prevent router RTB from dropping a packet destined for the 10.1.3.0/24

network if a default route is configured?

A: ip classless
B: ip default-network
C: network 10.1.1.0
D: network 10.1.1.0 0.0.0.255 area 0
Correct Answers: A

104. 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:All routers will reference their topology database to determine if any backup routes to the 192.168.1.0 network are known.
B: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.
C: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.
D: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.
E: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.
**Correct Answers: C, D**

105. Which statement accurately describes a benefit provided by VTP?

A: VTP allows routing between VLANs.
B: VTP allows a single port to carry information to more than one VLAN.
C: VTP allows physically redundant links while preventing switching loops.
D: VTP allows switches to share VLAN configuration information.

Correct Answers: D

106. Refer to the exhibit. What kind of cable should be used to make each connection that is identified by the numbers shown?
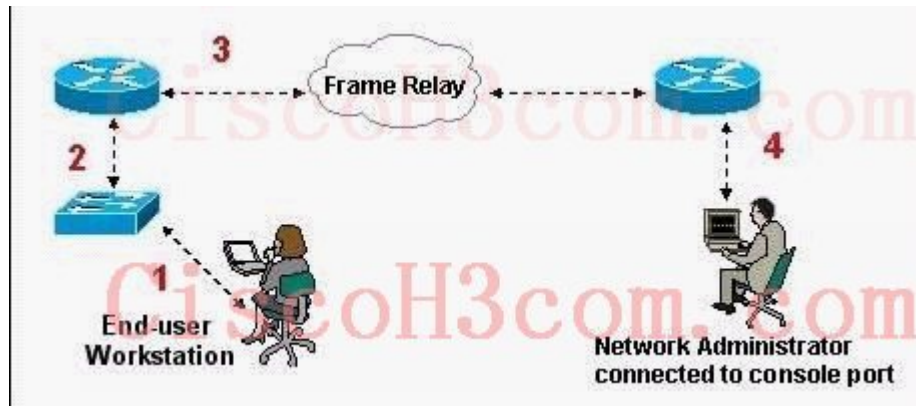
A: 1 - Ethernet crossover cable
2 - Ethernet straight-through cable
3 - fiber optic cable
4 - rollover cable
B: 1 - Ethernet straight-through cable
2 - Ethernet straight-through cable
3 - serial cable
4 - rollover cable
C: 1 - Ethernet rollover cable
2 - Ethernet crossover cable
3 - serial cable
4 - null modem cable
D: 1 - Ethernet straight-through cable
2 - Ethernet crossover cable
3 - serial cable
4 - rollover cable
E: 1 - Ethernet straight-through cable
2 - Ethernet crossover cable
3 - serial cable
4 - Ethernet straight-through cable
Correct Answers: B

107. 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?
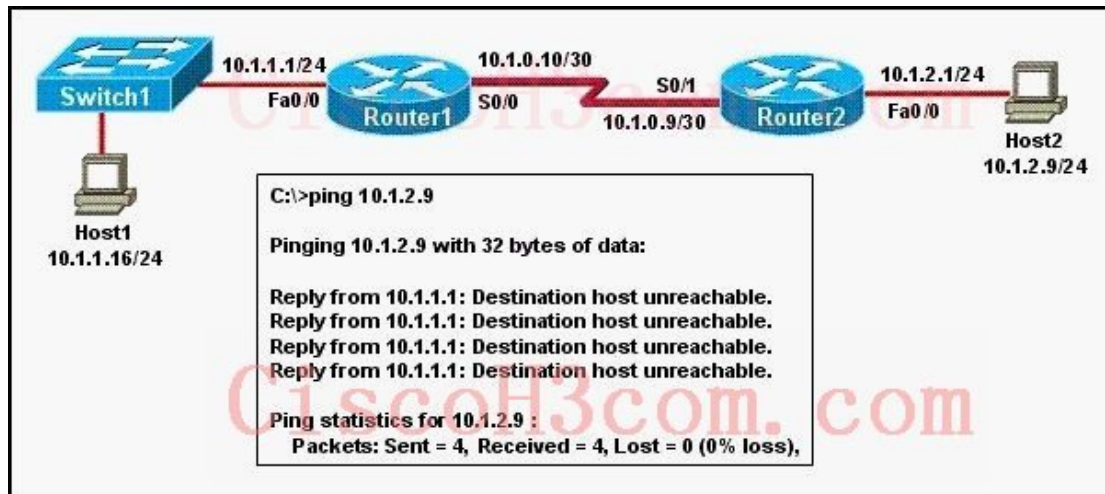
A: The link between Host1 and Switch1 is down.

B: 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 Answers: C

108. What does the "Inside Global" address represent in the configuration of NAT?

A: the summarized address for all of the internal subnetted addresses

B: the MAC address of the router used by inside hosts to connect to the Internet

C: a globally unique, private IP address assigned to a host on the inside network

D: a registered address that represents an inside host to an outside network

Correct Answers: D

109. During startup, the router displays the following error message:

boot: cannot open "flash:"

What will the router do next?

A: Because of damaged flash memory, the router will fail the POST.

B: It will attempt to locate the IOS from a TFTP server. If this fails, it will initiate the setup dialog.

C: It will attempt to locate the IOS from a TFTP server. If this fails, it will load a limited IOS from ROM.

D: It will attempt to locate the configuration file from a TFTP server. If this fails, it will initiate the setup dialog.

E: It will attempt to locate the configuration file from a TFTP server. If this fails, it will load a limited configuration from ROM.

Correct Answers: C

110. 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?
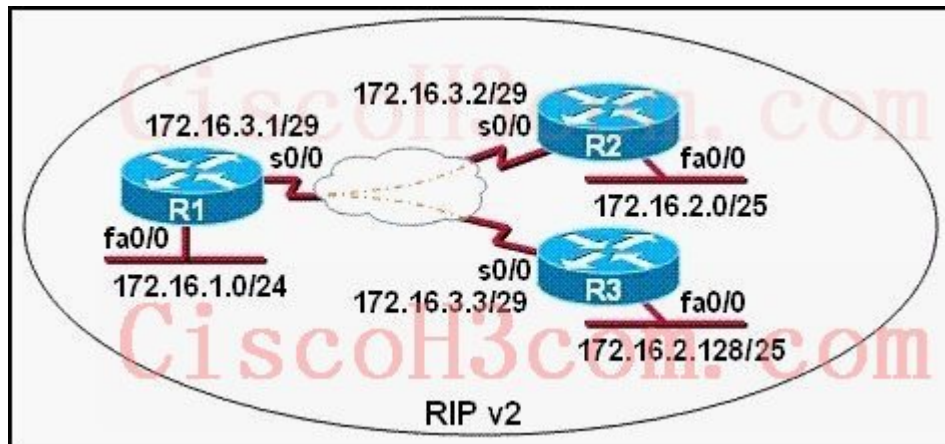
A: The ip subnet-zero command has been issued on the R1 router.
B: The RIP v2 dynamic routing protocol cannot be used across a Frame Relay network.
C: Split horizon is preventing R2 from learning about the R3 networks and R3 from learning about the R2 networks.
D: The 172.16.2.0/25 and 172.16.2.128/25 networks are overlapping networks that can be seen by R1, but not between R2 and R3.
E: The 172.16.3.0/29 network used on the Frame Relay links is creating a discontiguous network between the R2 and R3 router subnetworks.
Correct Answers: C

111. 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.)
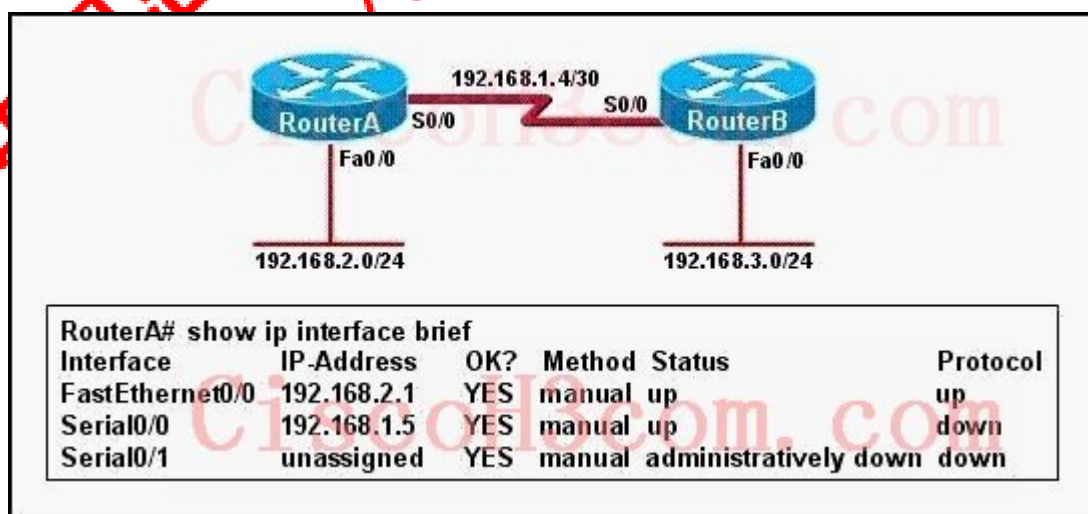
A:The cable that is connected to S0/0 on RouterA is faulty.

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 Answers: E, F

112. Hotspot

Question #1

If the router R1 has a packet with a destination address 192.168.1.255, what describes the operation of the network?

○ R1 will forward the packet out all interfaces.

○ R1 will drop this packet because this it is not a valid IP address.

○ As R1 forwards the frame containing this packet, Sw-A will add 192.168.1.255 to its MAC table.

○ R1 will encapsulate the packet in a frame with a destination MAC address of FF-FF-FF-FF-FF-FF.

○ 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.

Question #2

Users on the 192.168.1.0 /24 network must access files located on the Server 1. What route could be configured on router R1 for file requests to reach the server?

○ ip route 0.0.0.0 0.0.0.0 s0/0/0

○ ip route 0.0.0.0 0.0.0.0 209.165.200.226

○ ip route 209.165.200.0 255.255.255.0 192.168.1.250

○ ip route 192.168.1.0 255.255.255.0 209.165.100.250

Question #3

When a packet is sent from Host 1 to Server 1, in how many different frames will the packet be encapsulated as it is sent across the internetwork?

○ 0

○ 1

○ 2

○ 3

○ 4

Question #4

What must be configured on the network in order for users on the Internet to view web pages located on Web Server 2?

○ On router R2, configure a default static route to the 192.168.1.0 network.

○ On router R2, configure DNS to resolve the URL assigned to Web Server 2 to the 192.168.1.10 address.

○ On router R1, configure NAT to translate an address on the 209.165.100.0/24 network to 192.168.1.10.

○ On router R1, configure DHCP to assign a registered IP address on the 209.165.100.0/24 network to Web Server 2.

Question #5

The router address 192.168.1.250 is the default gateway for both the Web Server 2 and Host 1. What is the correct subnet mask for this network?

○ 255.255.255.0

○ 255.255.255.192

○ 255.255.255.250

○ 255.255.255.252

Hotspot question. Click on the correct location or locations in the exhibit.

Correct Answers:

Instructions

This item contains several questions that you must answer. You can view these questions by clicking on the corresponding button to the left. Changing questions can be accomplished by clicking the numbers to the left of each question. In order to complete the questions, you will need to refer to the topology.

To gain access to the topology, click on the topology button at the bottom of the screen. When you have finished viewing the topology, you can return to your questions by clicking on the Questions button to the left.

Each of the windows can be minimized by clicking on the [-]. You can also reposition a window by dragging it by the title bar.

Scenario

Refer to the topology. The diagram represents a small network with a single connection to the Internet. Using the information shown, answer the five questions shown on the Questions tab.

Topology

209.165.100.250 /24
S0/0/0
ISP
209.165.100.200 /24
R1
R2
Fa0/0
192.168.1.250 /24
Server 1
209.165.200.226 /24
SW-A
Web Server 2
192.168.1.10 /24
Host 1
192.168.1.106 /24

Question #1

If the router R1 has a packet with a destination address 192.168.1.255, what describes the operation of the network?

- [x] R1 will forward the packet out all interfaces.
- ( ) R1 will drop this packet because this it is not a valid IP address.
- ( ) As R1 forwards the frame containing this packet, Sw-A will add 192.168.1.255 to its MAC table.
- ( ) R1 will encapsulate the packet in a frame with a destination MAC address of FF-FF-FF-FF-FF-FF.
- ( ) 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.

Question #2

Users on the 192.168.1.0 /24 network must access files located on the Server 1. What route could be configured on router R1 for file requests to reach the server?

- ( ) ip route 0.0.0.0 0.0.0.0 s0/0/0
- ( ) ip route 0.0.0.0 0.0.0.0 209.165.200.226
- [x] ip route 209.165.200.0 255.255.255.0 192.168.1.250
- ( ) ip route 192.168.1.0 255.255.255.0 209.165.100.250

Question #3

When a packet is sent from Host 1 to Server 1, in how many different frames will the packet be encapsulated as it is sent across the internetwork?

- ( ) 0
- ( ) 1
- ( ) 2
- [x] 3
- ( ) 4

Question #4

What must be configured on the network in order for users on the Internet to view web pages located on Web Server 2?

- ☑ On router R2, configure a default static route to the 192.168.1.0 network.
- ○ On router R2, configure DNS to resolve the URL assigned to Web Server 2 to the 192.168.1.10 address.
- ○ On router R1, configure NAT to translate an address on the 209.165.100.0/24 network to 192.168.1.10.
- ○ On router R1, configure DHCP to assign a registered IP address on the 209.165.100.0/24 network to Web Server 2.

Question #5

The router address 192.168.1.250 is the default gateway for both the Web Server 2 and Host 1. What is the correct subnet mask for this network?

- ○ 255.255.255.0
- ○ 255.255.255.192
- ○ 255.255.255.250
- ☑ 255.255.255.252

113. When upgrading the IOS image, the network administrator receives the exhibited error message. What could be the cause of this error?


```
Router1#copy tftp flash
Address or name of remote host[ ]? 192.168.1.5
Source filename[ ]? c2600-js-1-121-3.bin
Destination filename | c2600-js-1-121-3.bin
Accessing tftp://192.168.1.5 /c2600-js-1-121-3.bin...
%Error opening tftp://192.168.1.5 /CCC (Timed out)
```

A: The new IOS image is too large for the router flash memory.
B: The TFTP server is unreachable from the router.
C: The new IOS image is not correct for this router platform.
D: The IOS image on the TFTP server is corrupt.
E: There is not enough disk space on the TFTP server for the IOS image.
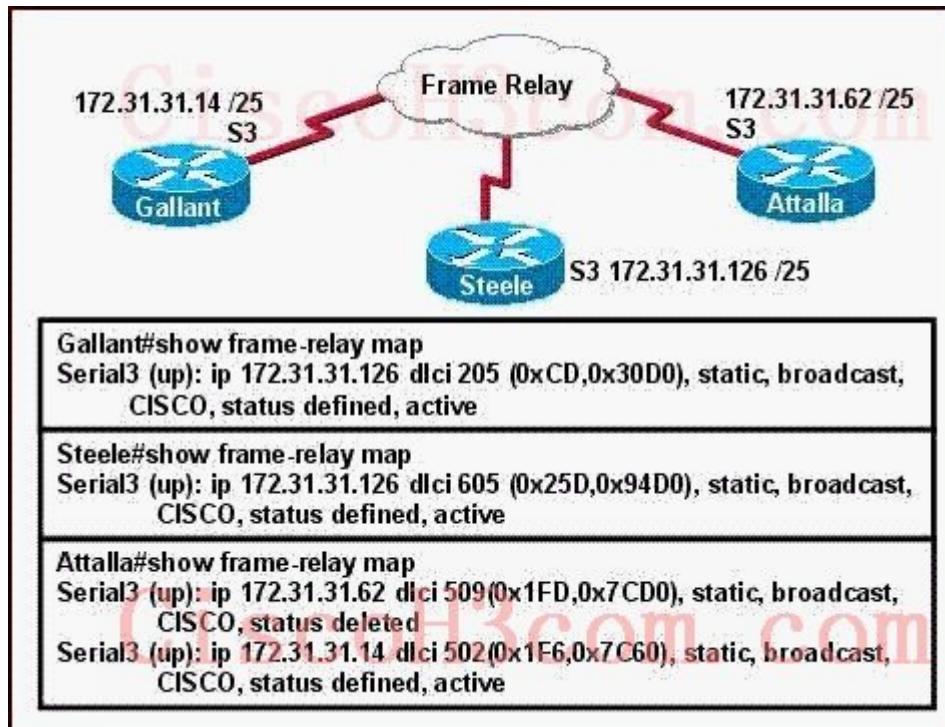Correct Answers: B

114. You and a co-worker have established wireless communication directly between your wireless laptops. What type of wireless topology has been created?

A: BSS
B: ESS
C: IBSS
D: SSID

Correct Answers: C

115. The Frame Relay network in the diagram is not functioning properly. What is the cause of the problem?

A: The Gallant router has the wrong LMI type configured.

B: Inverse ARP is providing the wrong PVC information to the Gallant router.

C: The S3 interface of the Steele router has been configured with the frame-relay encapsulation ietf command.

D: The frame-relay map statement in the Attalla router for the PVC to Steele is not correct.

E: The IP address on the serial interface of the Attalla router is configured incorrectly.

Correct Answers: D

116. Which of the following statements describe the network shown in the graphic? (Choose two.)
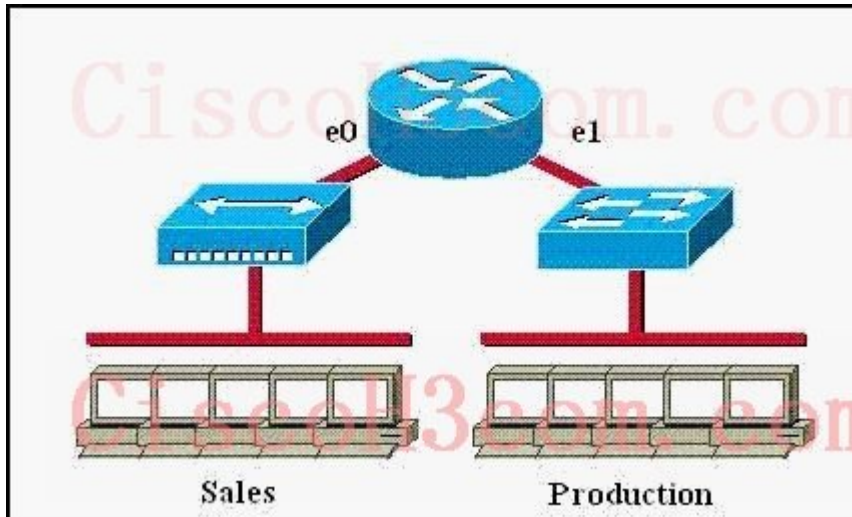
A:There are two broadcast domains in the network.

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 Answers: A, F

117.Which of the following are true regarding the command output shown in the display? (Choose two.)

A:There are at least two routers participating in the RIP process.

B:A ping to 192.168.168.2 will be successful.

C:A ping to 10.0.15.2 will be successful.

D:RtrA has three interfaces participating in the RIP process.

Correct Answers: A, C

118.What three pieces of information can be used in an extended access list to filter traffic? (Choose three.)

A:protocol

B:VLAN number

C:TCP or UDP port numbers

D:source switch port number

E:source IP address and destination IP address

F:source MAC address and destination MAC address

Correct Answers: A, C, E

119.What is the effect of using the service password-encryption command?

A: Only the enable password will be encrypted.

B: Only the enable secret password will be encrypted.

C: Only passwords configured after the command has been entered will be encrypted.

D: It will encrypt the secret password and remove the enable secret password from the configuration.

E: It will encrypt all current and future passwords.

Correct Answers: E

120. LAB

121.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 Answers: D, F

122. Refer to the exhibit. For what two reasons has the router loaded its IOS image from the location that is shown? (Choose two.)

A:Router1 has specific boot system commands that instruct it to load IOS from a 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 an image from TFTP for management purposes.
Correct Answers: A, C

123.At which OSI layer is a logical path created between two host systems?

A: session
B: transport
C: network
D: data link
E: physical
Correct Answers: C

124.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 Answers: A, C

125.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 Operating 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 VLAN database is updated when VTP information is received from other switches.
Correct Answers: C

126.Which two statements best describe the wireless security standard that is defined by WPA? (Choose two.)

A:It specifies use of a static encryption key that must be changed frequently to enhance

security.

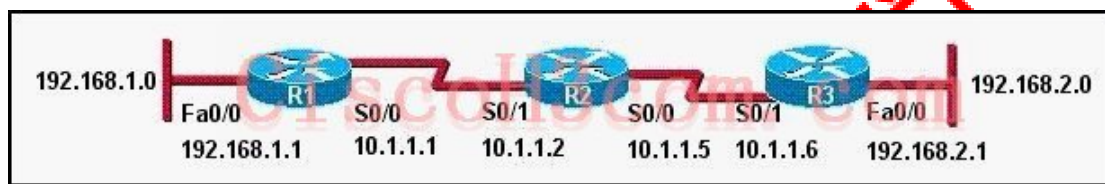B:It requires use of an open authentication method.

C:It specifies the use of dynamic encryption keys that change each time a client establishes a connection.

D:It requires that all access points and wireless devices use the same encryption key.

E:It includes authentication by PSK.

Correct Answers: C, E

127. 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:All routers will reference their topology database to determine if any backup routes to the 192.168.1.0 network are known.

B: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.

C: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.

D: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.

E: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.

Correct Answers: C, D

128. What is the function of the command switchport trunk native vlan 999 on a Cisco Catalyst switch?

A: It creates a VLAN 999 interface.

B: It designates VLAN 999 for untagged traffic.

C: It blocks VLAN 999 traffic from passing on the trunk.

D: It designates VLAN 999 as the default for all unknown tagged traffic.

Correct Answers: B

129. Which type of attack is characterized by a flood of packets that are requesting a TCP connection to a server?

A: denial of service

B: brute force

C: reconnaissance

D: Trojan horse

Correct Answers: A

130. LAB

1. This topology contains 3 routers and 1 switch. Complete the topology.
   ? Drag the appropriate device icons to the locations labeled **Device**.
   ? Drag the appropriate connections to the locations labeled **Connections**.
   ? Drag the appropriate IP addresses to the locations labeled IP Address. (Hint: Use the given host addresses and the Prime router information given).
   ? To remove a device or connection, drag it away from the topology.
2. Use information gathered from the Prime router to complete the configuration of any additional routers. **No passwords are required to access the Prime router.**
   The config terminal command has been disabled for the HQ router. This router does not require configuration.

Configure each additional router with the following
   ? Configure the interfaces with the correct IP address and enable the interface
   ? Set the password to allow console access to **consolepw.**
   ? Set the password to allow telnet access to **telnetpw.**
   ? Set the password to allow privilege mode access to **privpw.**

Note: Because routes are not being added to the configurations, you will not be able to ping through the internetwork.
   All devices have cable autosensing capabilities disabled.

Note: Because routes are not being added to the configurations, you will not be able to ping through the internetwork.
   All devices have cable autosensing capabilities disabled.
   All hosts are PC's.

131. When a new trunk is configured on a 2950 switch, which VLANs by default are allowed over the trunk link?

A: no VLANs

B: all VLANs

C: only VLANs 1 – 64

D: only the VLANs that are specified when creating the trunk

Correct Answers: B

132. 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.
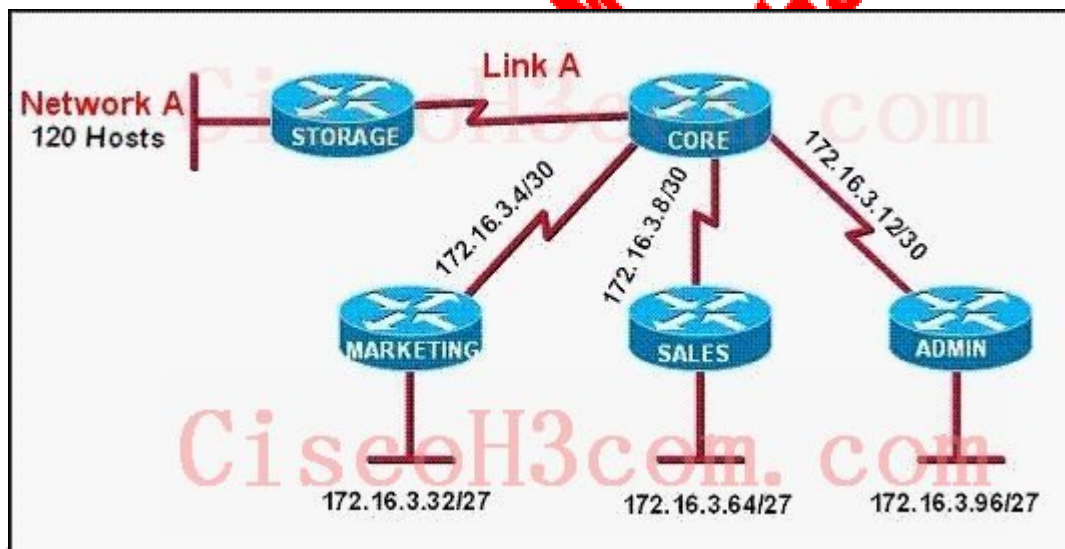
Correct Answers: B

133. An access list was written with the four statements shown in the graphic. Which single access list statement will combine all four of these statements into a single statement that will have exactly the same effect?

```
access-list 10 permit 172.29.16.0 0.0.0.255
access-list 10 permit 172.29.17.0 0.0.0.255
access-list 10 permit 172.29.18.0 0.0.0.255
access-list 10 permit 172.29.19.0 0.0.0.255
```

A: access-list 10 permit 172.29.16.0 0.0.0.255
B: access-list 10 permit 172.29.16.0 0.0.1.255
C: access-list 10 permit 172.29.16.0 0.0.3.255
D: access-list 10 permit 172.29.16.0 0.0.15.255
E: access-list 10 permit 172.29.0.0 0.0.255.255

Correct Answers: C

134. 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 Answers: B, D

135. 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 Answers: E, F

136.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 Answers: C, E

137.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?
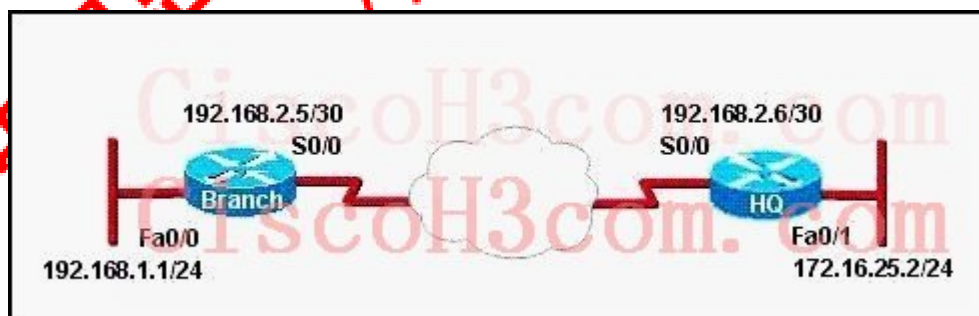
A: HQ(config)# ip route 192.168.1.0 255.255.255.0 192.168.2.5
Branch(config)# ip route 172.16.25.0 255.255.255.0 192.168.2.6
B: HQ(config)# router rip
HQ(config-router)# network 192.168.2.0
HQ(config-router)# network 172.16.0.0

Branch(config)# router rip
Branch (config-router)# network 192.168.1.0
Branch (config-router)# network 192.168.2.0
C: 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
D: 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
Correct Answers: A

138. 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 Answers: C

139. LAB

Printers, Inc. is redesigning the network that connects its three locations. The administrator gave the networking team 192.168.22.0 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. 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.

192.168.22.240/30
192.168.22.252/29
192.168.22.239/28
192.168.22.241/30
192.168.22.207/27
192.168.22.121/25
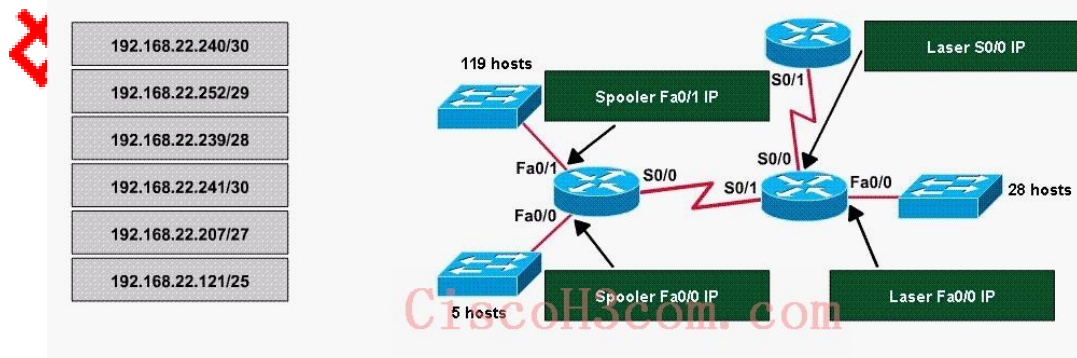
140. The OSPF Hello protocol performs which of the following tasks? (Choose two.)

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 Answers: A, C

141. Refer to the output from the show running-config command in the exhibit. What should the administrator do to allow the workstations connected to the FastEthernet 0/0 interface to obtain an IP address?


```
R1-ABC# show running-config
Current configuration:
!
version 12.1
hostname ABC
!
ip subnet-zero
ip name-server 192.16.1.1
ip dhcp excluded-address 10.90.201.1
!
ip dhcp pool ABC_DHCP
    network 10.90.201.0 255.255.255.0
    default-router 10.90.201.1
    dns-server 192.31.7.152
!
interface  FastEthernet 0/0
    no ip directed-broadcast
    ip nat inside
!
interface Serial 0/0
    description to ISP circuit ID ALDS1-3456AX4743-00
    ip address 192.31.7.38 255.255.255.255.252
    ip nat outside
!
ip nat inside source list 14 interface serial 0/0 overload
ip classless
ip route 0.0.0.0 0.0.0.0 192.31.7.37
!
access-list 14 permit 10.90.201.0 0.0.0.255
<output omitted>
```

A: Apply access-group 14 to interface FastEthernet 0/0.

B: Add access-list 14 permit any any to the access list configuration.

C: Configure the IP address of the FastEtherent 0/0 interface to 10.90.201.1.

D: Add an interface description to the FastEthernet 0/0 interface configuration.
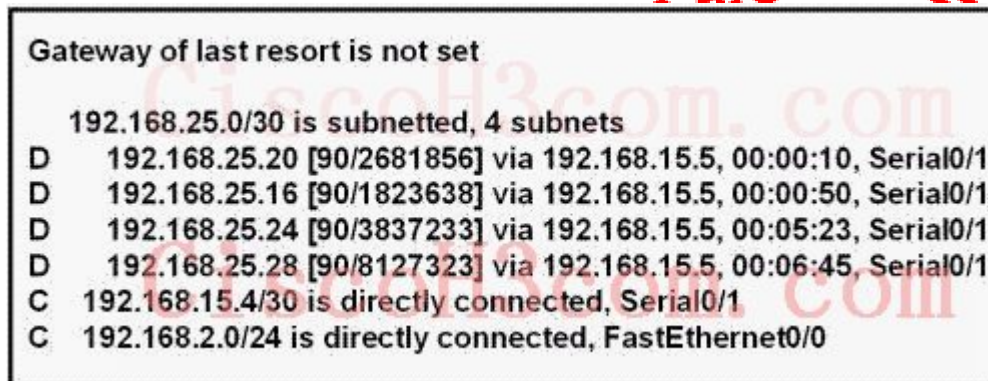
Correct Answers: C

142. Refer to the exhibit. What IP address should be assigned to Workstation A?

A: 192.168.1.143/28
B: 192.168.1.144/28
C: 192.168.1.145/28
D: 192.168.1.159/28
E: 192.168.1.160/28
Correct Answers: C

143. 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: 192.168.25.0 255.255.255.252
C: 192.168.25.16 255.255.255.240
D: 192.168.25.16 255.255.255.252
E: 192.168.25.28 255.255.255.240
F: 192.168.25.28 255.255.255.252
Correct Answers: C

144. 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: FTP
B: Telnet
C: SMTP
D: DNS
E: HTTP

F:POP3

Correct Answers: D, E, F

145. Why does the data communication industry use the layered OSI reference model? (Choose two.)

A:It divides the network communication process into smaller and simpler components, thus aiding component development, design, and troubleshooting.
B:It enables equipment from different vendors to use the same electronic components, thus saving research and development funds.
C:It supports the evolution of multiple competing standards, and thus provides business opportunities for equipment manufacturers.
D:It encourages industry standardization by defining what functions occur at each layer of the model.
E:It provides a means by which changes in functionality in one layer require changes in other layers.

Correct Answers: A, D

146. Drop

Drag and drop question. Drag the items to the proper locations.

Correct Answers:

In order to complete a basic switch configuration, drag each switch IOS command on the left to its purpose on the right.

Left	Right
ip default-gateway	enable
interface vlan 1	configure terminal
hostname	hostname
ip address	interface vlan 1
enable	no shutdown
no shutdown	ip address
configure terminal	ip default-gateway

147. 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?


```
Coffee#show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is 172.19.22.2 to network 0.0.0.0

C    172.17.22.0 is directly connected, FastEthernet0/0
C    172.18.22.0 is directly connected, Serial0/0
S*   0.0.0.0/0 [1/0] via 172.19.22.2
```

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 Answers: C

148. 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 maximum 1

B:Switch1(config)# mac-address-table secure

C:Switch1(config)# access-list 10 permit ip host

D:Switch1(config-if)# switchport port-security violation shutdown

E:Switch1(config-if)# ip access-group 10

Correct Answers: A, D

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

A: 10 Mbps

B: 11 Mbps

C: 54 Mbps

D: 100 Mbps

Correct Answers: B

150. 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

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.)

```
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#
```

A:FastEthernet0/0

B:FastEthernet0/1

C:Serial0/0

D:Serial0/1.102

E:Serial0/1.103

F:Serial0/1.104

Correct Answers: B, C, D

151. 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
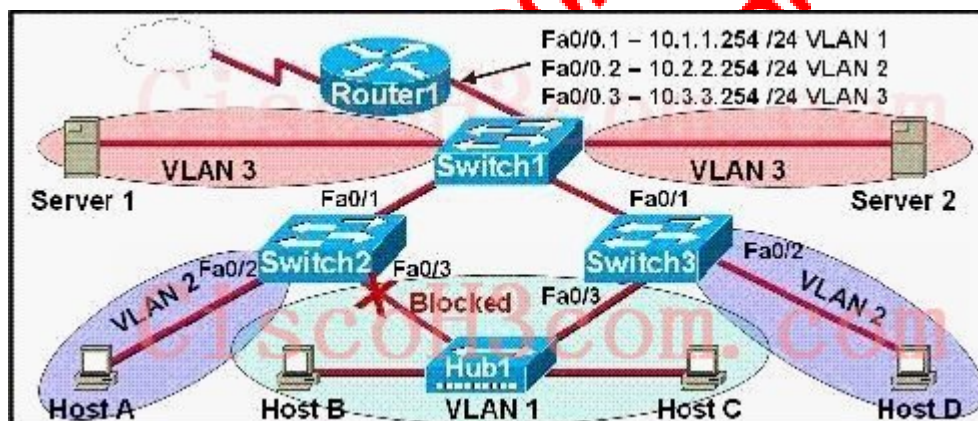
be implemented to help prevent unauthorized access to the server? (Choose two.)
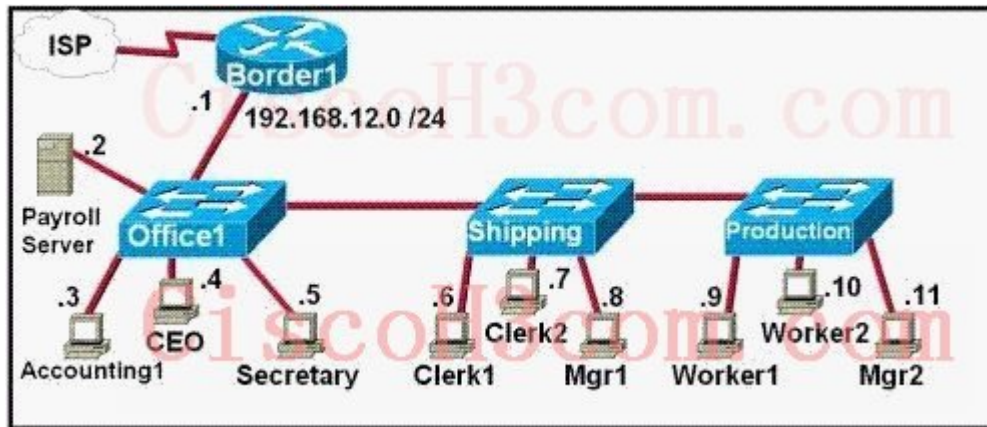
A:access lists
B:encrypted router passwords
C:STP
D:VLANs
E:VTP
F:wireless LANs
Correct Answers: A, D

152. Which statement is correct about the internetwork shown in the diagram?

A: Switch2 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 Router 1, Host A cannot access Server 1.
F: If Fa0/1 is down on Switch 3, Host C cannot access Server 2.
Correct Answers: E

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

A:A successor route is used by EIGRP to forward traffic to a destination.
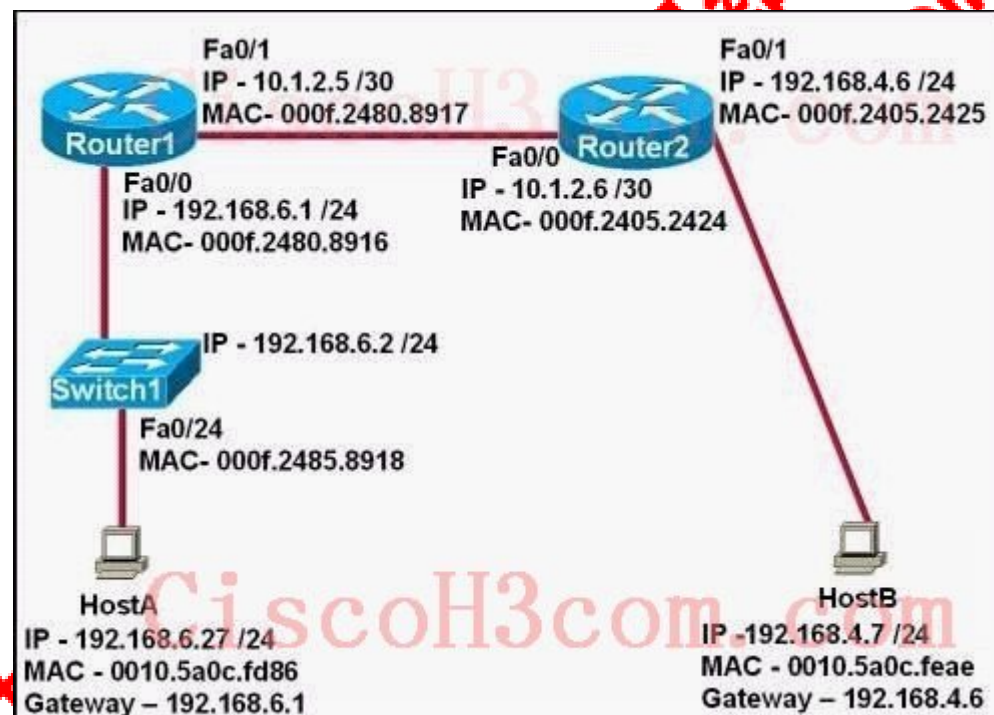B:Successor routes are saved in the topology table to be used if the primary route fails.

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 Answers: A, D

154.Which of the following is true regarding the use of switches and hubs for network connectivity?

A: Switches take less time to process frames than hubs take.

B: Switches do not forward broadcasts.

C: Hubs can filter frames.

D: Using hubs can increase the amount of bandwidth available to hosts.

E: Switches increase the number of collision domains in the network.

Correct Answers: E

155.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.feae	dynamic

F.

Interface Address	Physical Address	Type
192.168.6.2	000f.2485.8918	dynamic

Please Input correct Answer here:

Correct Answers: D

156. Why has the network shown in the exhibit failed to converge?
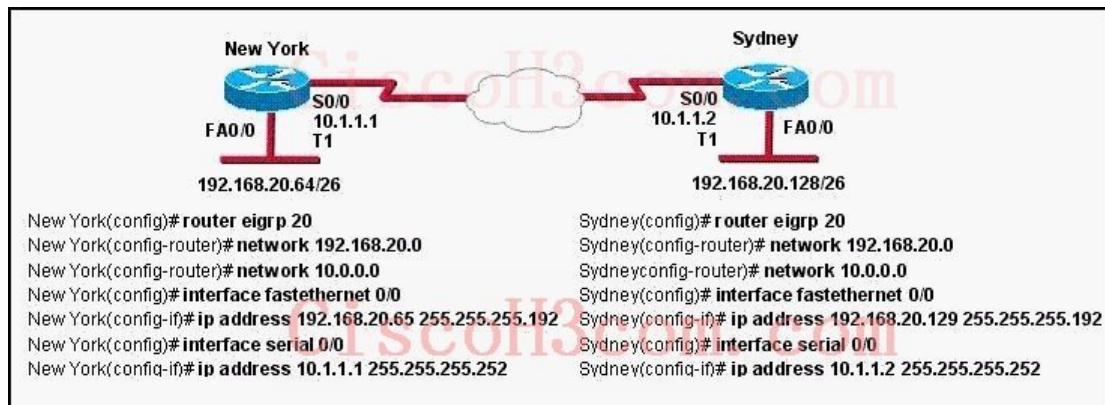
A: The no auto-summary command needs to be applied to the routers.
B: The network numbers have not been properly configured on the routers.
C: The subnet masks for the network numbers have not been properly configured.
D: The autonomous system number has not been properly configured.
E: The bandwidth values have not been properly configured on the serial interfaces.
Correct Answers: A

157.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 Answers: B, D

158.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 Answers: A, E

159.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:All routers will reference their topology database to determine if any backup routes to the 192.168.1.0 network are known.

B: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.
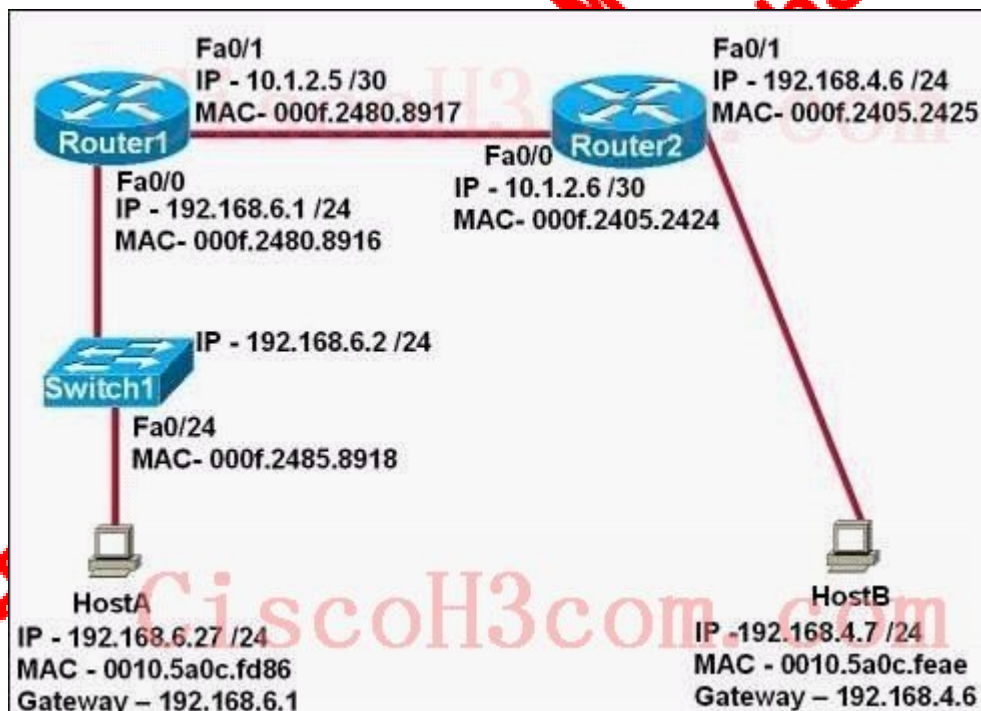
C:Because of the split-horizon rule, router R2 will be prevented from sending erroneous information to R1 about connectivity to the 192.168.1.0 network.

D: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.

E: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.

Correct Answers: C, D

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

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.feae	dynamic

○ F.

Interface Address	Physical Address	Type
192.168.6.2	000f.2485.8918	dynamic

Please Input correct Answer

here:

Correct Answers: D

161.Which of the following are key characteristics of PPP? (Choose three.)

A:can be used over analog circuits
B:maps Layer 2 to Layer 3 address
C:encapsulates several routed protocols
D:supports IP only
E:provides error correction
Correct Answers: A, C, E

162.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.)
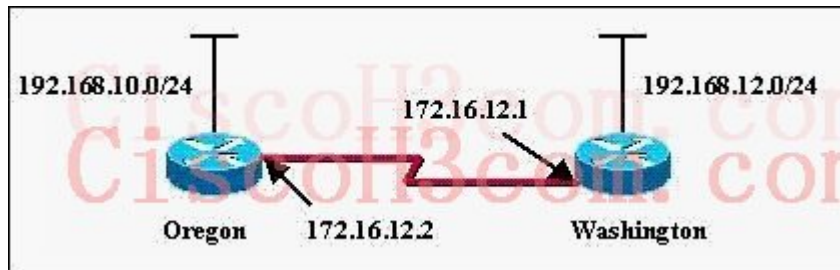
D: incorrect IP address mapping
C: mismatched encapsulation types
B: incorrect DLCI
A: mismatched LMI types
165. A Cisco router that was providing Frame Relay connectivity at a remote site was replaced with a different vendor's frame relay router. Connectivity is now down between the central and remote site. What is the most likely cause of the problem?

Correct Answers: B

E: The switch will forward the frame to all ports except the port on which it was received.
D: The switch will remove the destination MAC from the switch table.
C: The switch will return a copy of the frame out the source port.
B: The switch will forward the frame to a specific port.
A: The switch will not forward unicast frames.
164. What will an Ethernet switch do if it receives a unicast frame with a destination MAC that is listed in the switch table?

Correct Answers: B, E

F:SDM
E:IPS
D:IOX
C:IOS
B:IDS
A:ATM
163. What are two security appliances that can be installed in a network? (Choose two.)

Correct Answers: A, C

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

A:The command establishes a static route.

Correct Answers: C

166. Hotspot

Question #1

If the router R1 has a packet with a destination address 192.168.1.255, what describes the operation of the network?

○ R1 will forward the packet out all interfaces.

○ R1 will drop this packet because this it is not a valid IP address.

○ As R1 forwards the frame containing this packet, Sw-A will add 192.168.1.255 to its MAC table.

○ R1 will encapsulate the packet in a frame with a destination MAC address of FF-FF-FF-FF-FF-FF.

○ 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.

Question #2

Users on the 192.168.1.0 /24 network must access files located on the Server 1. What route could be configured on router R1 for file requests to reach the server?

○ ip route 0.0.0.0 0.0.0.0 s0/0/0

○ ip route 0.0.0.0 0.0.0.0 209.165.200.226

○ ip route 209.165.200.0 255.255.255.0 192.168.1.250

○ ip route 192.168.1.0 255.255.255.0 209.165.100.250

Question #3

When a packet is sent from Host 1 to Server 1, in how many different frames will the packet be encapsulated as it is sent across the internetwork?

○ 0

○ 1

○ 2

○ 3

○ 4

What must be configured on the network in order for users on the Internet to view web pages located on Web Server 2?

○ On router R2, configure a default static route to the 192.168.1.0 network.

○ On router R2, configure DNS to resolve the URL assigned to Web Server 2 to the 192.168.1.10 address.

○ On router R1, configure NAT to translate an address on the 209.165.100.0/24 network to 192.168.1.10.

○ On router R1, configure DHCP to assign a registered IP address on the 209.165.100.0/24 network to Web Server 2.

The router address 192.168.1.250 is the default gateway for both the Web Server 2 and Host 1. What is the correct subnet mask for this network?

○ 255.255.255.0

○ 255.255.255.192

○ 255.255.255.250

○ 255.255.255.252

Hotspot question. Click on the correct location or locations in the exhibit.

Correct Answers:

Instructions

This item contains several questions that you must answer. You can view these questions by clicking on the corresponding button to the left. Changing questions can be accomplished by clicking the numbers to the left of each question. In order to complete the questions, you will need to refer to the topology.

To gain access to the topology, click on the topology button at the bottom of the screen. When you have finished viewing the topology, you can return to your questions by clicking on the Questions button to the left.

Each of the windows can be minimized by clicking on the [-]. You can also reposition a window by dragging it by the title bar.

Scenario

Refer to the topology. The diagram represents a small network with a single connection to the Internet. Using the information shown, answer the five questions shown on the Questions tab.

Topology

209.165.100.250 /24
S0/0/0
R1
ISP
209.165.100.200 /24
R2
Fa0/0
192.168.1.250 /24
Server 1
209.165.200.226 /24
SW-A
Web Server 2
192.168.1.10 /24
Host 1
192.168.1.106 /24

Question #1

If the router R1 has a packet with a destination address 192.168.1.255, what describes the operation of the network?

- ☑ R1 will forward the packet out all interfaces.
- ○ R1 will drop this packet because this it is not a valid IP address.
- ○ As R1 forwards the frame containing this packet, Sw-A will add 192.168.1.255 to its MAC table.
- ○ R1 will encapsulate the packet in a frame with a destination MAC address of FF-FF-FF-FF-FF-FF.
- ○ 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.

Question #2

Users on the 192.168.1.0 /24 network must access files located on the Server 1. What route could be configured on router R1 for file requests to reach the server?

- ○ ip route 0.0.0.0 0.0.0.0 s0/0/0
- ○ ip route 0.0.0.0 0.0.0.0 209.165.200.226
- ☑ ip route 209.165.200.0 255.255.255.0 192.168.1.250
- ○ ip route 192.168.1.0 255.255.255.0 209.165.100.250

Question #3

When a packet is sent from Host 1 to Server 1, in how many different frames will the packet be encapsulated as it is sent across the internetwork?

- ○ 0
- ○ 1
- ○ 2
- ☑ 3
- ○ 4

Question #4

What must be configured on the network in order for users on the Internet to view web pages located on Web Server 2?

☑ On router R2, configure a default static route to the 192.168.1.0 network.

○ On router R2, configure DNS to resolve the URL assigned to Web Server 2 to the 192.168.1.10 address.

○ On router R1, configure NAT to translate an address on the 209.165.100.0/24 network to 192.168.1.10.

○ On router R1, configure DHCP to assign a registered IP address on the 209.165.100.0/24 network to Web Server 2.

Question #5

The router address 192.168.1.250 is the default gateway for both the Web Server 2 and Host 1. What is the correct subnet mask for this network?

○ 255.255.255.0

○ 255.255.255.192

○ 255.255.255.250

☑ 255.255.255.252

167. 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.)
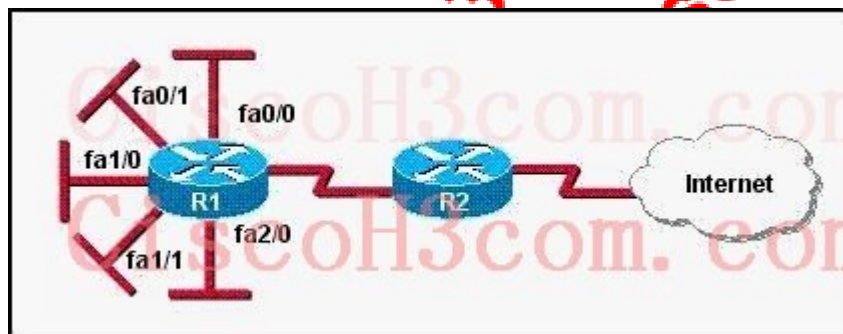
A:192.1.159.2
B:192.1.160.11
C:192.1.138.41
D:192.1.151.254
E:192.1.143.145
F:192.1.1.144

Correct Answers: A, D

168. Refer to the output from the show running-config command in the exhibit. What should the administrator do to allow the workstations connected to the FastEthernet 0/0 interface to obtain an IP address?

```
R1-ABC# show running-config
Current configuration:
!
version 12.1
hostname ABC
!
ip subnet-zero
ip name-server 192.16.1.1
ip dhcp excluded-address 10.90.201.1
!
ip dhcp pool ABC_DHCP
    network 10.90.201.0 255.255.255.0
    default-router 10.90.201.1
    dns-server 192.31.7.152
!
interface  FastEthernet 0/0
    no ip directed-broadcast
    ip nat inside
!
interface Serial 0/0
    description to ISP circuit ID ALDS1-3456AX4743-00
    ip address 192.31.7.38 255.255.255.255.252
    ip nat outside
!
ip nat inside source list 14 interface serial 0/0 overload
ip classless
ip route 0.0.0.0 0.0.0.0 192.31.7.37
!
access-list 14 permit 10.90.201.0 0.0.0.255
<output omitted>
```

A: Apply access-group 14 to interface FastEthernet 0/0.

B: Add access-list 14 permit any any to the access list configuration.

C: Configure the IP address of the FastEtherent 0/0 interface to 10.90.201.1.

D: Add an interface description to the FastEthernet 0/0 interface configuration.

Correct Answers: C

169.A network administrator would like to implement NAT in the network shown in the graphic to allow inside hosts to use a private addressing scheme. Where should NAT be configured?
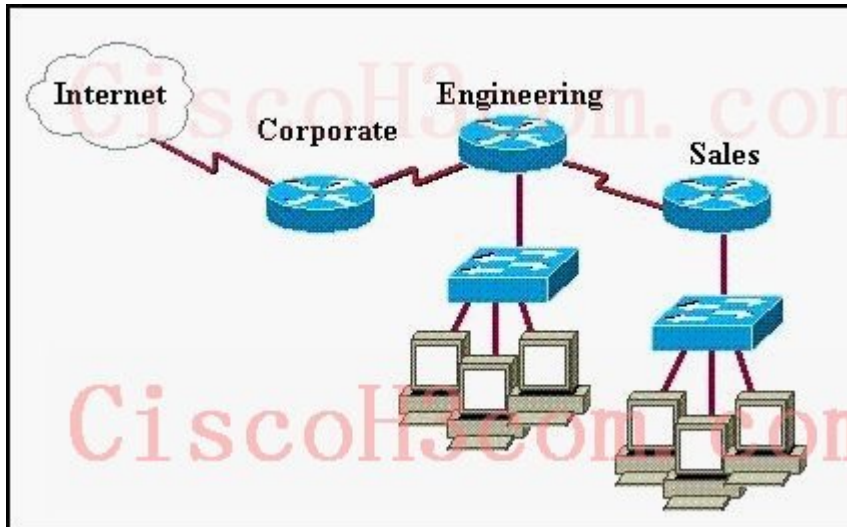
A: Corporate router

B: Engineering router

C: Sales router

D: all routers

E: all routers and switches

Correct Answers: A

170. 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 Answers: C

171. Drop

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 **debug**
interface vlan 1	allows access to configuration commands that affect the system as a whole
hostname	sets the system name
ip address	activates the interface configuration mode for VLAN 1
enable	enables the switch management interface
no shutdown	sets the switch management IP address
configure terminal	allows the switch to be managed from remote networks

Drag and drop question. Drag the items to the proper locations.

Correct Answers:

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	enable
interface vlan 1	configure terminal
hostname	hostname
ip address	interface vlan 1
enable	no shutdown
no shutdown	ip address
configure terminal	ip default-gateway

172. Refer to the exhibit. What can be determined about routes that are learned from the router at IP address 190.171.23.12?

```
HQ_Router# show ip protocols
Routing Protocol is "rip"
  Sending updates every 30 seconds, next due in 18 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 2, receive version 2
    Interface          Send  Recv  Triggered RIP  Key-chain
    Ethernet0           2     2
    Ethernet1           2     2
  Automatic network summarization is not in effect
  Maximum path: 4
  Routing for Networks:
    190.171.0.0
    190.172.0.0
  Routing Information Sources:
    Gateway         Distance      Last Update
    190.171.23.10      120        00:00:22
    190.171.23.12      120        00:03:30
    190.172.32.10      120        00:00:16
  Distance: (default is 120)

HQ_Router#
```

A: HQ_Router last received an update from 190.171.23.12 at 3:30 am.

B: If HQ_Router does not receive an update from 190.171.23.12 in 30 seconds, all routes from that source will be removed from the routing table.

C: If HQ_Router does not receive an update from 190.171.23.12 in 30 seconds, all routes from that source will be flagged with a hold-down timer.

D: 190.171.23.12 is expected to send an update to HQ_Router for network 190.172.0.0 in 3 minutes and 30 seconds.

Correct Answers: B

173. 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.)
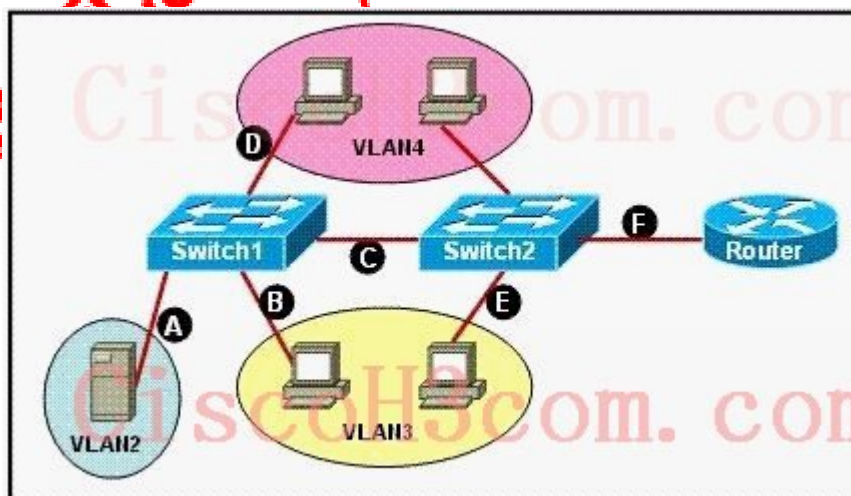
A:A
B:B
C:C
D:D
E:E
F:F
Correct Answers: C, F

174. Which tables of EIGRP route information are held in RAM and maintained through the use of hello and update packets? (Choose two.)

A:neighbor table
B:SPF table
C:RTP table
D:topology table
E:query table
F:DUAL table
Correct Answers: A, D

175. 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.)
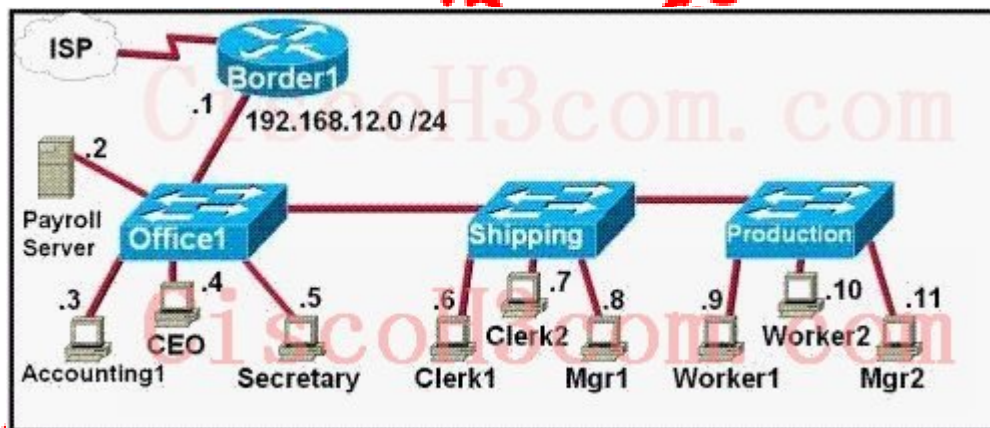
A:access lists
B:encrypted router passwords
C:STP
D:VLANs
E:VTP
F:wireless LANs
Correct Answers: A, D

176. A router learns about a remote network from EIGRP, OSPF, and a static route. Assuming all routing protocols are using their default administrative distance, which route will

the router use to forward data to the remote network?

A: The router will use the static route.
B: The router will use the OSPF route.
C: The router will use the EIGRP route.
D: The router will load balance and use all three routes.
Correct Answers: A

177. Refer to the exhibit. A new subnet with 12 hosts has been added to the network. Which subnet address should this network use to provide enough useable addresses while wasting the fewest addresses?
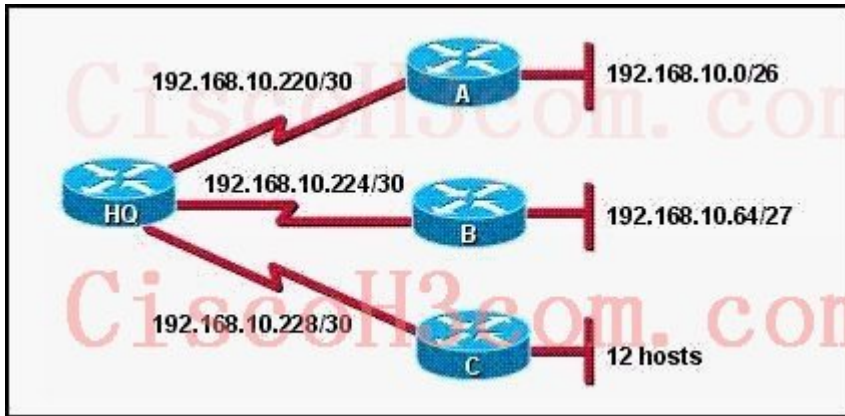
A: 192.168.10.80/28
B: 192.168.10.80/29
C: 192.168.10.96/28
D: 192.168.10.96/29
Correct Answers: C

178. An access list has been designed to prevent HTTP traffic from the Accounting Department from reaching the HR server attached to the Holyoke router. Which of the following access lists will accomplish this task when grouped with the e0 interface on the Chicopee router?
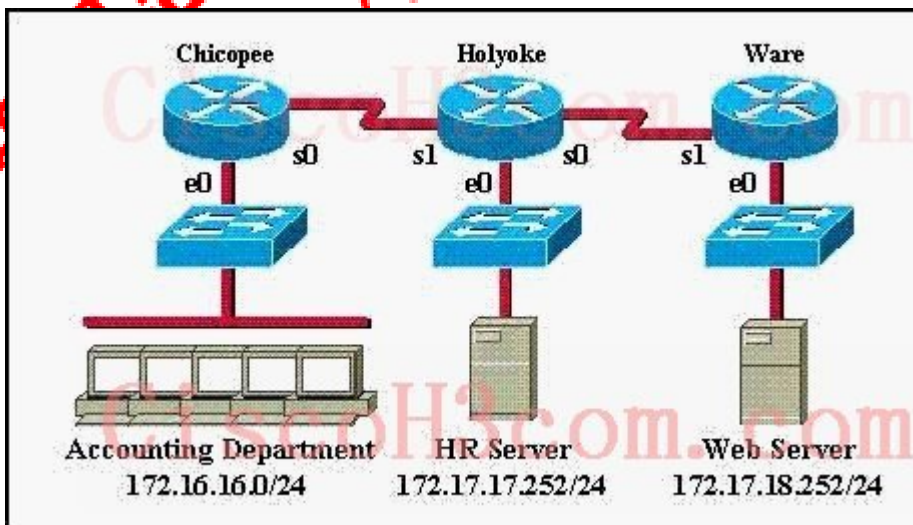
A: permit ip any any

deny tcp 172.16.16.0 0.0.0.255 172.17.17.252 0.0.0.0 eq 80

B: permit ip any any

deny tcp 172.17.17.252 0.0.0.0 172.16.16.0 0.0.0.255 eq 80

C: deny tcp 172.17.17.252 0.0.0.0 172.16.16.0 0.0.0.255 eq 80

permit ip any any

D: deny tcp 172.16.16.0 0.0.0.255 172.17.17.252 0.0.0.0 eq 80

permit ip any any

Correct Answers: D

179.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 Answers: D

180.Refer to the exhibit. The network administrator must complete the connection between the RTA of the XYZ Company and the service provider. To accomplish this task, which two devices could be installed at the customer site to provide a connection through the local loop to the central office of the provider? (Choose two)
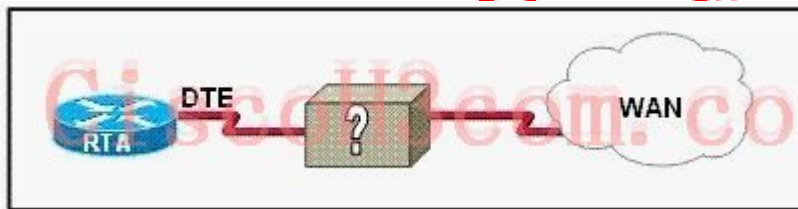
A:WAN switch
B:PVC
C:ATM switch
D:multiplexer
E:CSU/DSU
F:modem

Correct Answers: E, F

181.When a router is connected to a Frame Relay WAN link using a serial DTE interface, how is the interface clock rate determined?

A: It is supplied by the CSU/DSU.
B: It is supplied by the far end router.
C: It is determined by the clock rate command.
D: It is supplied by the Layer 1 bit stream timing.

Correct Answers: A

182. When a new trunk link is configured on an IOS based switch, which VLANs are allowed over the link?

A: By default, all defined VLANs are allowed on the trunk.
B: Each single VLAN, or VLAN range, must be specified with the switchport mode command.
C: Each single VLAN, or VLAN range, must be specified with the vtp domain command.
D: Each single VLAN, or VLAN range, must be specified with the vlan database command.
Correct Answers: A

183. Acknowledgements, sequencing, and flow control are characteristics of which OSI layer?

A: Layer 2
B: Layer 3
C: Layer 4
D: Layer 5
E: Layer 6
F: Layer 7
Correct Answers: C

184. 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 Answers: A, C, D

185. Which protocol provides a method of sharing VLAN configuration information between switches?

A: VTP
B: STP
C: ISL
D: 802.1Q
E: VLSM
Correct Answers: A

186. LAB

187. Refer to the exhibit. How will router A choose a path to the 10.1.2.0/24 network when different routing protocols are configured? (Choose three.)

A:If RIPv2 is the routing protocol, only the path AD will be installed in the routing table by default.

B:If RIPv2 is the routing protocol, the equal cost paths ABD and ACD will be installed in the routing table by default.

C:If EIGRP is the routing protocol, only the path AD will be installed in the routing table by default.

D:If EIGRP is the routing protocol, the equal cost paths ABD and ACD will be installed in the routing table by default.

E:If EIGRP and OSPF are both running on the network, the EIGRP paths will be installed in the routing table.

F:If EIGRP and OSPF are both running on the network, the OSPF paths will be installed in the routing table.

Correct Answers: A, D, E

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

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

Correct Answers: B, D

189. Refer to the exhibit. Why does RouterA show multiple unequal cost paths to network 192.168.81.0/24?

```
RouterA# show ip eigrp topology
IP-EIGRP Topology Table for AS(109)/ID(192.168.80.28)

Codes: P - Passive, A - Active, U - Update, Q - Query, R - Reply,
       r - reply Status, s - sia Status

P 192.168.90.0 255.255.255.0, 2 successors, FD is 0
        via 192.168.80.28 (46251776/46226176), Ethernet0
        via 192.168.81.28 (46251776/46226176), Ethernet1
        via 192.168.80.31 (46277376/46251776), Serial0
P 192.168.81.0 255.255.255.0, 1 successors, FD is 307200
        via Connected, Ethernet1
        via 192.168.81.28 (307200/281600), Ethernet1
        via 192.168.80.28 (307200/281600), Ethernet0
        via 192.168.80.31 (332800/307200), Serial0
```

A: A variance was configured for EIGRP autonomous system 109.
B: The EIGRP topology table displays all routes to a destination.
C: The EIGRP topology table shows only backup routes to a destination.
D: Multiple floating static routes were configured to network 192.168.81.0 via interface Serial0.

Correct Answers: B

190. Which statement is true about full-duplex Ethernet in comparison to half-duplex Ethernet?

A: Full-duplex Ethernet consists of a shared cable segment. Half-duplex Ethernet provides a point-to-point link.
B: Full-duplex Ethernet uses a loopback circuit to detect collisions. Half-duplex Ethernet uses a jam signal.
C: Full-duplex Ethernet can provide higher throughput than can half-duplex Ethernet of the same bandwidth.

D: Full-duplex Ethernet uses two wires to send and receive. Half-duplex Ethernet uses one wire to send and receive.

Correct Answers:　C

191. 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 Answers:　B, C, D

192. Drop

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 100 deny** *protocol address mask* **any**], by dragging the appropriate options on the left to their correct placeholders on the right.

0.0.0.0	protocol
192.168.125.0	
192.168.125.32	address
192.168.125.34	
255.255.255.255	mask
ip	
tcp	
udp	

Drag and drop question. Drag the items to the proper locations.
Correct Answers:

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 100 deny** *protocol address mask* **any**], by dragging the appropriate options on the left to their correct placeholders 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

protocol
ip

address
192.168.125.34

mask
0.0.0.0

CiscoH3com. com

193. 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?
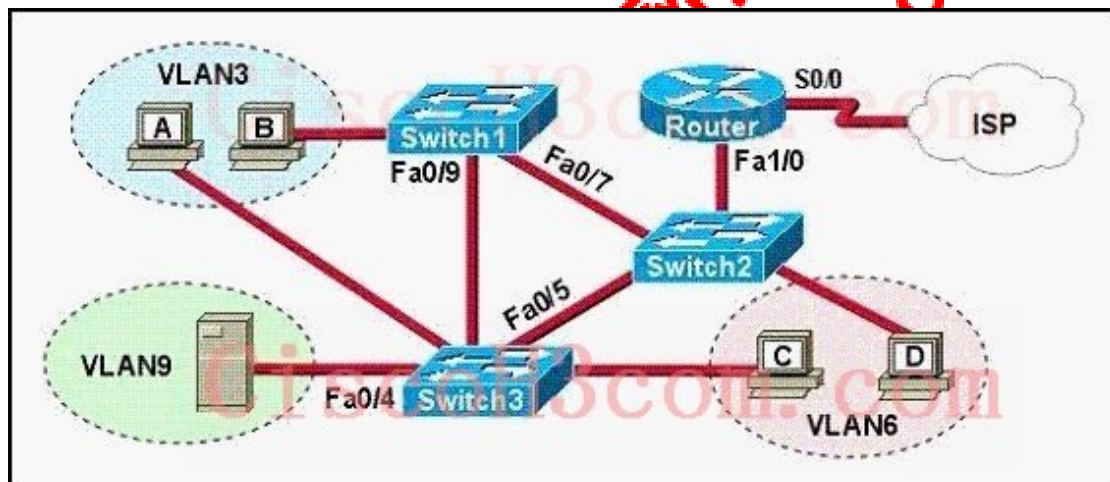
A: Host B would not be able to access the server in VLAN9 until the cable is reconnected.
B: Communication between VLAN3 and the other VLANs would be disabled.
C: The transfer of files from Host B to the server in VLAN9 would be significantly slower.
D: For less than a minute, Host B would not be able to access the server in VLAN9. Then normal network function would resume.
Correct Answers: D

194. Refer to the graphic. How many collision domains are shown?
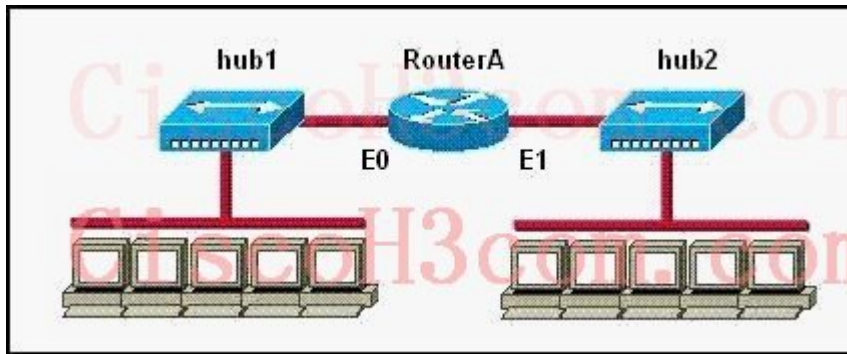
A: one

B: two

C: three

D: four

E: six

F: fourteen

Correct Answers: B

195. Refer to the exhibit. The network administrator is in a campus building distant from Building B. WANRouter is hosting a newly installed WAN link on interface S0/0. The new link is not functioning and the administrator needs to determine if the correct cable has been attached to the S0/0 interface. How can the administrator accurately verify the correct cable type on S0/0 in the most efficient manner?
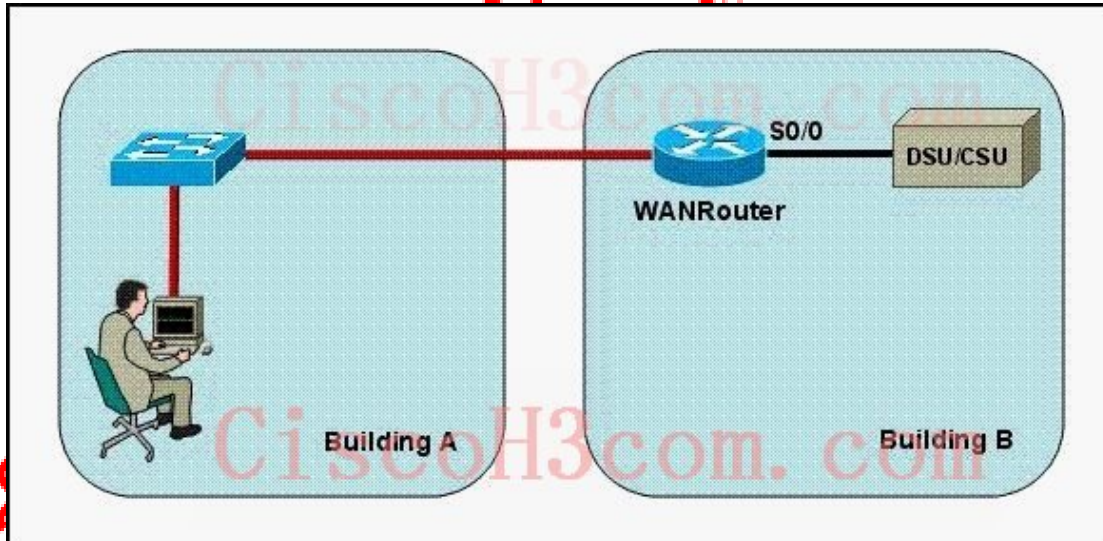
A: Telnet to WANRouter and execute the command show interfaces S0/0

B: Telnet to WANRouter and execute the command show processes S0/0

C: Telnet to WANRouter and execute the command show running-configuration

D: Telnet to WANRouter and execute the command show controller S0/0

E: Physically examine the cable between WANRouter S0/0 and the DCE.

F: Establish a console session on WANRouter and execute the command show interfaces S0/0

Correct Answers: D

196. Refer to the exhibit. For what two reasons has the router loaded its IOS image from the location that is shown? (Choose two.)

```
Router1> show version
Cisco Internetwork Operating System Software
IOS (tm) 7200 Software (C7200-J-M), Experimental 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: 7200 Software (C7200-BOOT-M), Version 11.1(472), RELEASE SOFTWARE (fc1)

Router1 uptime is 23 hours, 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
```

Printers, Inc. is redesigning the network that connects its three locations. The administrator gave the networking team 192.168.75.0 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. 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.
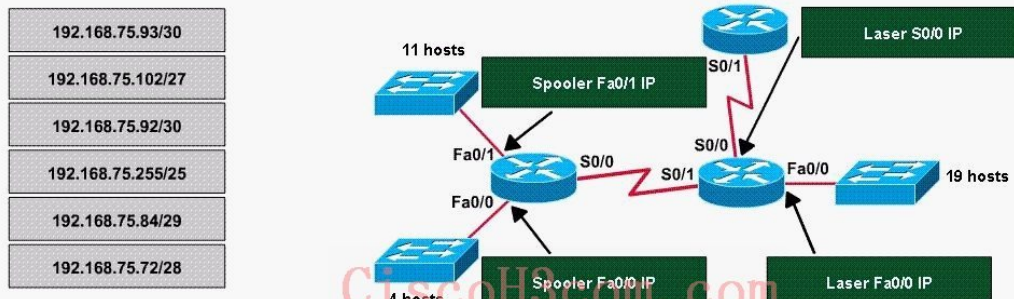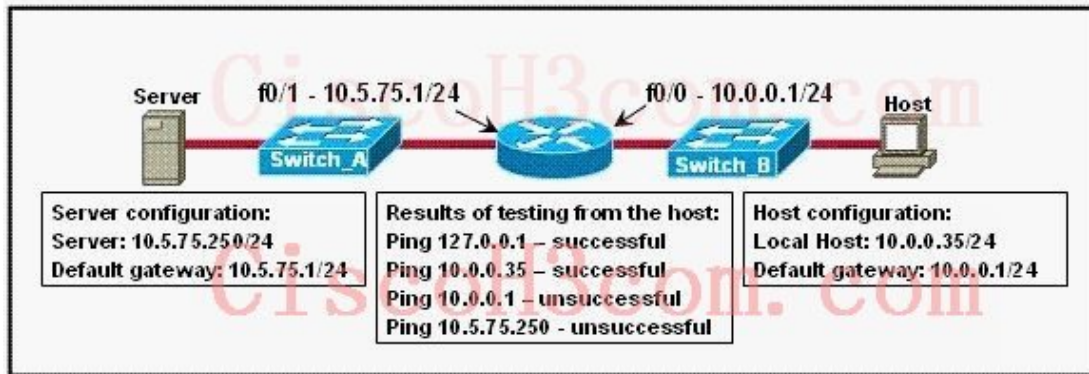

198. Refer to the exhibit. A technician is troubleshooting a host connectivity problem. The host is unable to ping a server connected to Switch_A. Based on the results of the testing, what could be the problem?

197. LAB

Correct Answers: A, C

E: Cisco routers will first attempt to load an image from TFTP for management purposes.
D: Router1 defaulted to ROMMON mode and loaded the IOS image from a TFTP server.
C: Router1 cannot locate a valid IOS image in flash memory.
B: Router1 is acting as a TFTP server for other routers.
A: Router1 has specific boot system commands that instruct it to load IOS from a TFTP

server.

Server configuration:
Server: 10.5.75.250/24
Default gateway: 10.5.75.1/24

Results of testing from the host:
Ping 127.0.0.1 – successful
Ping 10.0.0.35 – successful
Ping 10.0.0.1 – unsuccessful
Ping 10.5.75.250 - unsuccessful

Host configuration:
Local Host: 10.0.0.35/24
Default gateway: 10.0.0.1/24

A: A remote physical layer problem exists.

B: The host NIC is not functioning.

C: TCP/IP has not been correctly installed on the host.

D: A local physical layer problem exists.

Correct Answers: D

199. A routing protocol is required that supports:

1) routing update authentication

2) an addressing scheme that conserves IP addresses

3) multiple vendors

4) a network with over 50 routers

Which routing protocol fulfills these requirements?

A: RIPv1

B: RIPv2

C: EIGRP

D: OSPF

Correct Answers: D

200. LAB

201. Refer to the exhibit. What is the correct addressing for a frame and packet received by Host B from Host A?
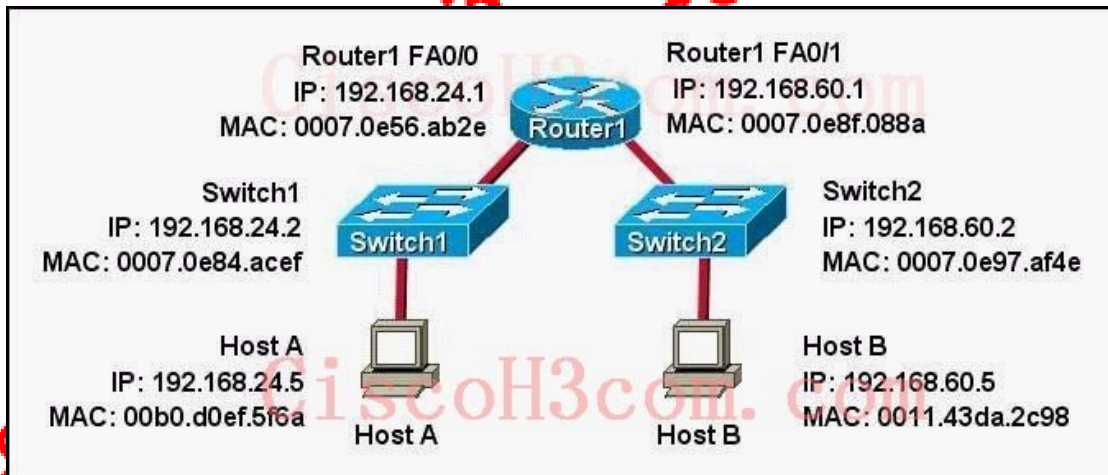
A: Destination MAC: 0011.43da.2c98
Source MAC: 0070.0e8f.088a
Destination IP: 192.168.60.5
Source IP: 192.168.24.5
B: Destination MAC: 0011.43da.2c98
Source MAC: 00b0.d0ef.5f6a
Destination IP: 192.168.60.5
Source IP: 192.168.24.5
C: Destination MAC: 0011.43da.2c98

Source MAC: 0070.0e8f.088a

Destination IP: 192.168.60.5

Source IP: 192.168.60.1

D: Destination MAC: 0011.43da.2c98

Source MAC: 0070.0e97.af4e

Destination IP: 192.168.60.5

Source IP: 192.168.60.2

Correct Answers: A

202.Refer to the exhibit. The network administrator has verified that a functioning cable connects Switch1 and Switch2. From the output that is shown, what two pieces of information can the administrator validly conclude? (Choose two.)
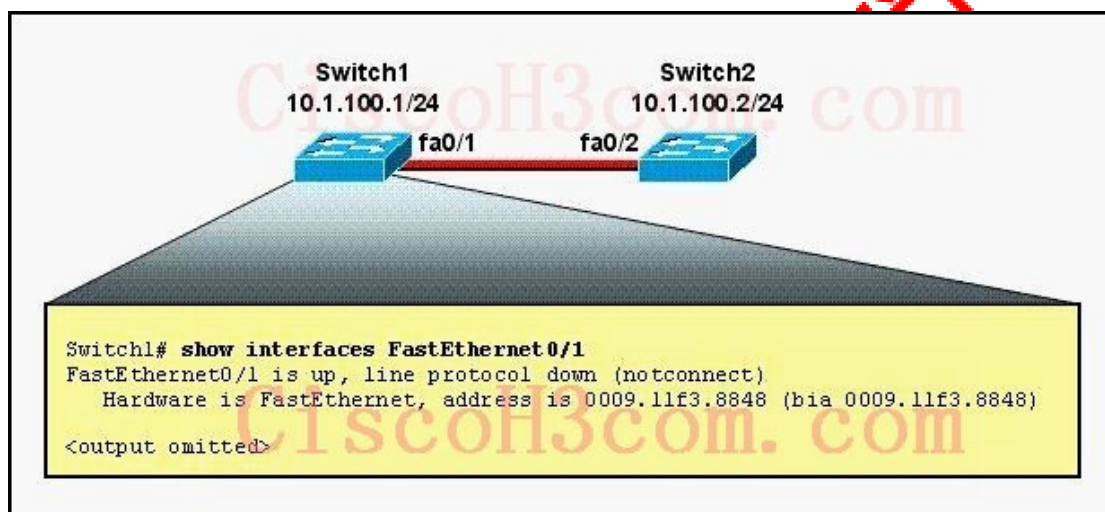
A:Using a source MAC address of 0009.11f3.8848, Switch2 is sending frames to Switch1.

B:Interface fa0/1 on Switch1 is in a shutdown state.

C:The status of fa0/2 should be checked on Switch2.

D:There is likely to be an IP address issue on Switch1 fa0/1.

E:The interface is functional at OSI Layer 1.

Correct Answers: C, E

203.You and a co-worker have established wireless communication directly between your wireless laptops. What type of wireless topology has been created?
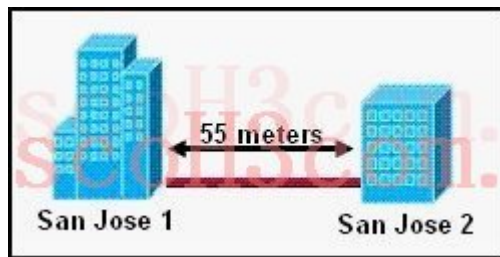
A: BSS

B: ESS

C: IBSS

D: SSID

Correct Answers: C

204.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 differences 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 Answers: D

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

A: 10 Mbps

B: 11 Mbps

C: 54 Mbps

D: 100 Mbps

Correct Answers: B

206. Refer to the output of the two show commands in the exhibit. If an administrator tries to ping host 10.1.8.5 from host 10.1.6.100, how will the ICMP packets be processed by Router A?


```
RouterA# show running-config
 <some output text omitted>
router rip
 network 10.0.0.0
 !
 ip classless
RouterA# show ip route
 <some output text omitted>
Gateway of last resort is 10.1.5.5 to network 0.0.0.0

    10.0.0.0/24 is subnetted, 2 subnets
R    10.1.3.0 [120/1] via 10.1.2.2, 00:00:00, Serial0/0
C    10.1.2.0 is directly connected, Serial0/0
C    10.1.5.0 is directly connected, Serial0/1
C    10.1.6.0 is directly connected, FastEthernet0/0
R*   0.0.0.0/0 [120/1] via 10.1.5.5, 00:00:00, Serial0/1
```

A: The packets will be discarded.

B: The packets will be routed out the S0/0 interface.

C: The packets will be routed out the S0/1 interface.

D: The packets will be routed out the Fa0/0 interface.
Correct Answers: C

207. A network administrator is configuring the routers in the graphic for OSPF. The OSPF process has been started and the networks have been configured for Area 0 as shown in the diagram. The network administrator has several options for configuring RouterB to ensure that it will be preferred as the designated router (DR) for the 172.16.1.0 /24 LAN segment. What configuration tasks could be used to establish this preference? (Choose three.)
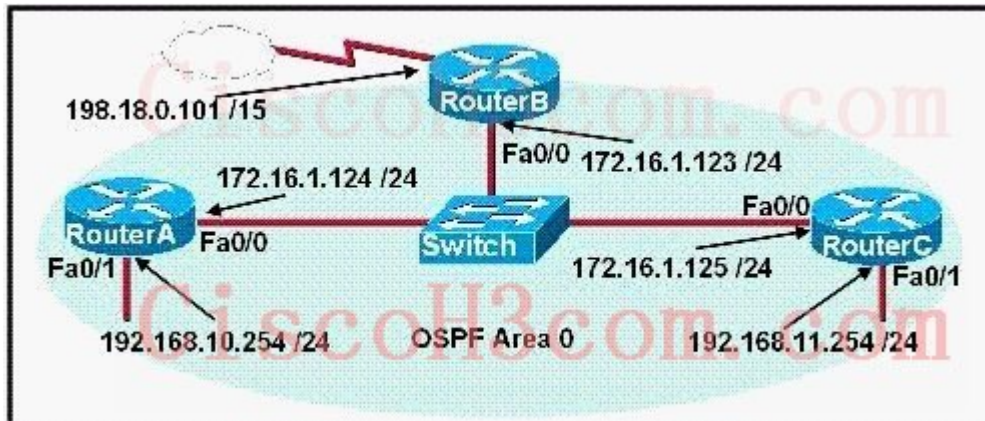
A:Configure the priority value of the Fa0/0 interface of RouterB to a higher value than any other interface on the Ethernet network.
B:Change the router id of Router B by assigning the IP address 172.16.1.130/24 to the Fa0/0 interface of RouterB.
C:Configure a loopback interface on RouterB with an IP address higher than any IP address on the other routers.
D:Change the priority value of the Fa0/0 interface of RouterB to zero.
E:Change the priority values of the Fa0/0 interfaces of RouterA and RouterC to zero.
F:No further configuration is necessary.
Correct Answers: A, C, E

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

Router1# showrunning-config
router eigrp 10
  network 10.0.0.0
  network 192.168.1.0
  network 192.168.3.0
  no auto-summary

192.168.1.1/30
S0

10.0.2.0/24   Router1

S1
192.168.3.2/30

192.168.3.1/30
S0

Router3

10.0.4.0/24

Router2# showrunning-config
router eigrp 10
  network 192.168.1.0
  network 192.168.2.0
  no auto-summary

192.168.1.2/30
S1

Router2

S0
192.168.2.1/30

192.168.2.2/30
S1

Router3# showrunning-config
router eigrp 10
  network 10.0.0.0
  network 192.168.2.0
  no auto-summary

Router1# show ip eigrp neighbors

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

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 Answers: B