100-101 Cisco ICND1 v2.0 Certification Exam

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Version: 13.01

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Operation of IP Data Networks

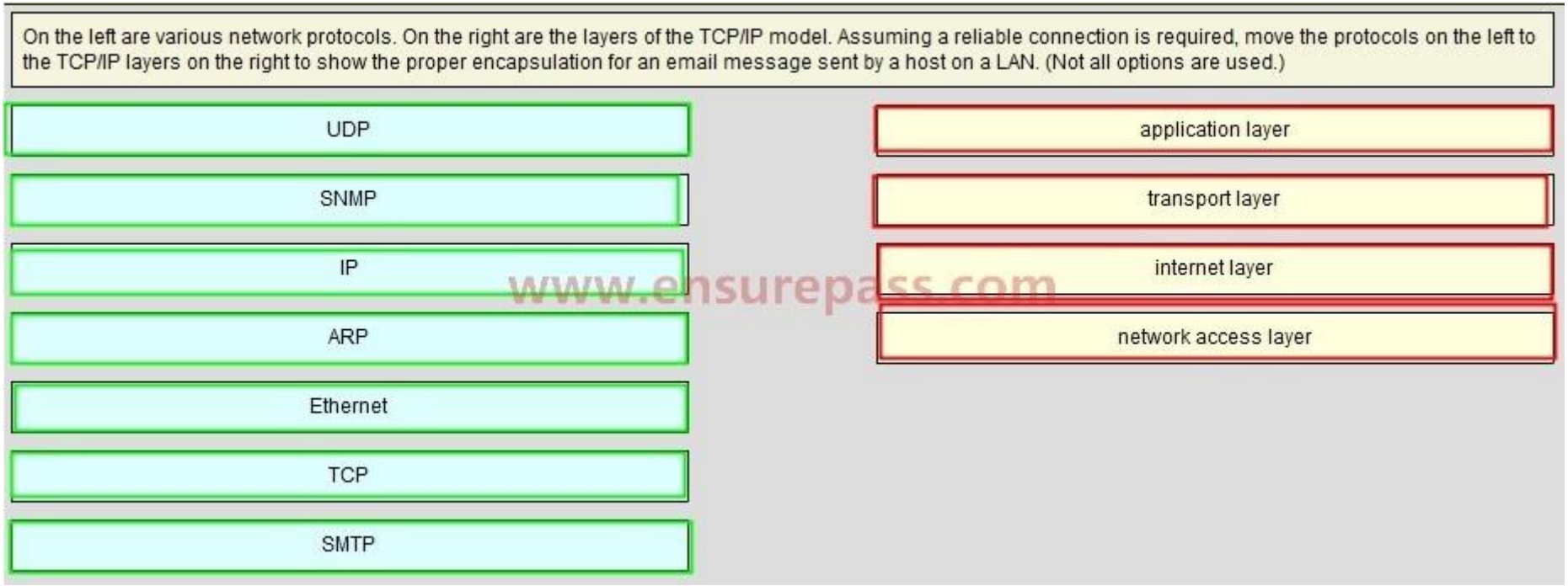
QUESTION 1
Which three statements are true about the operation of a full-duplex Ethernet network? (Choose three.)

A. There are no collisions in full-duplex mode.
B. A dedicated switch port is required for each full-duplex node.
C. Ethernet hub ports are preconfigured for full-duplex mode.
D. In a full-duplex environment, the host network card must check for the availability of the network media before transmitting.
E. The host network card and the switch port must be capable of operating in full-duplex mode.

Correct Answer: ABE
Section: (none)
Explanation

Explanation/Reference:

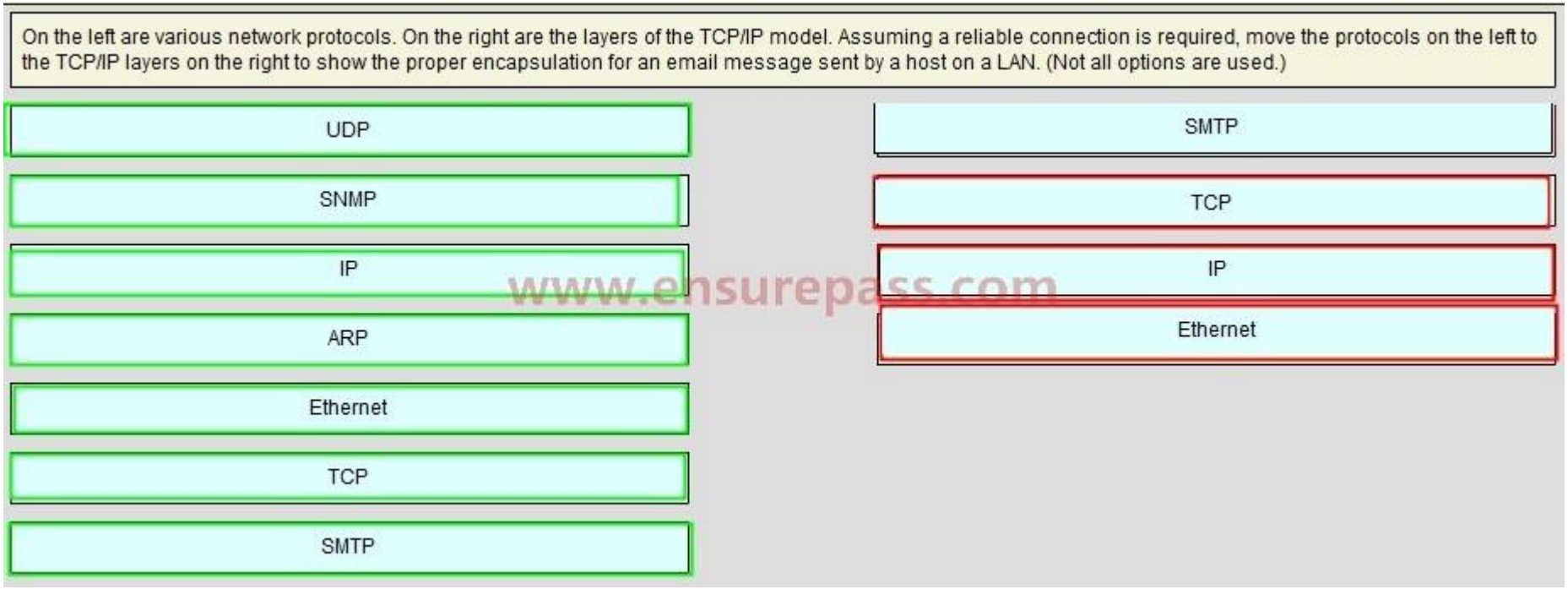
QUESTION 2



A.
B.
C.
D.

Correct Answer:
Section: (none)
Explanation

Explanation/Reference:



QUESTION 3
Which OSI layer header contains the address of a destination host that is on another network?

A. application
B. session
C. transport

D. network
E. data link
F. physical

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 4
Which layer of the TCP/IP stack combines the OSI model physical and data link layers?

A. Internet layer
B. transport layer
C. application layer
D. network access layer

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

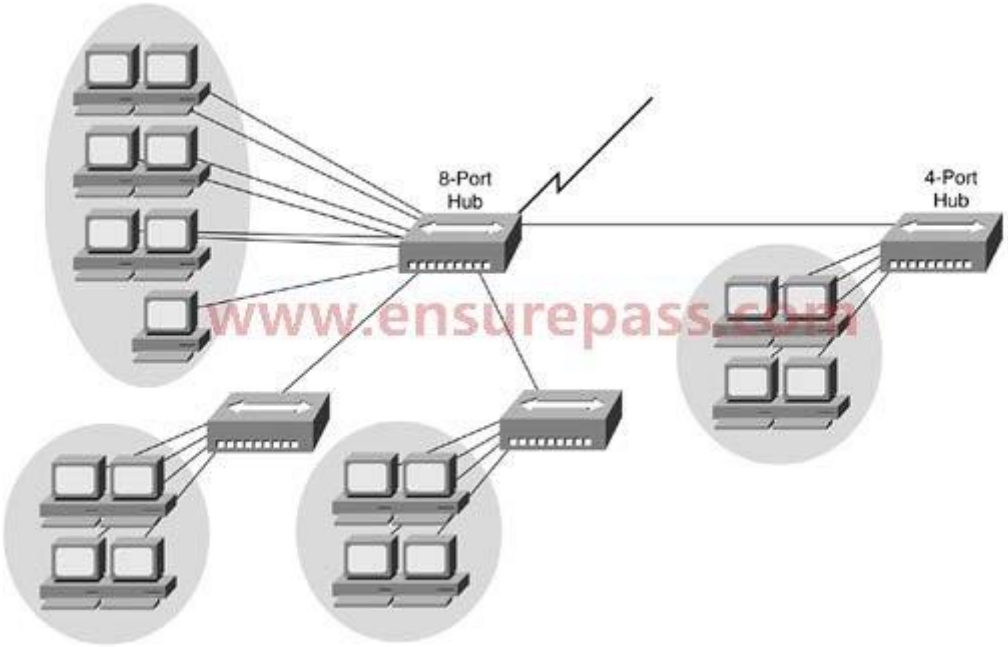
QUESTION 5
Which protocol uses a connection-oriented service to deliver files between end systems?

A. TFTP
B. DNS
C. FTP
D. SNMP
E. RIP

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 6
Refer to the exhibit. If the hubs in the graphic were replaced by switches, what would be virtually eliminated?

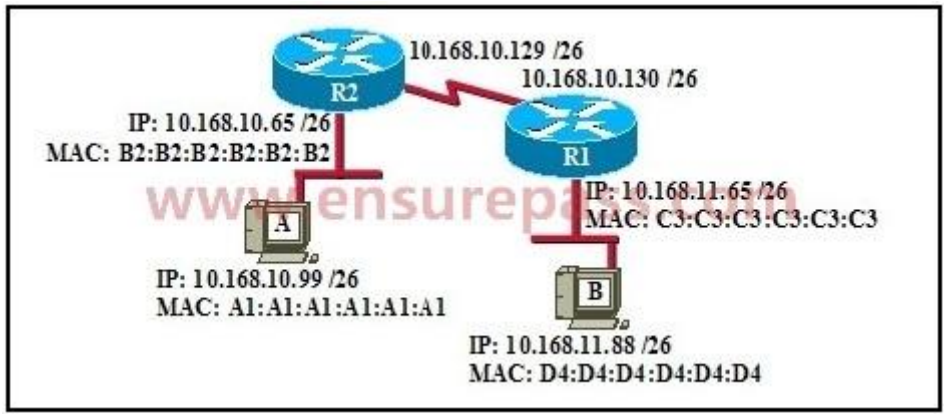


A. broadcast domains
B. repeater domains
C. Ethernet collisions
D. signal amplification
E. Ethernet broadcasts

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 7
Refer to the exhibit. If host A sends an IP packet to host B, what will the source physical address be in the frame when it reaches host B?

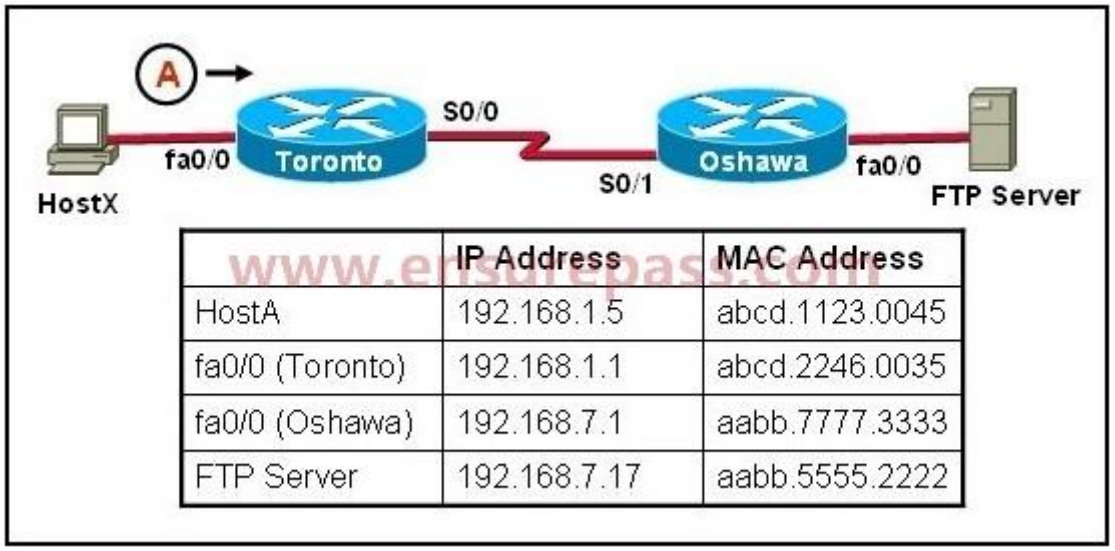


A. 10.168.10.99
B. 10.168.11.88
C. A1:A1:A1:A1:A1:A1
D. B2:B2:B2:B2:B2:B2
E. C3:C3:C3:C3:C3:C3
F. D4:D4:D4:D4:D4:D4

Correct Answer: E
Section: (none)
Explanation

Explanation/Reference:

QUESTION 8
Refer to the exhibit. HostX is transferring a file to the FTP server. Point A represents the frame as it goes toward the Toronto router. What will the Layer 2 destination address be at this point?



	IP Address	MAC Address
HostA	192.168.1.5	abcd.1123.0045
fa0/0 (Toronto)	192.168.1.1	abcd.2246.0035
fa0/0 (Oshawa)	192.168.7.1	aabb.7777.3333
FTP Server	192.168.7.17	aabb.5555.2222

A. abcd.1123.0045
B. 192.168.7.17
C. aabb.5555.2222
D. 192.168.1.1
E. abcd.2246.0035

Correct Answer: E
Section: (none)
Explanation

Explanation/Reference:

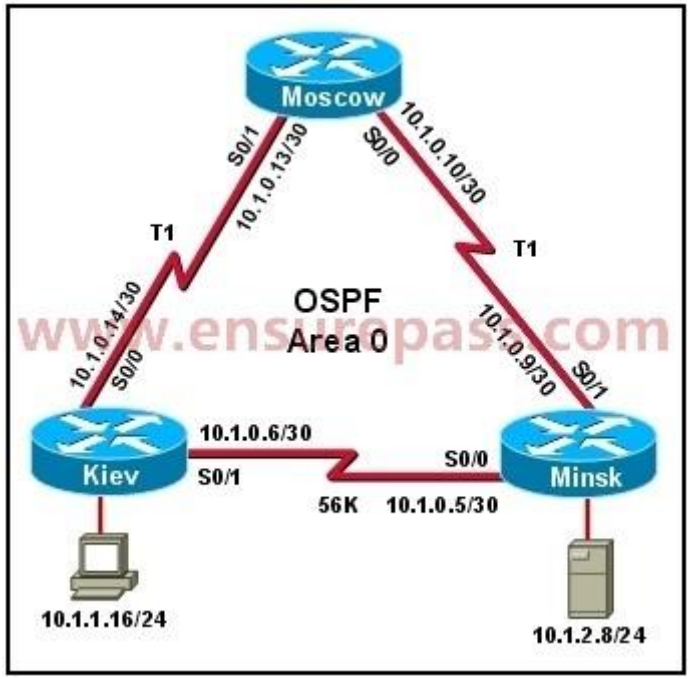
QUESTION 9
Which network device functions only at Layer 1 of the OSI model?

A. bridge
B. hub
C. NIC
D. router
E. switch

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 10
Refer to the exhibit. The host in Kiev sends a request for an HTML document to the server in Minsk. What will be the source IP address of the packet as it leaves the Kiev router?

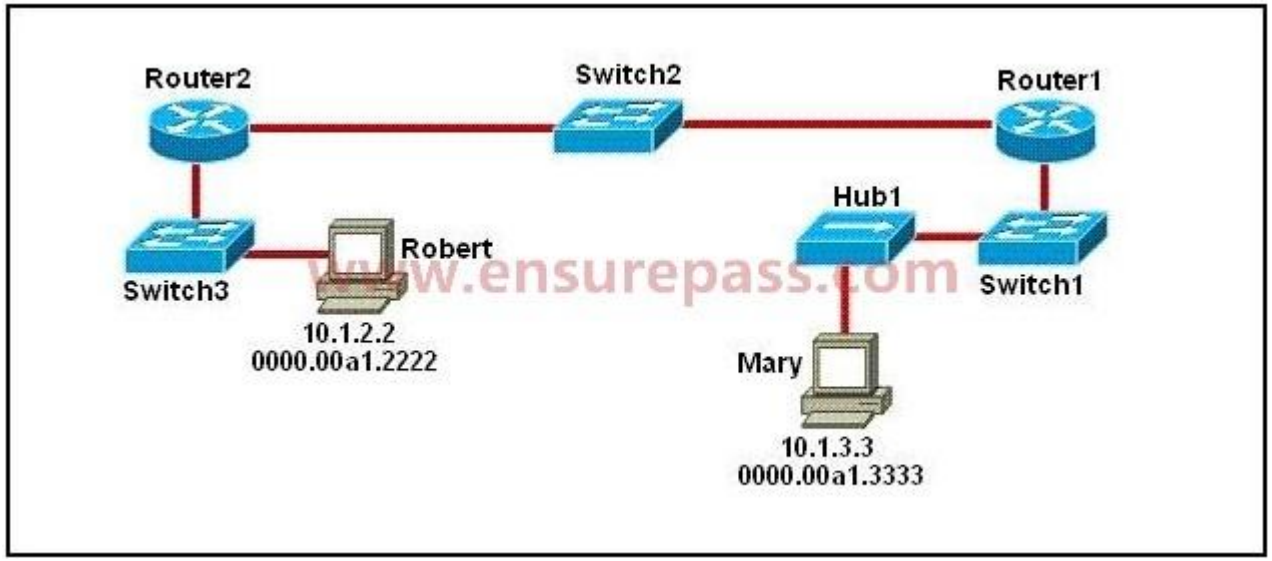


A. 10.1.0.1
B. 10.1.0.5
C. 10.1.0.6
D. 10.1.0.14
E. 10.1.1.16
F. 10.1.2.8

Correct Answer: E
Section: (none)
Explanation

Explanation/Reference:

QUESTION 11
Refer to the exhibit. As packets travel from Mary to Robert, which three devices will use the destination MAC address of the packet to determine a forwarding path? (Choose three.)

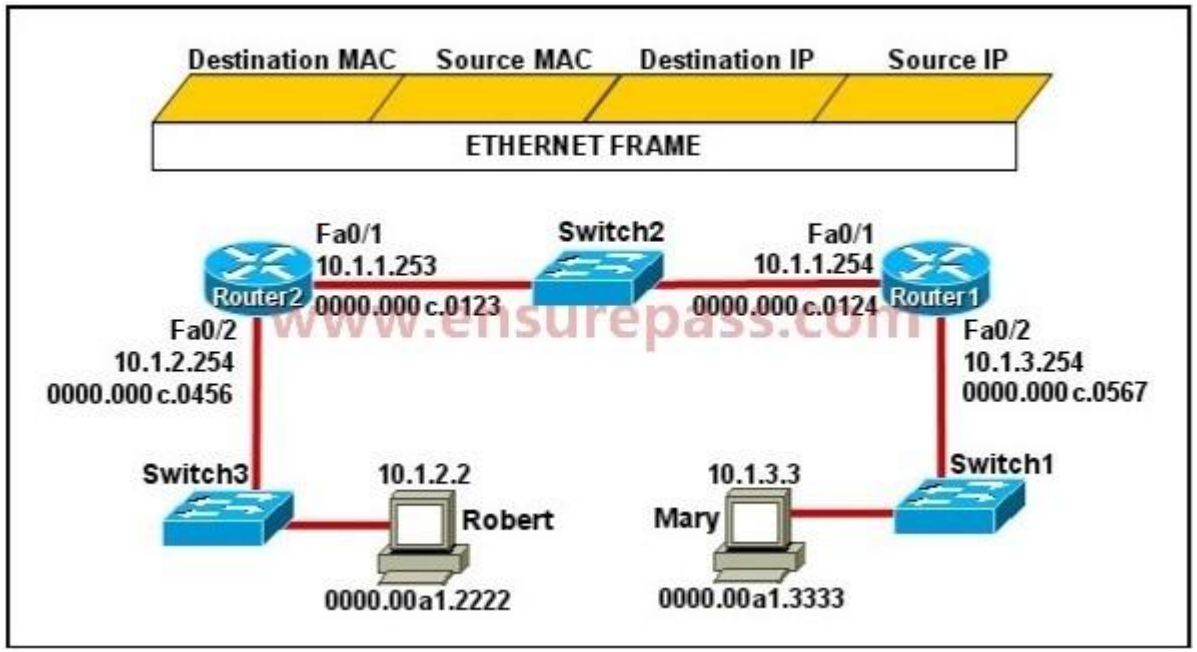


A. Hub1
B. Switch1
C. Router1
D. Switch2
E. Router2
F. Switch3

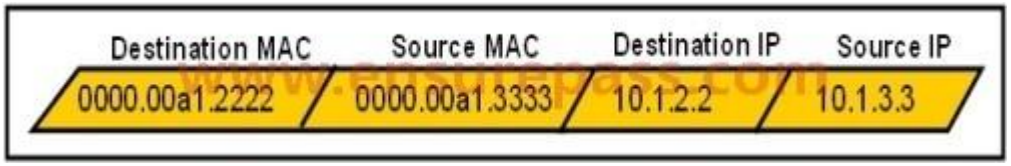
Correct Answer: BDF
Section: (none)
Explanation

Explanation/Reference:

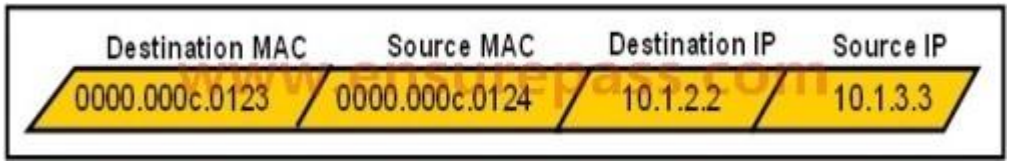
QUESTION 12
Refer to the exhibit. Mary is sending an instant message to Robert. The message will be broken into a series of packets that will traverse all network devices. What addresses will populate these packets as they are forwarded from Router1 to Router2?



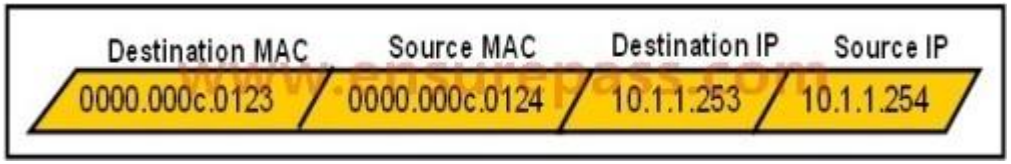
A.



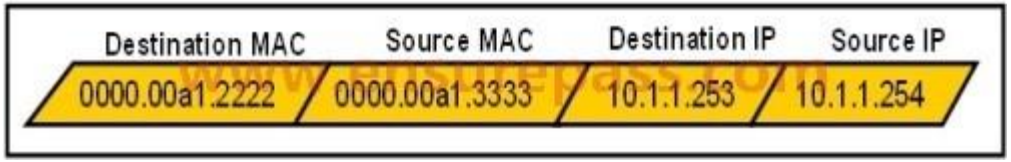
B.



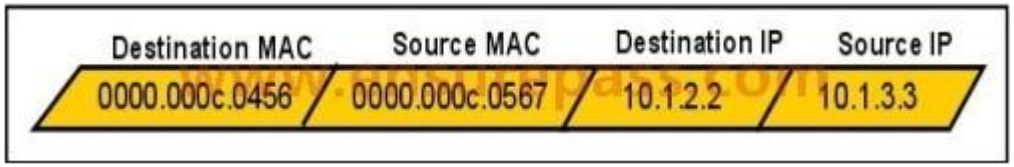
C.



D.



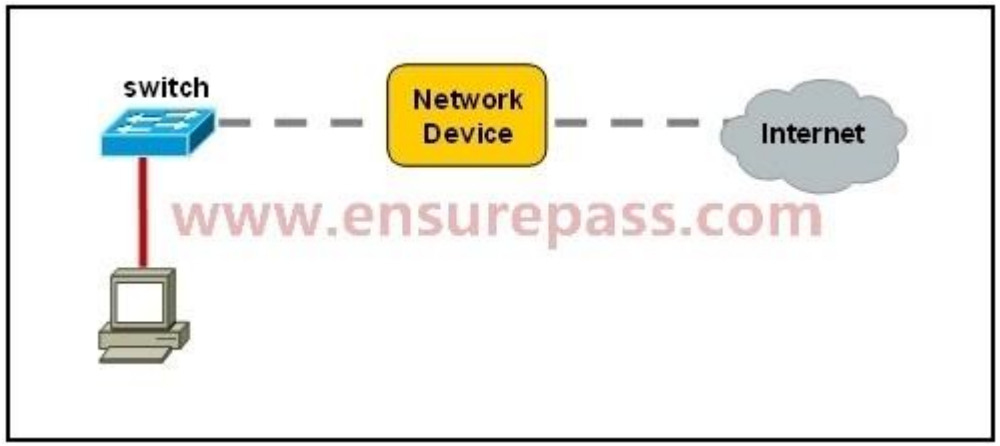
E.



Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 13
Refer to the exhibit. A network device needs to be installed in the place of the icon labeled Network Device to accommodate a leased line attachment to the Internet. Which network device and interface configuration meets the minimum requirements for this installation?



A. a router with two Ethernet interfaces
B. a switch with two Ethernet interfaces
C. a router with one Ethernet and one serial interface
D. a switch with one Ethernet and one serial interface
E. a router with one Ethernet and one modem interface

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 14
Which transport layer protocol provides best-effort delivery service with no acknowledgment receipt required?

A. HTTP
B. IP
C. TCP
D. Telnet
E. UDP

Correct Answer: E
Section: (none)
Explanation

Explanation/Reference:

QUESTION 15
Which layer of the OSI model controls the reliability of communications between network devices using flow control, sequencing and acknowledgments?

A. Physical
B. Data-link
C. Transport
D. Network

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 16
Which statements are true regarding ICMP packets? (Choose two.)

A. They acknowledge receipt of TCP segments.
B. They guarantee datagram delivery.
C. TRACERT uses ICMP packets.
D. They are encapsulated within IP datagrams.
E. They are encapsulated within UDP datagrams.

Correct Answer: CD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 17
Which statements accurately describe CDP? (Choose three.)

A. CDP is an IEEE standard protocol.
B. CDP is a Cisco proprietary protocol.

C. CDP is a datalink layer protocol.
D. CDP is a network layer protocol.
E. CDP can discover directly connected neighboring Cisco devices.
F. CDP can discover Cisco devices that are not directly connected.

Correct Answer: BCE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 18
How does a switch differ from a hub?

A. A switch does not induce any latency into the frame transfer time.
B. A switch tracks MAC addresses of directly-connected devices.
C. A switch operates at a lower, more efficient layer of the OSI model.
D. A switch decreases the number of broadcast domains.
E. A switch decreases the number of collision domains.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 19
What must occur before a workstation can exchange HTTP packets with a web server?

A. A UDP connection must be established between the workstation and its default gateway.
B. A UDP connection must be established between the workstation and the web server.
C. A TCP connection must be established between the workstation and its default gateway.
D. A TCP connection must be established between the workstation and the web server.
E. An ICMP connection must be established between the workstation and its default gateway.
F. An ICMP connection must be established between the workstation and the web server.

Correct Answer: D

Section: (none)
Explanation

Explanation/Reference:

QUESTION 20
How does TCP differ from UDP? (Choose two.)

A. TCP provides best effort delivery.
B. TCP provides synchronized communication.
C. TCP segments are essentially datagrams.
D. TCP provides sequence numbering of packets.
E. TCP uses broadcast delivery.

Correct Answer: BD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 21
A workstation has just resolved a browser URL to the IP address of a server. What protocol will the workstation now use to determine the destination MAC address to be placed into frames directed toward the server?

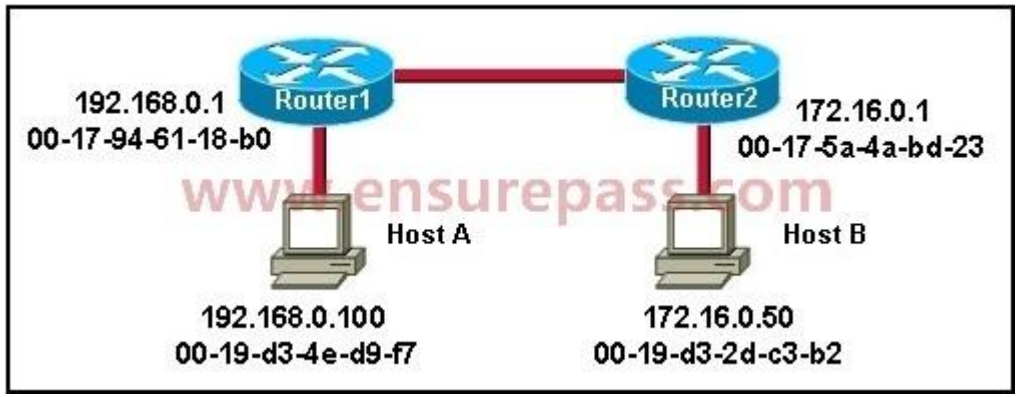
A. HTTP
B. DNS
C. DHCP
D. RARP
E. ARP

Correct Answer: E
Section: (none)
Explanation

Explanation/Reference:

QUESTION 22

Refer to the exhibit. Host A is sending a packet to Host B for the first time. What destination MAC address will Host A use in the ARP request?



A. 192.168.0.1
B. 172.16.0.50
C. 00-17-94-61-18-b0
D. 00-19-d3-2d-c3-b2
E. ff-ff-ff-ff-ff-ff
F. 255.255.255.255

Correct Answer: E
Section: (none)
Explanation

Explanation/Reference:

QUESTION 23
What are two common TCP applications? (Choose two.)

A. TFTP
B. SMTP
C. SNMP
D. FTP
E. DNS

Correct Answer: BD

Section: (none)
Explanation

Explanation/Reference:

QUESTION 24
Refer to the exhibit. SwitchA receives the frame with the addressing shown. According to the command output also shown in the exhibit, how will SwitchA handle this frame?

SwitchA# **show mac-address-table**
< non-essential output omitted >

Destination Address	Address Type	VLAN	Destination Port
00b0.d056.fe4d	Dynamic	1	FastEthernet0/3
00b0.d043.ac2e	Dynamic	1	FastEthernet0/4
00b0.d0fe.ac32	Dynamic	1	FastEthernet0/5
00b0.d0da.cb56	Dynamic	1	FastEthernet0/6

Frame received by SwitchA:

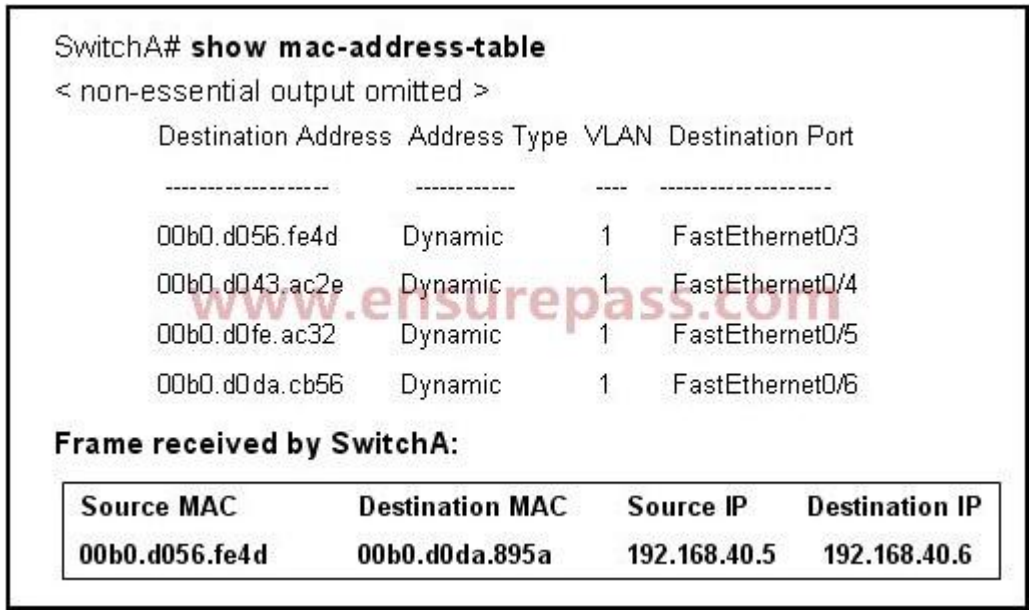
Source MAC	Destination MAC	Source IP	Destination IP
00b0.d056.fe4d	00b0.d0da.cb56	192.168.40.5	192.168.40.6

A. It will drop the frame.
B. It will forward the frame out port Fa0/3 only.
C. It will flood the frame out all ports.
D. It will flood the frame out all ports except Fa0/3.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 25
Refer to the exhibit. SwitchA receives the frame with the addressing shown in the exhibit. According to the command output also shown in the exhibit, how will SwitchA handle this frame?


SwitchA# **show mac-address-table**
< non-essential output omitted >

Destination Address	Address Type	VLAN	Destination Port
00b0.d056.fe4d	Dynamic	1	FastEthernet0/3
00b0.d043.ac2e	Dynamic	1	FastEthernet0/4
00b0.d0fe.ac32	Dynamic	1	FastEthernet0/5
00b0.d0da.cb56	Dynamic	1	FastEthernet0/6

Frame received by SwitchA:

Source MAC	Destination MAC	Source IP	Destination IP
00b0.d056.fe4d	00b0.d0da.895a	192.168.40.5	192.168.40.6

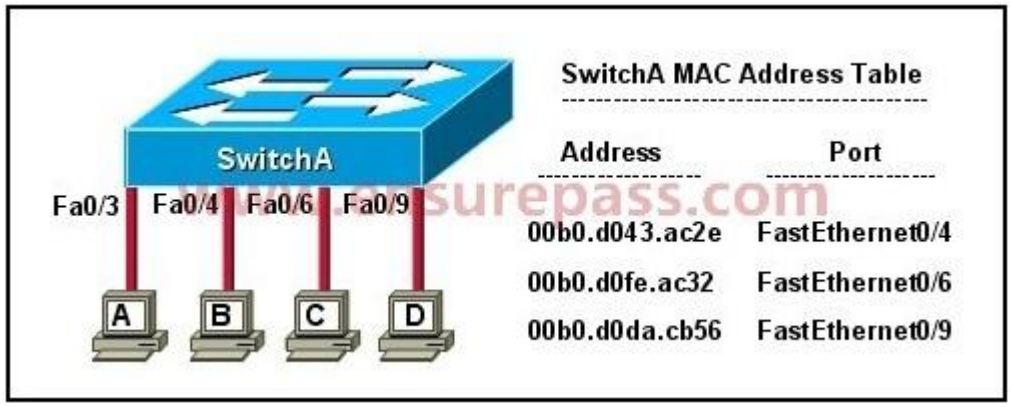
A. It will drop the frame.
B. It will forward the frame out port Fa0/6 only.
C. It will forward the frame out port Fa0/3 only.
D. It will flood the frame out all ports.
E. It will flood the frame out all ports except Fa0/3.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 26
Refer to the exhibit. The exhibit is showing the topology and the MAC address table. Host A sends a data frame to host D. What will the switch do when

it receives the frame from host A?



A. The switch will add the source address and port to the MAC address table and forward the frame to host D.
B. The switch will discard the frame and send an error message back to host A.
C. The switch will flood the frame out of all ports except for port Fa0/3.
D. The switch will add the destination address of the frame to the MAC address table and forward the frame to host D.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 27
Which two statements describe the operation of the CSMA/CD access method? (Choose two.)

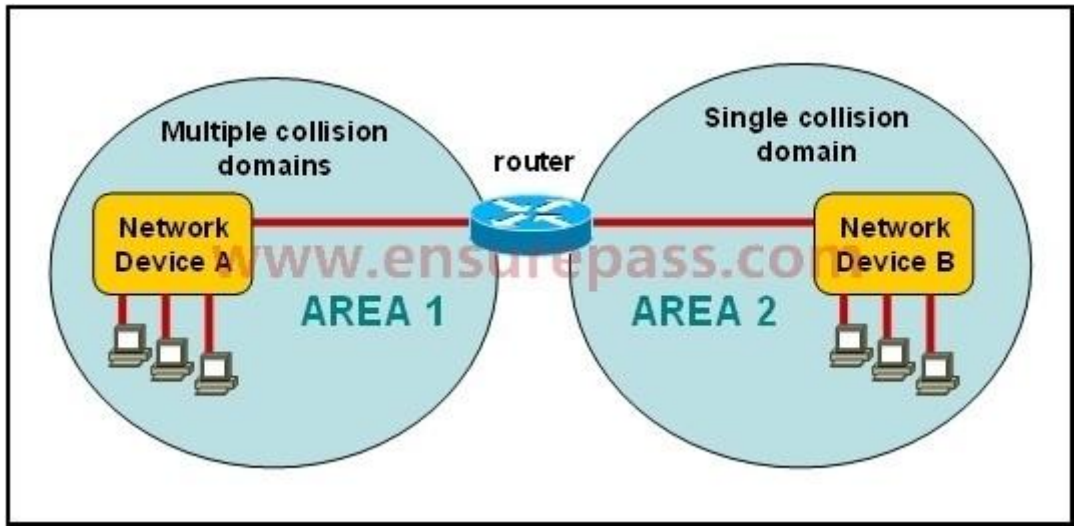
A. In a CSMA/CD collision domain, multiple stations can successfully transmit data simultaneously.
B. In a CSMA/CD collision domain, stations must wait until the media is not in use before transmitting.
C. The use of hubs to enlarge the size of collision domains is one way to improve the operation of the CSMA/CD access method.
D. After a collision, the station that detected the collision has first priority to resend the lost data.
E. After a collision, all stations run a random backoff algorithm. When the backoff delay period has expired, all stations have equal priority to transmit data.
F. After a collision, all stations involved run an identical backoff algorithm and then synchronize with each other prior to transmitting data.

Correct Answer: BE

Section: (none)
Explanation

Explanation/Reference:

QUESTION 28
Refer to the exhibit. A network has been planned as shown. Which three statements accurately describe the areas and devices in the network plan? (Choose three.)



A. Network Device A is a switch.
B. Network Device B is a switch.
C. Network Device A is a hub.
D. Network Device B is a hub.
E. Area 1 contains a Layer 2 device.
F. Area 2 contains a Layer 2 device.

Correct Answer: ADE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 29
On a Cisco switch, which protocol determines if an attached VoIP phone is from Cisco or from another vendor?

A. RTP
B. TCP
C. CDP
D. UDP

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 30
Refer to the exhibit. What must be configured to establish a successful connection from Host A to switch SW-A through router RT-A?

A. VLAN 1 on RT-A
B. IP routing on SW-A
C. default gateway on SW-A
D. crossover cable connecting SW-A and RT-A

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 31
At which layer of the OSI model does the protocol that provides the information that is displayed by the show cdp neighbors command operate?

A. application
B. transport
C. network
D. physical
E. data link

Correct Answer: E
Section: (none)
Explanation

Explanation/Reference:

QUESTION 32
Which two characteristics apply to Layer 2 switches? (Choose two.)

A. increases the number of collision domains
B. decreases the number of collision domains
C. implements VLAN
D. decreases the number of broadcast domains
E. uses the IP address to make decisions for forwarding data packets

Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 33
Which two characteristics describe the access layer of the hierarchical network design model? (Choose two.)

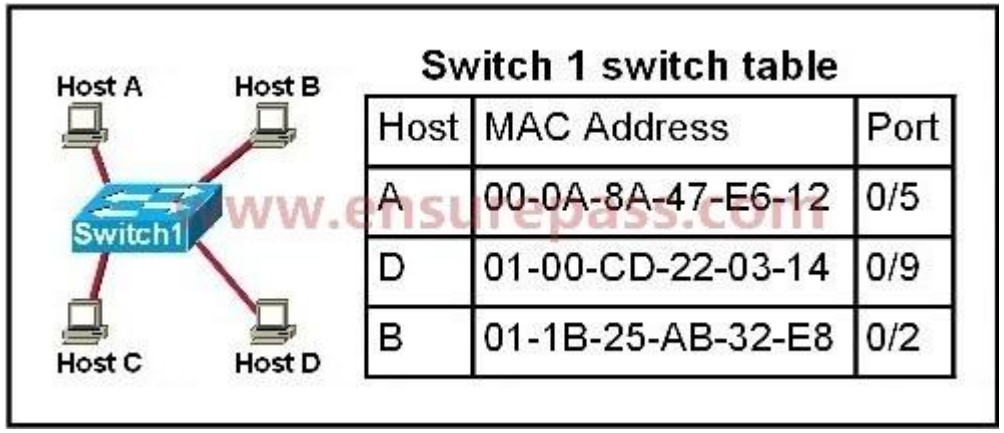
A. layer 3 support
B. port security
C. redundant components
D. VLANs

E. PoE

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 34
Refer to the topology and switching table shown in the graphic. Host B sends a frame to Host C. What will the switch do with the frame?



Switch 1 switch table

Host	MAC Address	Port
A	00-0A-8A-47-E6-12	0/5
D	01-00-CD-22-03-14	0/9
B	01-1B-25-AB-32-E8	0/2

A. drop the frame
B. send the frame out all ports except port 0/2
C. return the frame to Host B
D. send an ARP request for Host C
E. send an ICMP Host Unreachable message to Host B
F. record the destination MAC address in the switching table and send the frame directly to Host C

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

LAN Switching Technologies

QUESTION 1
Which two options will help to solve the problem of a network that is suffering a broadcast storm? (Choose two.)

A. a bridge
B. a router
C. a hub
D. a Layer 3 switch
E. an access point

Correct Answer: BD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 2
A switch receives a frame on one of its ports. There is no entry in the MAC address table for the destination MAC address. What will the switch do with the frame?

A. drop the frame
B. forward it out of all ports except the one that received it
C. forward it out of all ports
D. store it until it learns the correct port

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 3
Which address type does a switch use to make selective forwarding decisions?

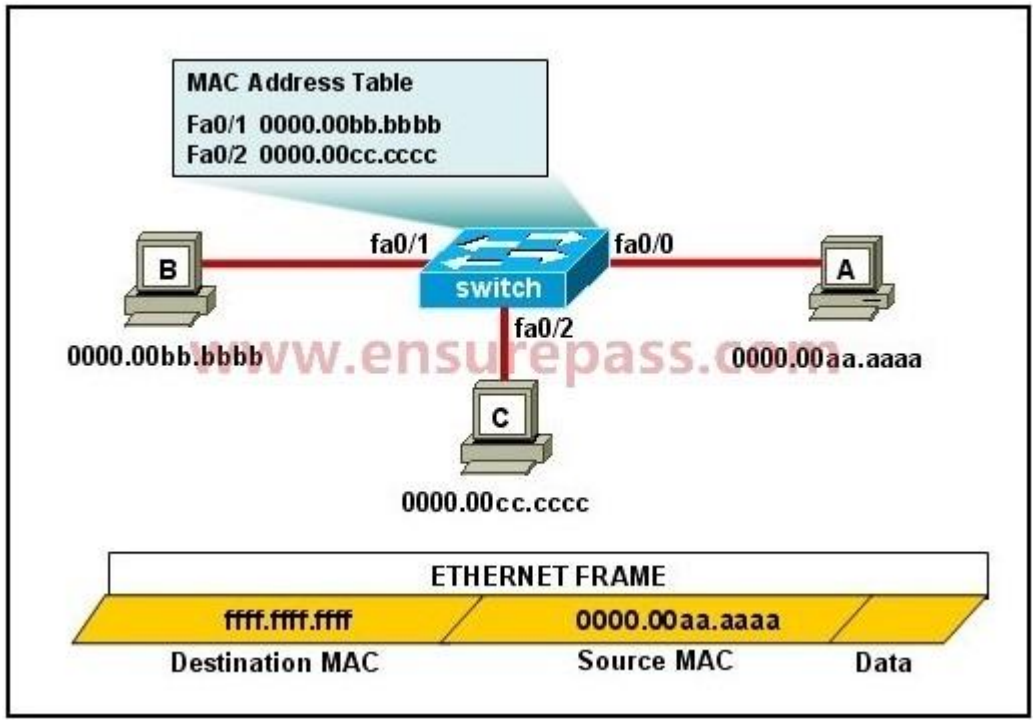
A. source IP address
B. destination IP address
C. source and destination IP address

D. source MAC address
E. destination MAC address

Correct Answer: E
Section: (none)
Explanation

Explanation/Reference:

QUESTION 4
Refer to the exhibit. The MAC address table is shown in its entirety. The Ethernet frame that is shown arrives at the switch. What two operations will the switch perform when it receives this frame? (Choose two.)



A. The switch will not forward a frame with this destination MAC address.
B. The MAC address of 0000.00aa.aaaa will be added to the MAC Address Table.
C. The MAC address of ffff.ffff.ffff will be added to the MAC address table.

D. The frame will be forwarded out all active switch ports except for port fa0/0.
E. The frame will be forwarded out fa0/0 and fa0/1 only.
F. The frame will be forwarded out all the ports on the switch.

Correct Answer: BD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 5
What does a host on an Ethernet network do when it is creating a frame and it does not have the destination address?

A. drops the frame
B. sends out a Layer 3 broadcast message
C. sends a message to the router requesting the address
D. sends out an ARP request with the destination IP address

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

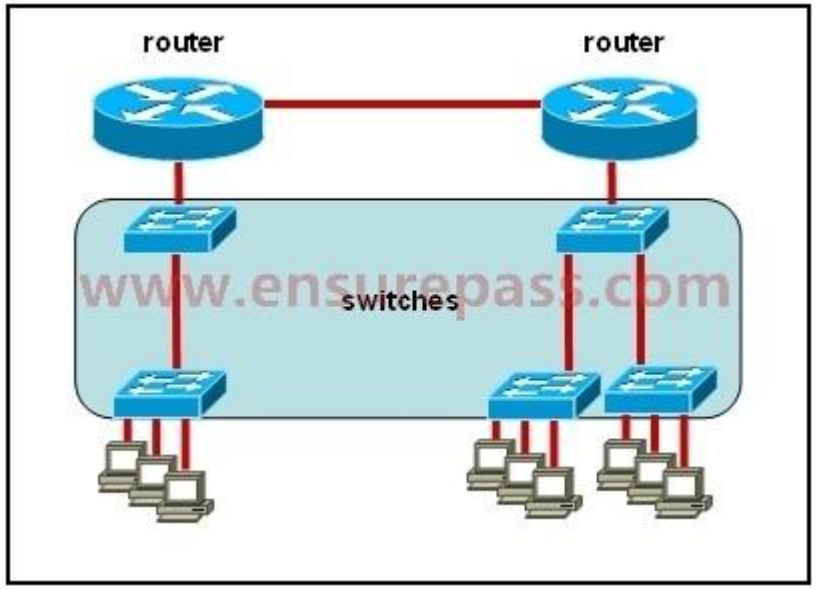
QUESTION 6
A switch has 48 ports and 4 VLANs. How many collision and broadcast domains exist on the switch (collision, broadcast)?

A. 4, 48
B. 48, 4
C. 48, 1
D. 1, 48
E. 4, 1

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 7
Refer to the exhibit. All devices attached to the network are shown. How many collision domains are present in this network?

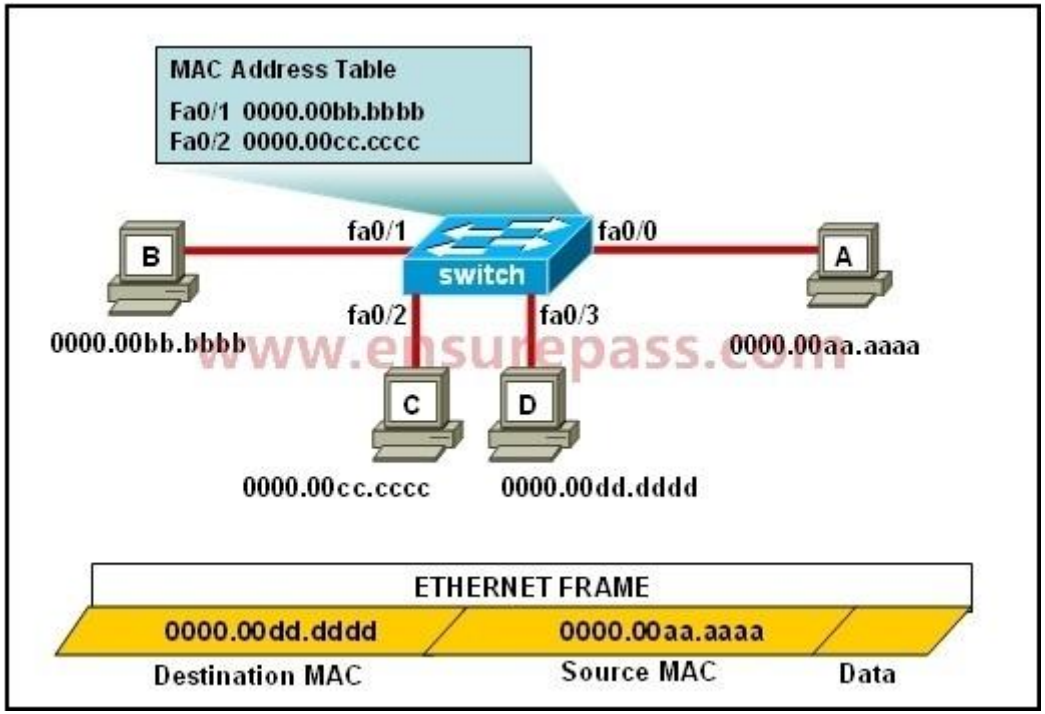


A. 2
B. 3
C. 6
D. 9
E. 15

Correct Answer: E
Section: (none)
Explanation

Explanation/Reference:

QUESTION 8
Refer to the exhibit. The ports that are shown are the only active ports on the switch. The MAC address table is shown in its entirety. The Ethernet frame that is shown arrives at the switch. What two operations will the switch perform when it receives this frame? (Choose two.)



A. The MAC address of 0000.00aa.aaaa will be added to the MAC address table.
B. The MAC address of 0000.00dd.dddd will be added to the MAC address table.
C. The frame will be forwarded out port fa0/3 only.
D. The frame will be forwarded out fa0/1, fa0/2, and fa0/3.
E. The frame will be forwarded out all the active ports.

Correct Answer: AD
Section: (none)
Explanation

Explanation/Reference:

IP addressing (IPv4 / IPv6)

QUESTION 1
Which IP addresses are valid for hosts belonging to the 10.1.160.0/20 subnet? (Choose three.)

A. 10.1.168.0
B. 10.1.176.1
C. 10.1.174.255
D. 10.1.160.255
E. 10.1.160.0
F. 10.1.175.255

Correct Answer: ACD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 2
Given an IP address of 192.168.1.42 255.255.255.248, what is the subnet address?

A. 192.168.1.8/29
B. 192.168.1.32/27
C. 192.168.1.40/29
D. 192.168.1.16/28
E. 192.168.1.48/29

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 3
Refer to the exhibit.The enterprise has decided to use the network address 172.16.0.0. The network administrator needs to design a classful addressing scheme to accommodate the three subnets, with 30, 40 and 50 hosts, as shown. What subnet mask would accommodate this network?

Net bits	Subnet mask	total-addresses per subnet
/20	255.255.240.0	4096
/21	255.255.248.0	2048
/22	255.255.252.0	1024
/23	255.255.254.0	512
/24	255.255.255.0	256
/25	255.255.255.128	128
/26	255.255.255.192	64
/27	255.255.255.224	32
/28	255.255.255.240	16
/29	255.255.255.248	8
/30	255.255.255.252	4

A. 255.255.255.192
B. 255.255.255.224
C. 255.255.255.240
D. 255.255.255.248
E. 255.255.255.252

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 4
Which two statements describe the IP address 10.16.3.65/23? (Choose two.)

A. The subnet address is 10.16.3.0 255.255.254.0.
B. The lowest host address in the subnet is 10.16.2.1 255.255.254.0.
C. The last valid host address in the subnet is 10.16.2.254 255.255.254.0
D. The broadcast address of the subnet is 10.16.3.255 255.255.254.0.
E. The network is not subnetted.

Correct Answer: BD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 5
Given a Class C IP address subnetted with a /30 subnet mask, how many valid host IP addresses are available on each of the subnets?

A. 1
B. 2
C. 4
D. 8
E. 252
F. 254

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 6
Which one of the following IP addresses is the last valid host in the subnet using mask 255.255.255.224?

A. 192.168.2.63
B. 192.168.2.62
C. 192.168.2.61
D. 192.168.2.60
E. 192.168.2.32

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 7
What is the subnet address of 172.16.159.159/22?

A. 172.16.0.0
B. 172.16.128.0
C. 172.16.156.0
D. 172.16.159.0
E. 172.16.159.128
F. 172.16.192.0

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 8
What is the subnet address for the IP address 172.19.20.23/28?

A. 172.19.20.0
B. 172.19.20.15
C. 172.19.20.16
D. 172.19.20.20
E. 172.19.20.32

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

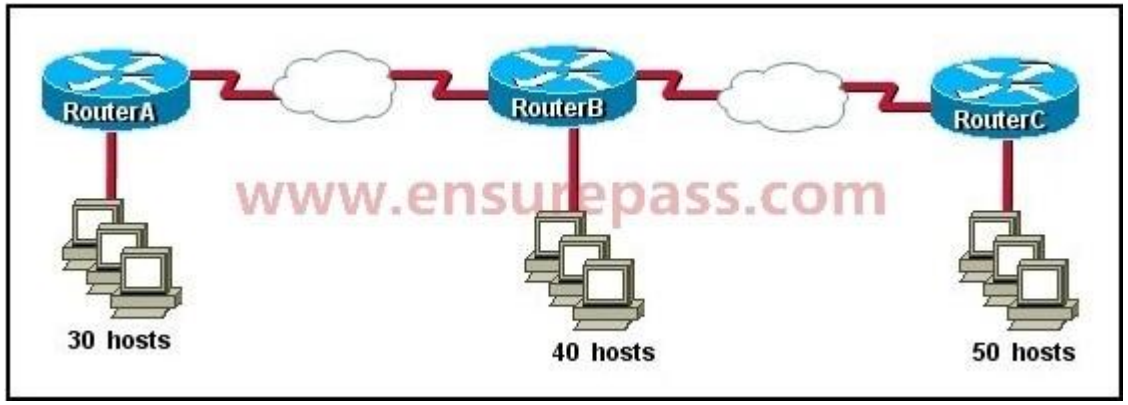
QUESTION 9
An administrator is working with the 192.168.4.0 network, which has been subnetted with a /26 mask. Which two addresses can be assigned to hosts within the same subnet? (Choose two.)

A. 192.168.4.61
B. 192.168.4.63
C. 192.168.4.67
D. 192.168.4.125
E. 192.168.4.128
F. 192.168.4.132

Correct Answer: CD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 10
Refer to the exhibit. The internetwork is using subnets of the address 192.168.1.0 with a subnet mask of 255.255.255.224. The routing protocol in use is RIP version 1. Which address could be assigned to the FastEthernet interface on RouterA?



A. 192.168.1.31
B. 192.168.1.64
C. 192.168.1.127
D. 192.168.1.190

E. 192.168.1.192

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 11
What is the network address for the host with IP address 192.168.23.61/28?

A. 192.168.23.0
B. 192.168.23.32
C. 192.168.23.48
D. 192.168.23.56
E. 192.168.23.60

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 12
The network manager has requested a 300-workstation expansion of the network. The workstations are to be installed in a single broadcast domain, but each workstation must have its own collision domain. The expansion is to be as cost-effective as possible while still meeting the requirements. Which three items will adequately fulfill the request? (Choose three).

A. one IP subnet with a mask of 255.255.254.0
B. two IP subnets with a mask of 255.255.255.0
C. seven 48-port hubs
D. seven 48-port switches
E. one router interface
F. seven router interfaces

Correct Answer: ADE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 13
What is the purpose of assigning an IP address to a switch?

A. provides local hosts with a default gateway address
B. allows remote management of the switch
C. allows the switch to respond to ARP requests between two hosts
D. ensures that hosts on the same LAN can communicate with each other

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

IP Routing Technologies

QUESTION 1
What two things does a router do when it forwards a packet? (Choose two.)

A. switches the packet to the appropriate outgoing interfaces
B. computes the destination host address
C. determines the next hop on the path
D. updates the destination IP address
E. forwards ARP requests

Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:

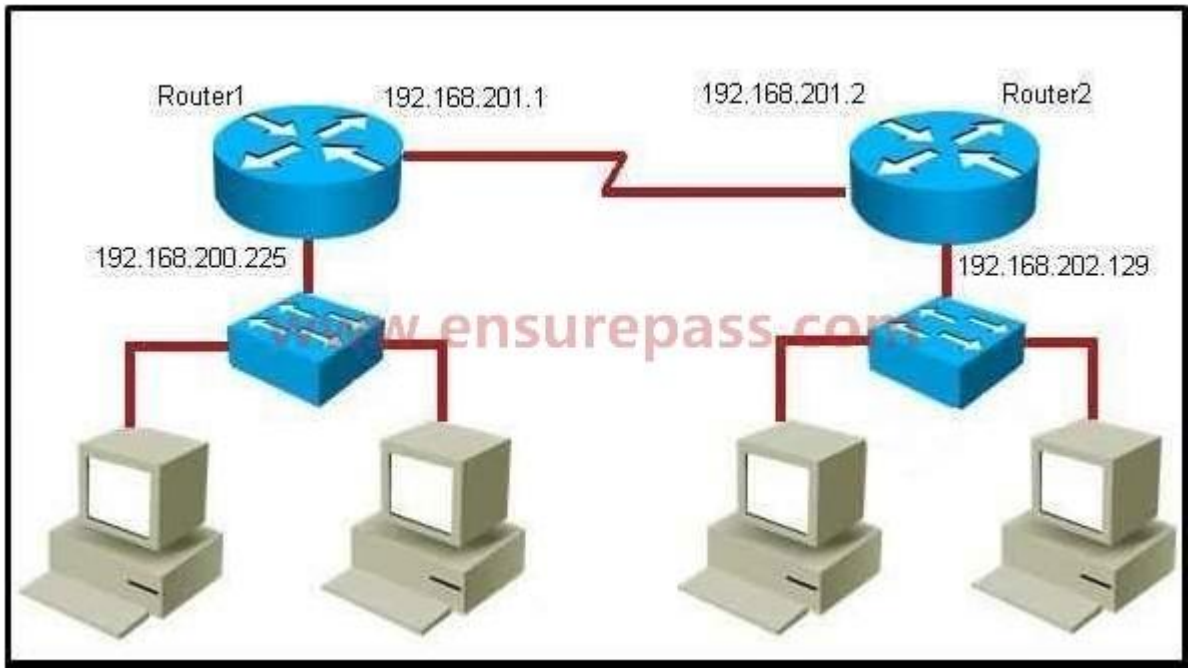
QUESTION 2
Refer to the exhibit. What is the simplest way to configure routing between the regional office network 10.89.0.0/20 and the corporate network?

A. router1(config)#ip route 10.89.0.0 255.255.240.0 10.89.16.2
B. router2(config)#ip route 10.89.3.0 255.255.0.0 10.89.16.2
C. router1(config)#ip route 10.89.0.0 255.255.240.0 10.89.16.1
D. router2(config)#ip route 0.0.0.0 0.0.0.0 10.89.16.1

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 3
Refer to the exhibit. Which command would you use to configure a static route on Router1 to network 192.168.202.0/24 with a nondefault administrative distance?



A. router1(config)#ip route 1 192.168.201.1 255.255.255.0 192.168.201.2
B. router1(config)#ip route 192.168.202.0 255.255.255.0 192.168.201.2 1
C. router1(config)#ip route 5 192.168.202.0 255.255.255.0 192.168.201.2
D. router1(config)#ip route 192.168.202.0 255.255.255.0 192.168.201.2 5

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 4
What does administrative distance refer to?

A. the cost of a link between two neighboring routers
B. the advertised cost to reach a network
C. the cost to reach a network that is administratively set
D. a measure of the trustworthiness of a routing information source

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 5
Which IOS command is used to initiate a login into a VTY port on a remote router?

A. router# login
B. router# telnet
C. router# trace
D. router# ping
E. router(config)# line vty 0 5
F. router(config-line)# login

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 6
The command ip route 192.168.100.160 255.255.255.224 192.168.10.2 was issued on a router. No routing protocols or other static routes are configured on the router. Which statement is true about this command?

A. The interface with IP address 192.168.10.2 is on this router.
B. The command sets a gateway of last resort for the router.
C. Packets that are destined for host 192.168.100.160 will be sent to 192.168.10.2.

D. The command creates a static route for all IP traffic with the source address 192.168.100.160.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

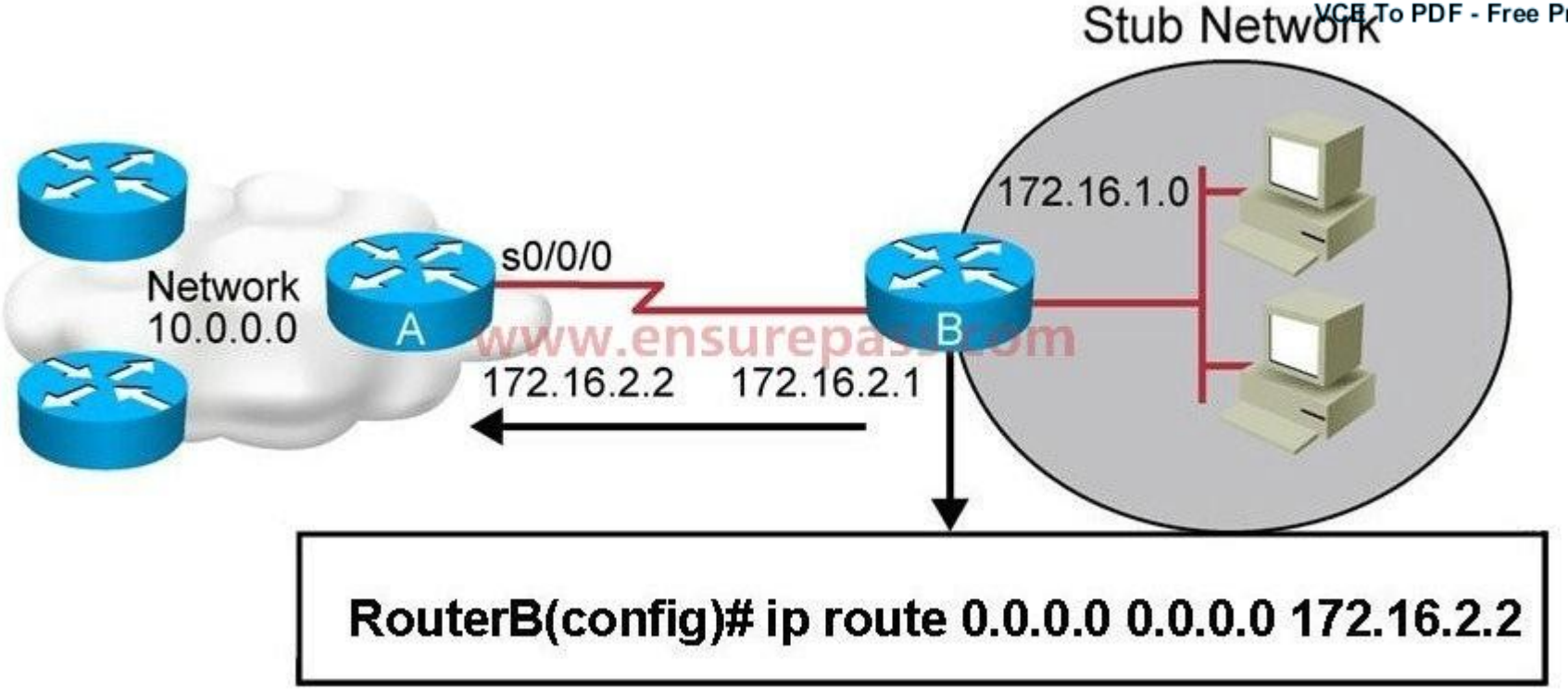
QUESTION 7
Which two of these functions do routers perform on packets? (Choose two.)

A. Examine the Layer 2 headers of inbound packets and use that information to determine the next hops for the packets.
B. Update the Layer 2 headers of outbound packets with the MAC addresses of the next hops.
C. Examine the Layer 3 headers of inbound packets and use that information to determine the next hops for the packets.
D. Examine the Layer 3 headers of inbound packets and use that information to determine the complete paths along which the packets will be routed to their ultimate destinations.
E. Update the Layer 3 headers of outbound packets so that the packets are properly directed to valid next hops.
F. Update the Layer 3 headers of outbound packets so that the packets are properly directed to their ultimate destinations.

Correct Answer: BC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 8
Refer to the exhibit. Which two statements are correct? (Choose two.)



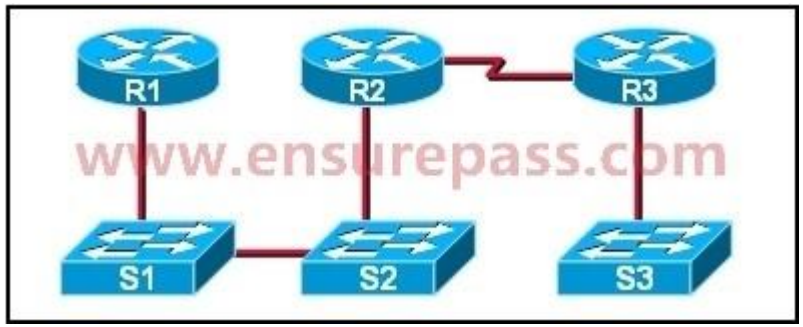
A. This is a default route.
B. Adding the subnet mask is optional for the ip route command.
C. This will allow any host on the 172.16.1.0 network to reach all known destinations beyond RouterA.
D. This command is incorrect, it needs to specify the interface, such as s0/0/0 rather than an IP address.
E. The same command needs to be entered on RouterA so that hosts on the 172.16.1.0 network can reach network 10.0.0.0.

Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 9
Refer to the exhibit. If CDP is enabled on all devices and interfaces, which devices will appear in the output of a show cdp neighbors command issued

from R2?



A. R2 and R3
B. R1 and R3
C. R3 and S2
D. R1, S1, S2, and R3
E. R1, S1, S2, R3, and S3

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 10
Refer to the exhibit. The two routers have had their startup configurations cleared and have been restarted. At a minimum, what must the administrator do to enable CDP to exchange information between R1 and R2?

A. Configure the router with the cdp enable command.
B. Enter no shutdown commands on the R1 and R2 fa0/1 interfaces.
C. Configure IP addressing and no shutdown commands on both the R1 and R2 fa0/1 interfaces.
D. Configure IP addressing and no shutdown commands on either of the R1 or R2 fa0/1 interfaces.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 11
Which two commands will display the current IP address and basic Layer 1 and 2 status of an interface? (Choose two.)

A. router#show version
B. router#show ip interface
C. router#show protocols
D. router#show controllers
E. router#show running-config

Correct Answer: CD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 12
An administrator is in the process of changing the configuration of a router. What command will allow the administrator to check the changes that have been made prior to saving the new configuration?

A. Router# show startup-config
B. Router# show current-config
C. Router# show running-config
D. Router# show memory
E. Router# show flash
F. Router# show processes

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 13
On a live network, which commands will verify the operational status of router interfaces? (Choose two.)

A. Router# show interfaces
B. Router# show ip protocols
C. Router# debug interface
D. Router# show ip interface brief
E. Router# show start

Correct Answer: AD
Section: (none)
Explanation

Explanation/Reference:

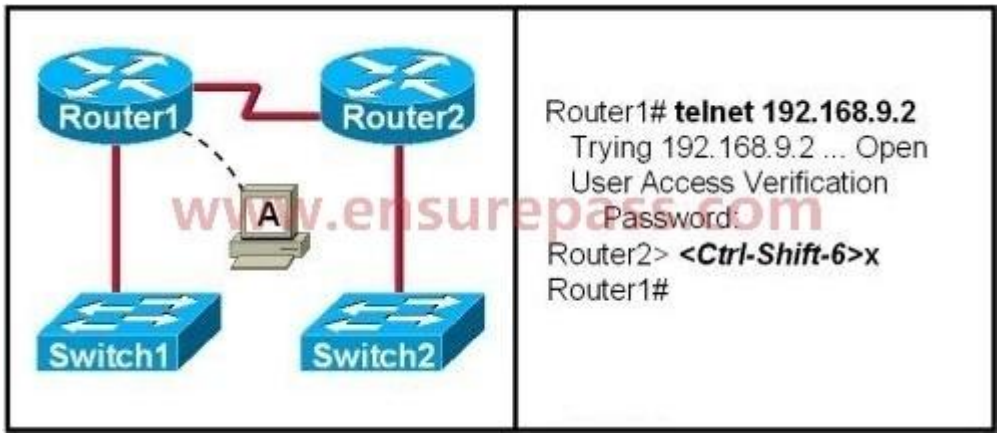
QUESTION 14
Which router command will configure an interface with the IP address 10.10.80.1/19?

A. router(config-if)# ip address 10.10.80.1/19
B. router(config-if)# ip address 10.10.80.1 255.255.0.0
C. router(config-if)# ip address 10.10.80.1 255.255.255.0
D. router(config-if)# ip address 10.10.80.1 255.255.224.0
E. router(config-if)# ip address 10.10.80.1 255.255.240.0
F. router(config-if)# ip address 10.10.80.1 255.255.255.240

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 15
Refer to the exhibit. If the resume command is entered after the sequence that is shown in the exhibit, which router prompt will be displayed?

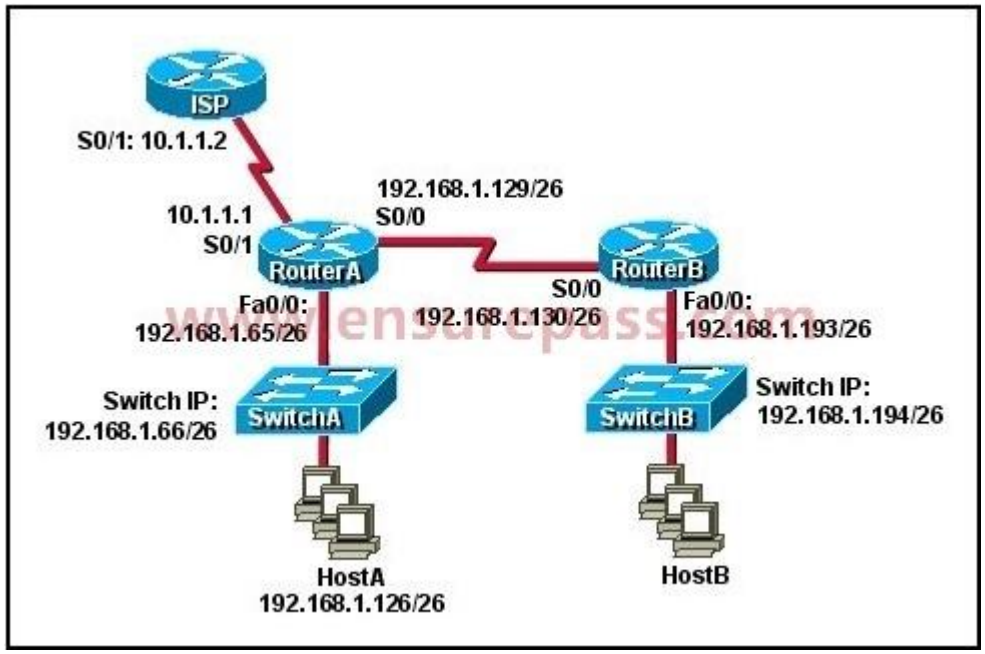


A. Router1>
B. Router1#
C. Router2>
D. Router2#

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 16
Refer to the exhibit. Which default gateway address should be assigned to HostA?



A. 192.168.1.1
B. 192.168.1.65
C. 192.168.1.66
D. 192.168.1.129
E. 10.1.1.1
F. 10.1.1.2

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

IP Services

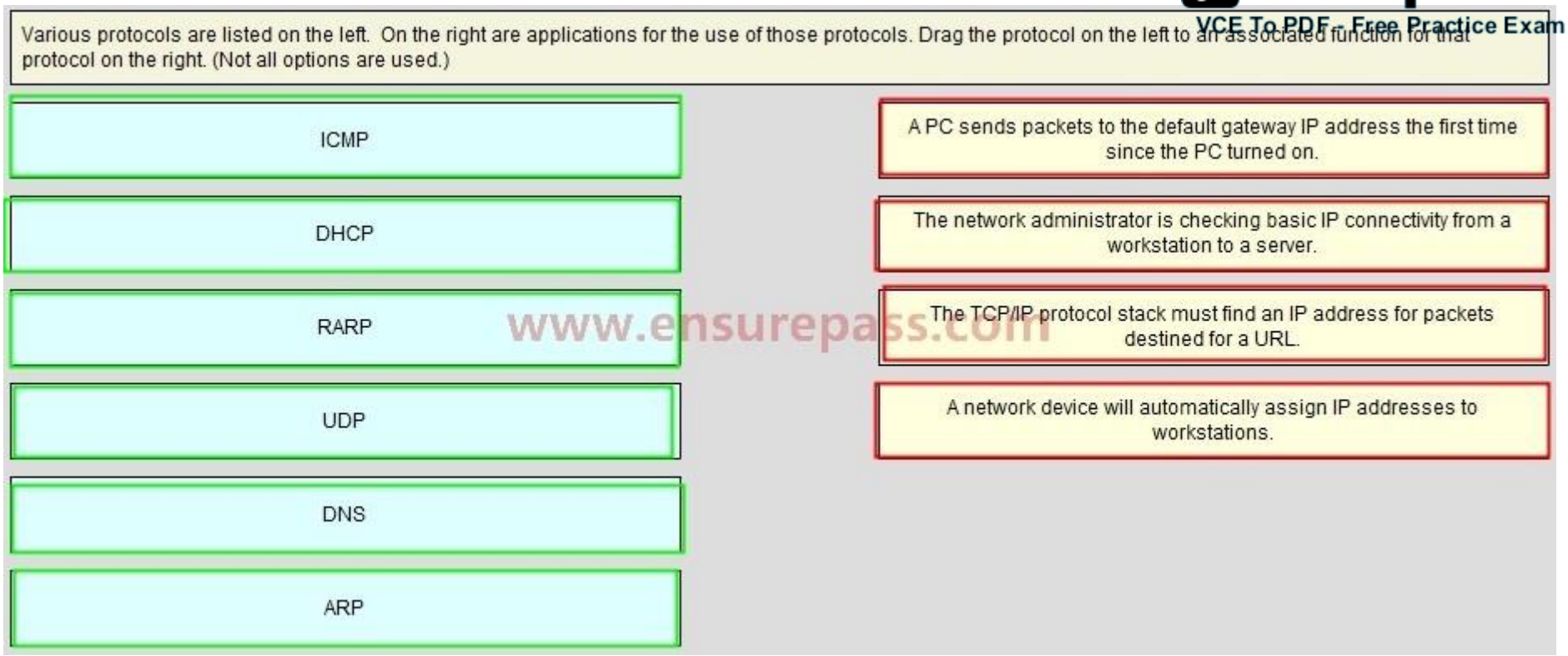
QUESTION 1
What is the best practice when assigning IP addresses in a small office of six hosts?

A. Use a DHCP server that is located at the headquarters.
B. Use a DHCP server that is located at the branch office.
C. Assign the addresses by using the local CDP protocol.
D. Assign the addresses statically on each node.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

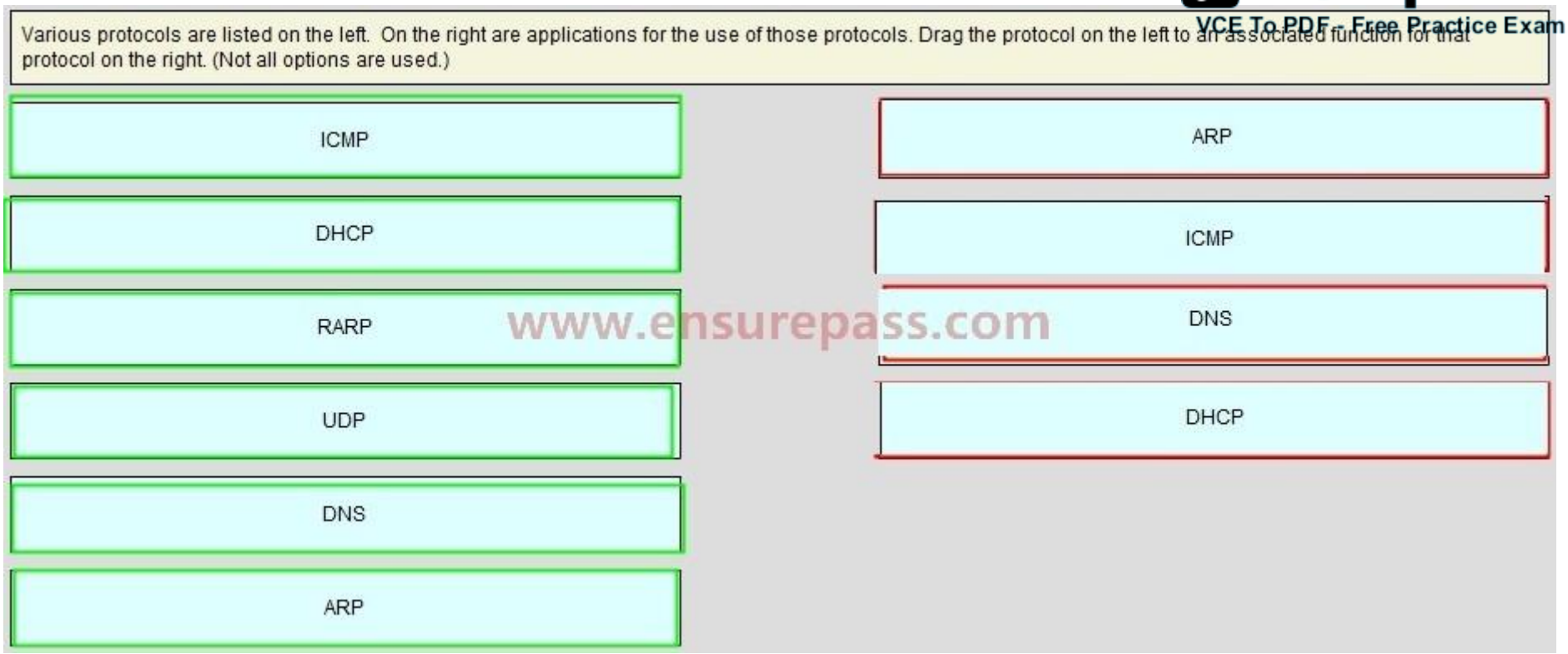
QUESTION 2



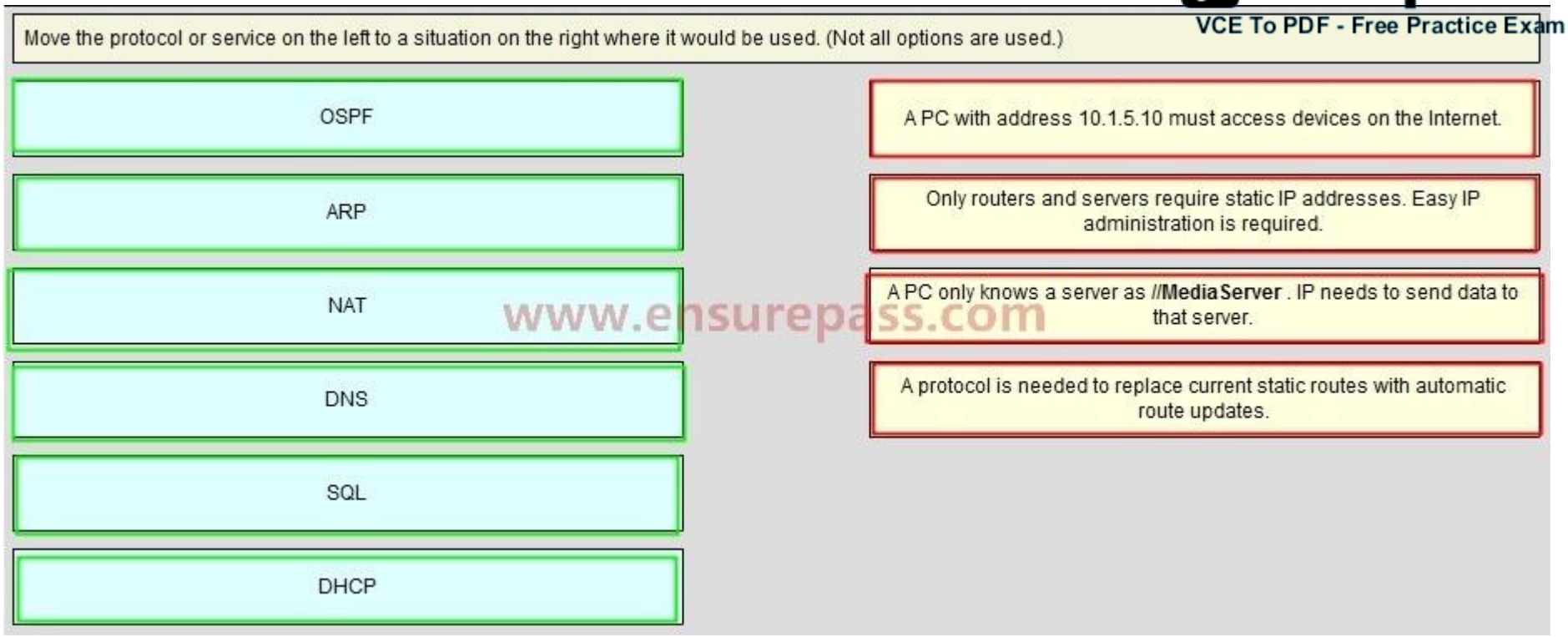
A.
B.
C.
D.

Correct Answer:
Section: (none)
Explanation

Explanation/Reference:



QUESTION 3

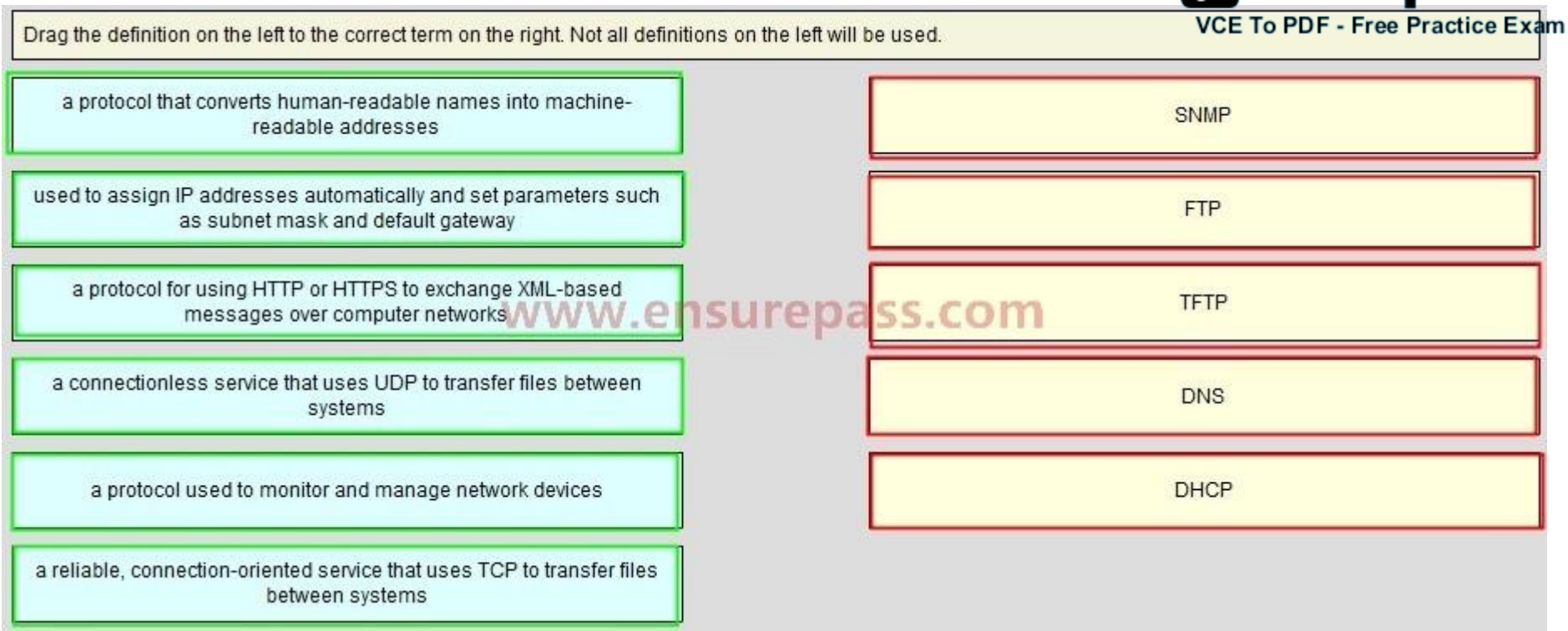


A.
B.
C.
D.

Correct Answer:
Section: (none)
Explanation

Explanation/Reference:

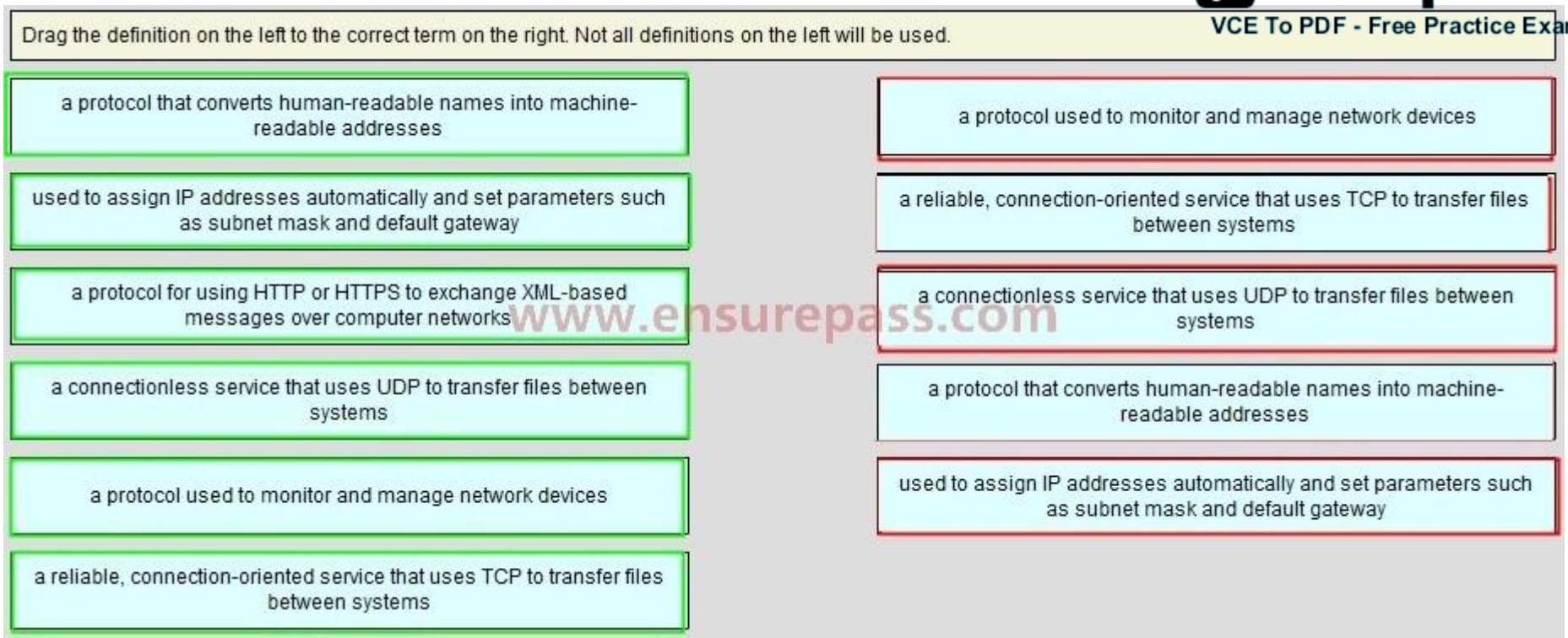
QUESTION 4



A.
B.
C.
D.

Correct Answer:
Section: (none)
Explanation

Explanation/Reference:



QUESTION 5
In the configuration of NAT, what does the keyword overload signify?

A. When bandwidth is insufficient, some hosts will not be allowed to access network translation.
B. The pool of IP addresses has been exhausted.
C. Multiple internal hosts will use one IP address to access external network resources.
D. If the number of available IP addresses is exceeded, excess traffic will use the specified address pool.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 6

What happens when computers on a private network attempt to connect to the Internet through a Cisco router running PAT?

A. The router uses the same IP address but a different TCP source port number for each connection.
B. An IP address is assigned based on the priority of the computer requesting the connection.
C. The router selects an address from a pool of one-to-one address mappings held in the lookup table.
D. The router assigns a unique IP address from a pool of legally registered addresses for the duration of the connection.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 7
When configuring NAT, the Internet interface is considered to be what?

A. local
B. inside
C. global
D. outside

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 8
The ip helper-address command does what?

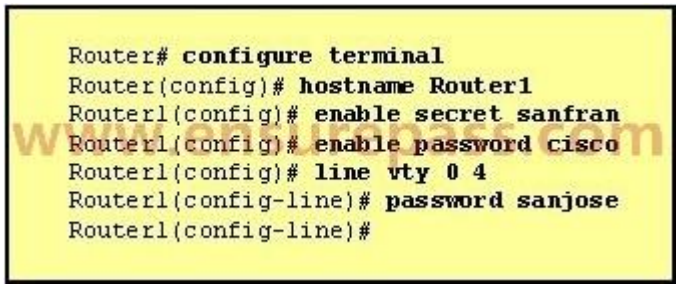
A. assigns an IP address to a host
B. resolves an IP address from a DNS server
C. relays a DHCP request across networks
D. resolves an IP address overlapping issue

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

Network Device Security

QUESTION 1
Refer to the exhibit. The network administrator made the entries that are shown and then saved the configuration. From a console connection, what password or password sequence is required for the administrator to access privileged mode on Router1?



A. cisco
B. sanfran
C. sanjose
D. either cisco or sanfran
E. either cisco or sanjose
F. sanjose and sanfran

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 2

A.
B.
C.
D.

Correct Answer:
Section: (none)
Explanation

Explanation/Reference:

QUESTION 3
The following commands are entered on the router:

Burbank(config)# enable secret fortress
Burbank(config)# line con 0
Burbank(config-line)# login
Burbank(config-line)# password n0way1n
Burbank(config-line)# exit
Burbank(config)# service password-encryption

What is the purpose of the last command entered?

A. to require the user to enter an encrypted password during the login process
B. to prevent the vty, console, and enable passwords from being displayed in plain text in the configuration files
C. to encrypt the enable secret password
D. to provide login encryption services between hosts attached to the router

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 4
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 Answer: E
Section: (none)
Explanation

Explanation/Reference:

QUESTION 5
An administrator has connected devices to a switch and, for security reasons, wants the dynamically learned MAC addresses from the address table added to the running configuration. What must be done to accomplish this?

A. Enable port security and use the keyword sticky.
B. Set the switchport mode to trunk and save the running configuration.
C. Use the switchport protected command to have the MAC addresses added to the configuration.
D. Use the no switchport port-security command to allow MAC addresses to be added to the configuration.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 6

A company has placed a networked PC in a lobby so guests can have access to the corporate directory. A security concern is that someone will disconnect the directory PC and re-connect their laptop computer and have access to the corporate network. For the port servicing the lobby, which three configuration steps should be performed on the switch to prevent this? (Choose three.)

A. Enable port security.
B. Create the port as a trunk port.
C. Create the port as an access port.
D. Create the port as a protected port.
E. Set the port security aging time to 0.
F. Statically assign the MAC address to the address table.
G. Configure the switch to discover new MAC addresses after a set time of inactivity.

Correct Answer: ACF
Section: (none)
Explanation

Explanation/Reference:

QUESTION 7
Why would a network administrator configure port security on a switch?

A. to prevent unauthorized Telnet access to a switch port
B. to prevent unauthorized hosts from accessing the LAN
C. to limit the number of Layer 2 broadcasts on a particular switch port
D. block unauthorized access to the switch management interfaces

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 8
How can you ensure that only the MAC address of a server is allowed by switch port Fa0/1?

A. Configure port Fa0/1 to accept connections only from the static IP address of the server.
B. Configure the server MAC address as a static entry of port security.
C. Use a proprietary connector type on Fa0/1 that is incomputable with other host connectors.

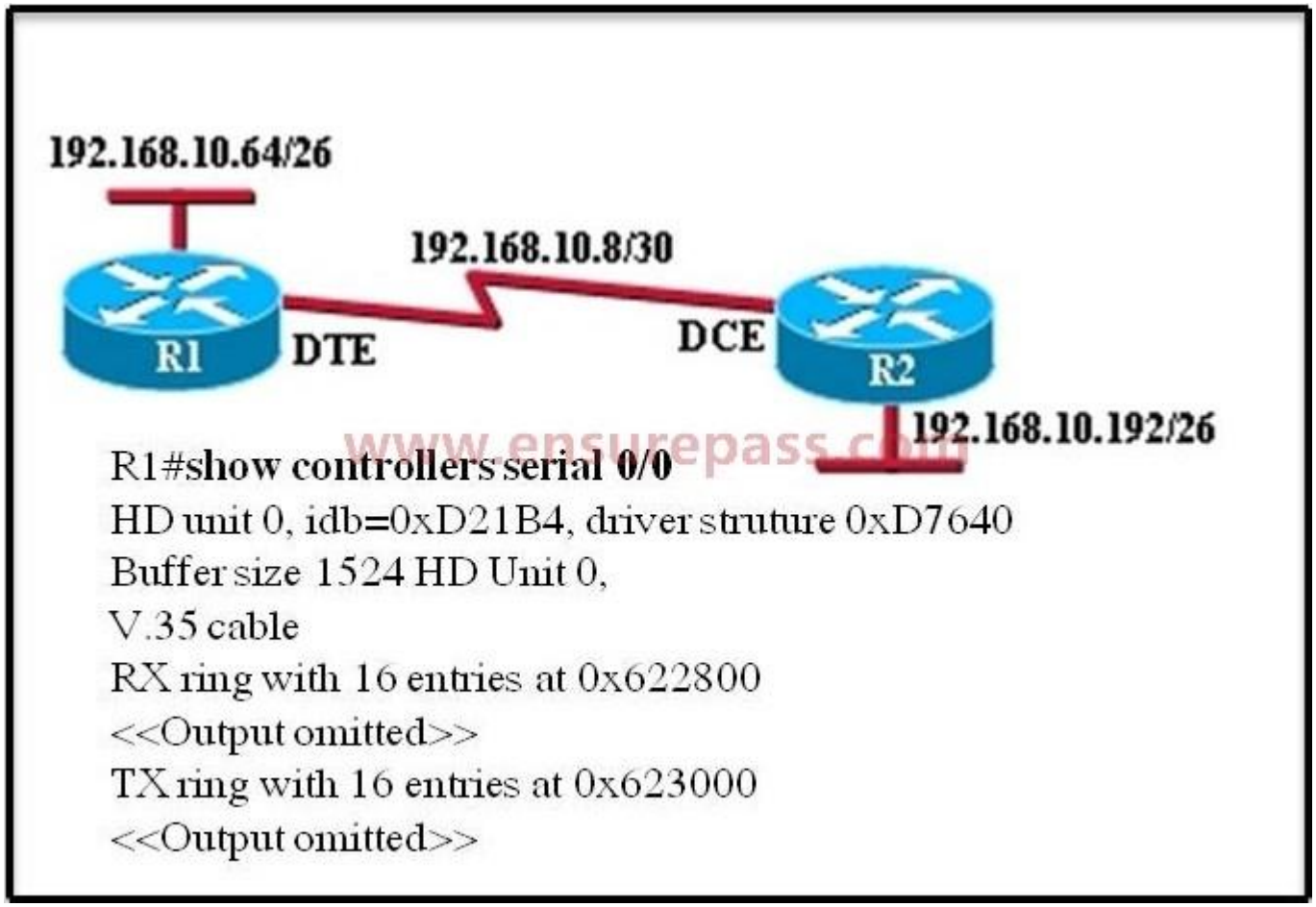
D. Bind the IP address of the server to its MAC address on the switch to prevent other hosts from spoofing the server IP address.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

Troubleshooting

QUESTION 1
Refer to the exhibit. An administrator cannot connect from R1 to R2. To troubleshoot this problem, the administrator has entered the command shown in the exhibit. Based on the output shown, what could be the problem?



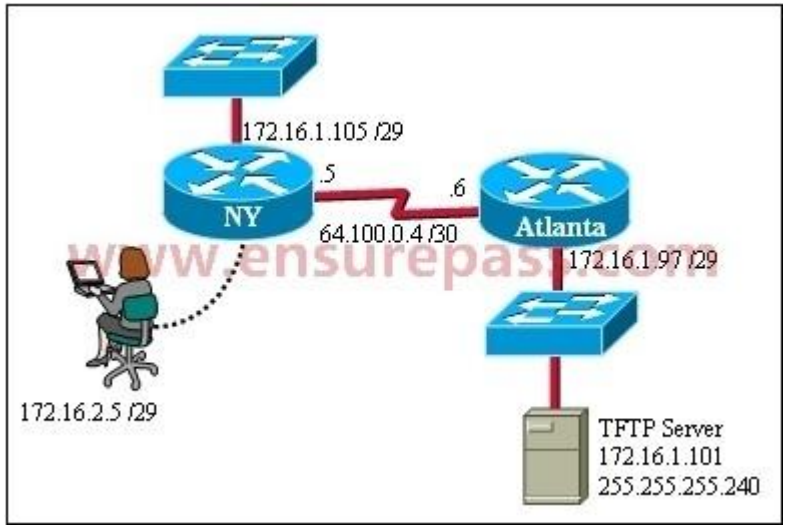
A. The serial interface is configured for half duplex.
B. The serial interface does not have a cable attached.
C. The serial interface has the wrong type of cable attached.
D. The serial interface is configured for the wrong frame size.

E. The serial interface has a full buffer.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 2
Refer to the exhibit. A TFTP server has recently been installed in the Atlanta office. The network administrator is located in the NY office and has made a console connection to the NY router. After establishing the connection they are unable to backup the configuration file and IOS of the NY router to the TFTP server. What is the cause of this problem?



A. The NY router has an incorrect subnet mask.
B. The TFTP server has an incorrect IP address.
C. The TFTP server has an incorrect subnet mask.
D. The network administrator computer has an incorrect IP address.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 3
If a host experiences intermittent issues that relate to congestion within a network while remaining connected, what could cause congestion on this LAN?

A. half-duplex operation
B. broadcast storms
C. network segmentation
D. multicasting

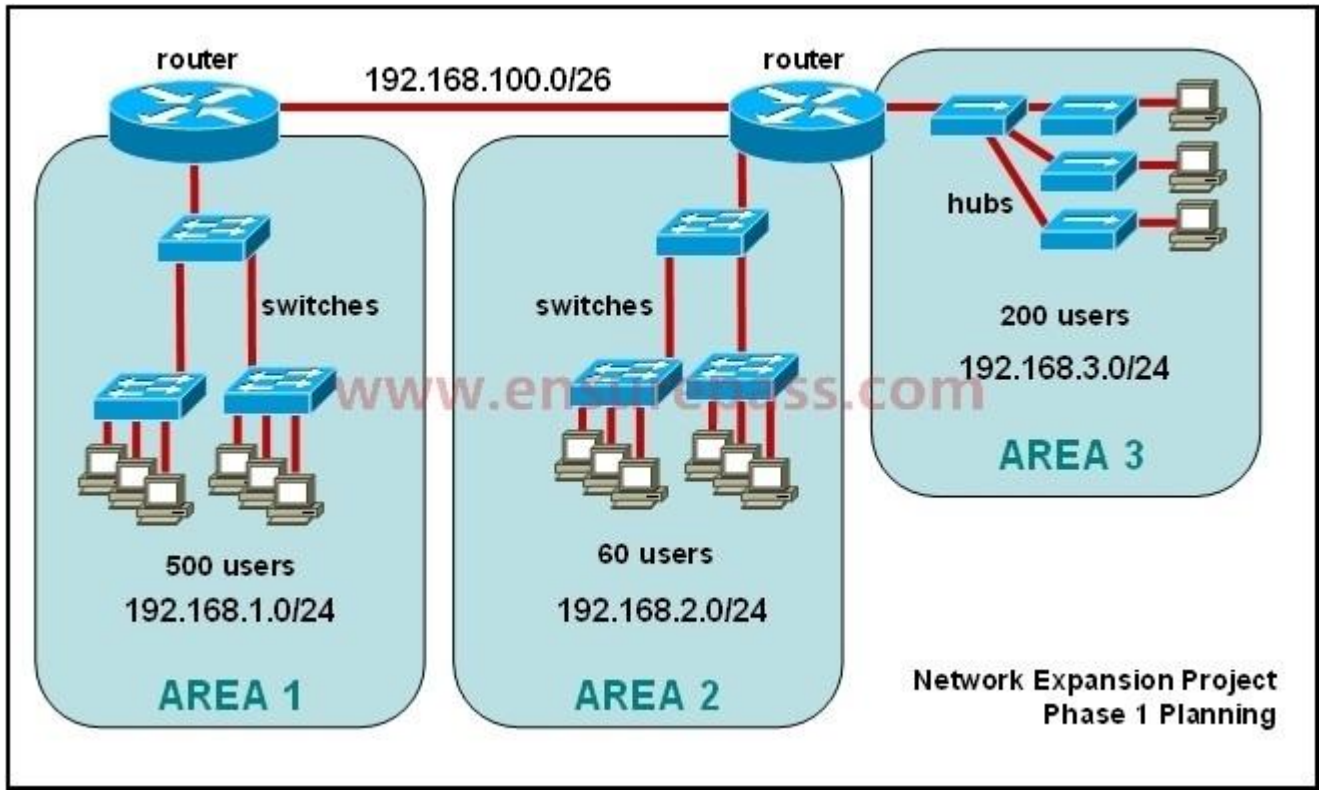
Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 4
Refer to the exhibit. The junior network support staff provided the diagram as a recommended configuration for the first phase of a four-phase network expansion project. The entire network expansion will have over 1000 users on 14 network segments and has been allocated this IP address space.

192.168.1.1 through 192.168.5.255
192.168.100.1 through 192.168.100.255

What are three problems with this design? (Choose three.)

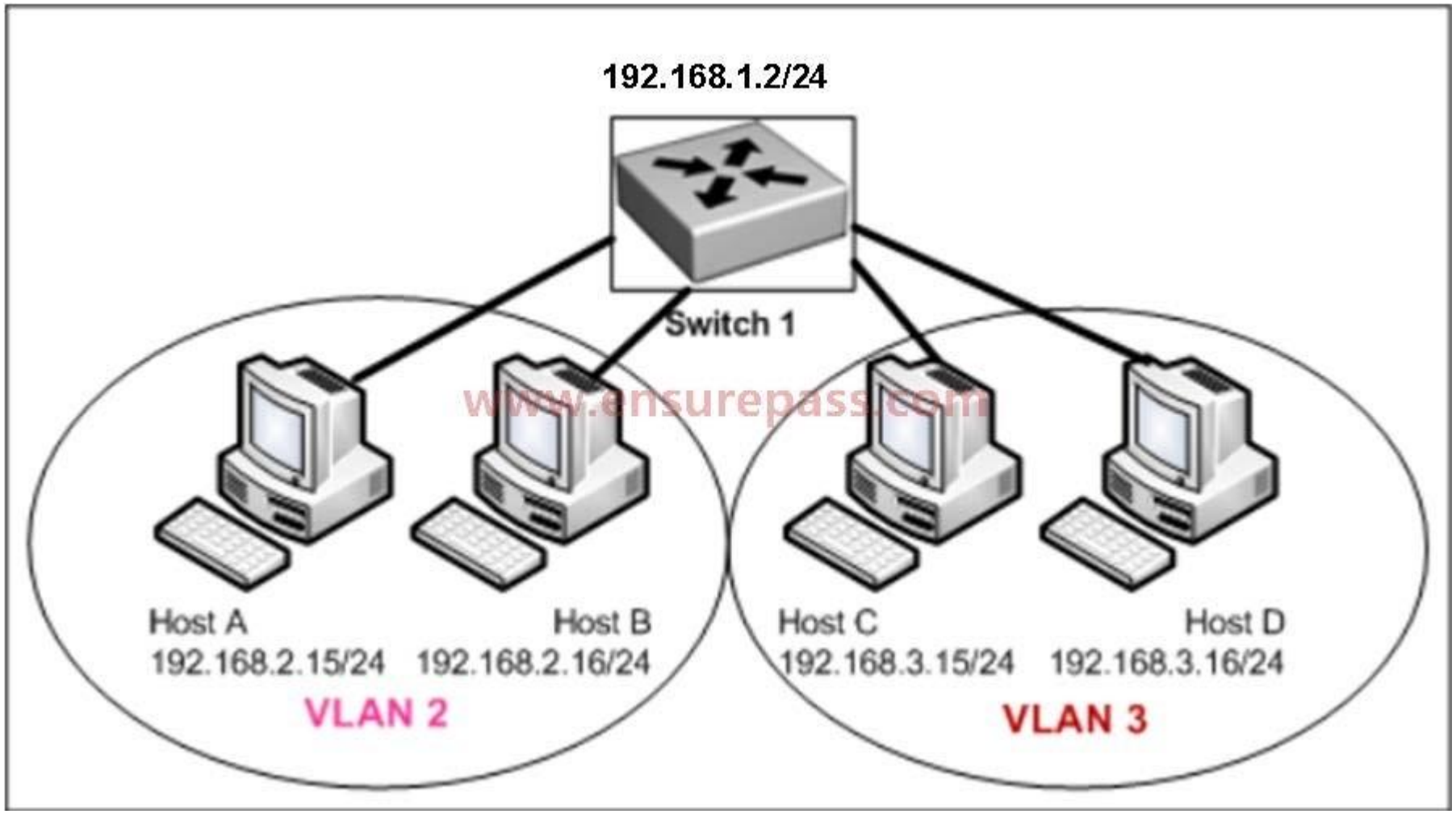


A. The AREA 1 IP address space is inadequate for the number of users.
B. The AREA 3 IP address space is inadequate for the number of users.
C. AREA 2 could use a mask of /25 to conserve IP address space.
D. The network address space that is provided requires a single network-wide mask.
E. The router-to-router connection is wasting address space.
F. The broadcast domain in AREA 1 is too large for IP to function.

Correct Answer: ACE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 5
Refer to the exhibit. Host A can communicate with Host B but not with Hosts C or D. How can the network administrator solve this problem?



A. Configure Hosts C and D with IP addresses in the 192.168.2.0 network.
B. Install a router and configure a route to route between VLANs 2 and 3.
C. Install a second switch and put Hosts C and D on that switch while Hosts A and B remain on the original switch.
D. Enable the VLAN trunking protocol on the switch.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 6
Refer to the exhibit. A network administrator has configured a Catalyst 2950 switch for remote management by pasting into the console the configuration commands that are shown in the exhibit. However, a Telnet session cannot be successfully established from a remote host. What should be done to fix this problem?

```
interface vlan 1
ip address 192.168.17.253  255.255.255.240
no shutdown
exit
ip default-gateway 192.168.17.1
line vty 0 15
password cisco
login
exit
```

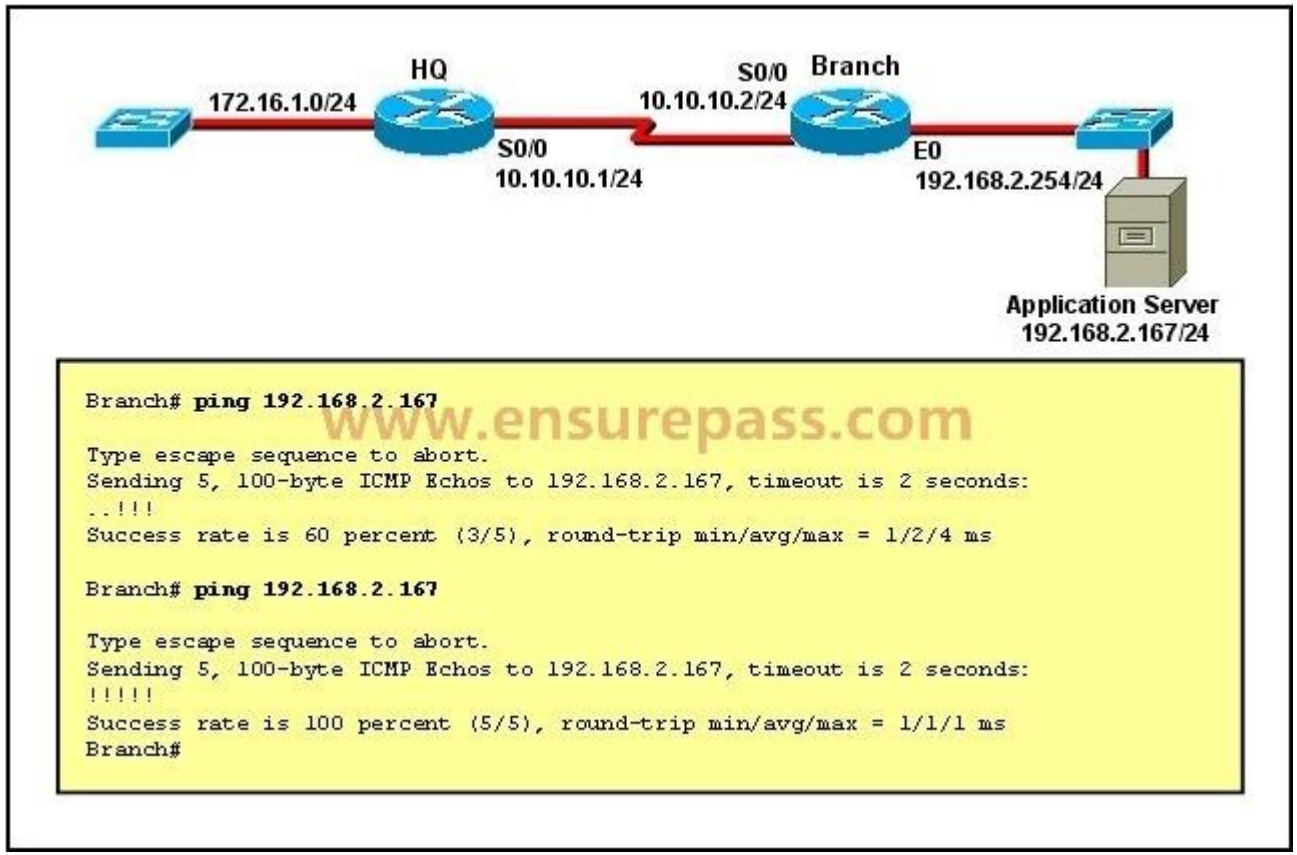

A. Change the first line to interface fastethernet 0/1.
B. Change the first line to interface vlan 0/1.
C. Change the fifth line to ip default-gateway 192.168.17.241.
D. Change the fifth line to ip route 0.0.0.0 0.0.0.0 192.168.17.1.
E. Change the sixth line to line con 0.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 7

Refer to the exhibit. The network administrator is testing connectivity from the branch router to the newly installed application server. What is the most likely reason for the first ping having a success rate of only 60 percent?

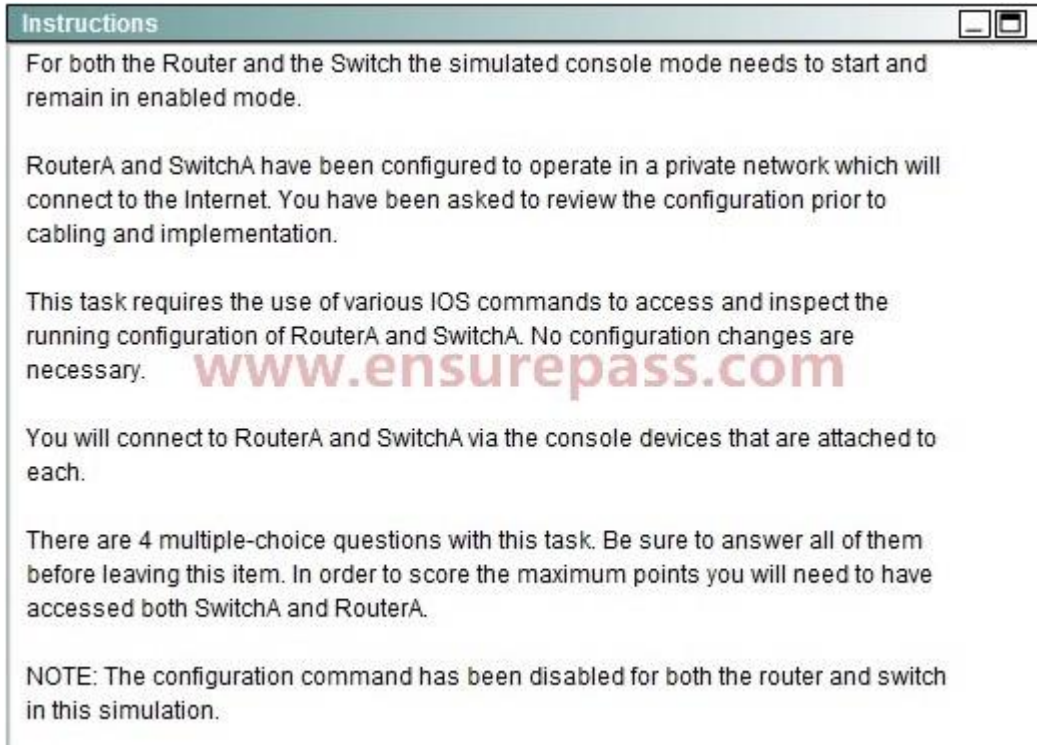


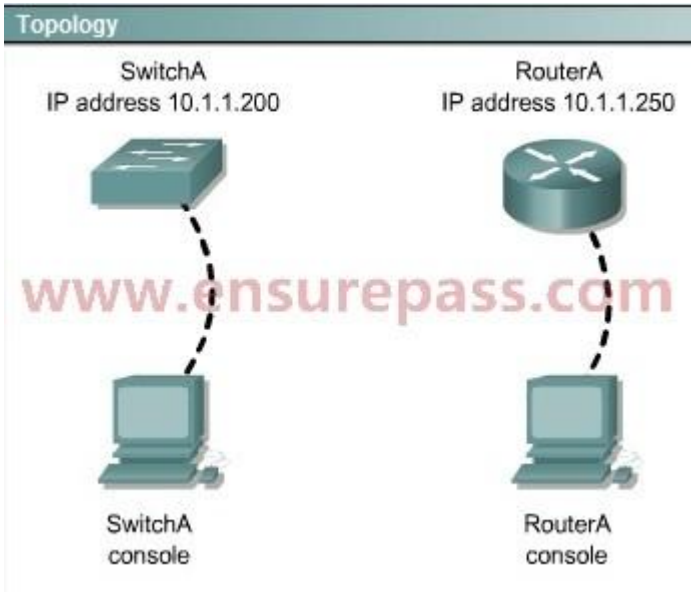
A. The network is likely to be congested, with the result that packets are being intermittently dropped.
B. The branch router had to resolve the application server MAC address.
C. There is a short delay while NAT translates the server IP address.
D. A routing table lookup delayed forwarding on the first two ping packets.
E. The branch router LAN interface should be upgraded to FastEthernet.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 8





Select two options which are security Issues which need to be modified before RouterA is used? (Choose two.)

A. unencrypted weak password is configured to protect privilege mode
B. inappropriate wording in banner message
C. the virtual terminal lines have a weak password configured
D. virtual terminal lines have a password, but it will not be used
E. configuration supports un-secure web server access

Correct Answer: BD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 9

Instructions

For both the Router and the Switch the simulated console mode needs to start and remain in enabled mode.

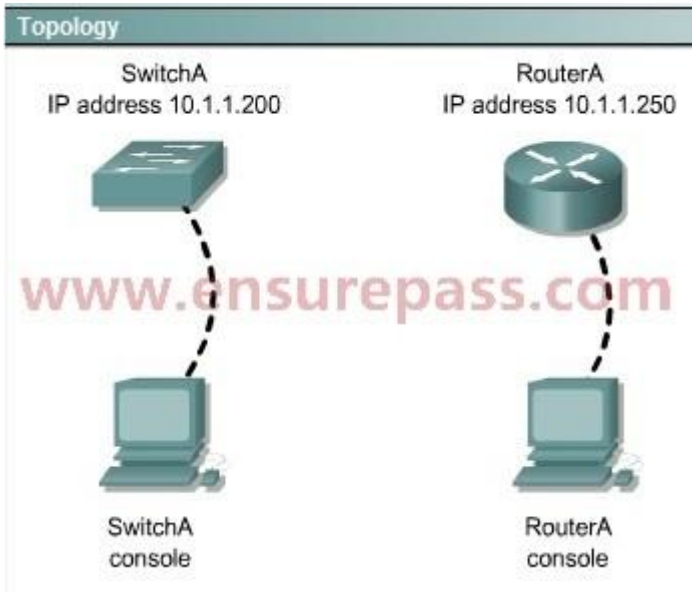
RouterA and SwitchA have been configured to operate in a private network which will connect to the Internet. You have been asked to review the configuration prior to cabling and implementation.

This task requires the use of various IOS commands to access and inspect the running configuration of RouterA and SwitchA. No configuration changes are necessary.

You will connect to RouterA and SwitchA via the console devices that are attached to each.

There are 4 multiple-choice questions with this task. Be sure to answer all of them before leaving this item. In order to score the maximum points you will need to have accessed both SwitchA and RouterA.

NOTE: The configuration command has been disabled for both the router and switch in this simulation.



Select three options which are security issues with the current configuration of SwitchA. (Choose three.)

A. privilege mode is protected with an unencrypted password
B. inappropriate wording in banner message
C. virtual terminal lines are protected only by a password requirement
D. both the username and password are weak
E. telnet connections can be used to remotely manage the switch
F. cisco user will be granted privilege level 15 by default

Correct Answer: ABD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 10

Instructions

For both the Router and the Switch the simulated console mode needs to start and remain in enabled mode.

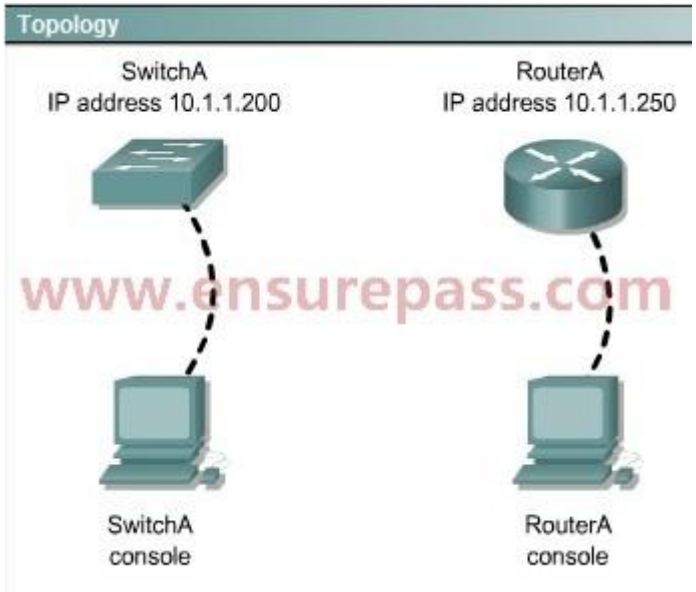
RouterA and SwitchA have been configured to operate in a private network which will connect to the Internet. You have been asked to review the configuration prior to cabling and implementation.

This task requires the use of various IOS commands to access and inspect the running configuration of RouterA and SwitchA. No configuration changes are necessary.

You will connect to RouterA and SwitchA via the console devices that are attached to each.

There are 4 multiple-choice questions with this task. Be sure to answer all of them before leaving this item. In order to score the maximum points you will need to have accessed both SwitchA and RouterA.

NOTE: The configuration command has been disabled for both the router and switch in this simulation.



Which two of the following are true regarding the configuration of RouterA? (Choose two.)

A. at least 5 simultaneous remote connections are possible
B. only telnet protocol connections to RouterA are supported
C. remote connections to RouterA using telnet will succeed
D. console line connections will nevertime out due to inactivity
E. since DHCP is not used on Fa0/1 there is not a need to use the NAT protocol

Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 11

Instructions

For both the Router and the Switch the simulated console mode needs to start and remain in enabled mode.

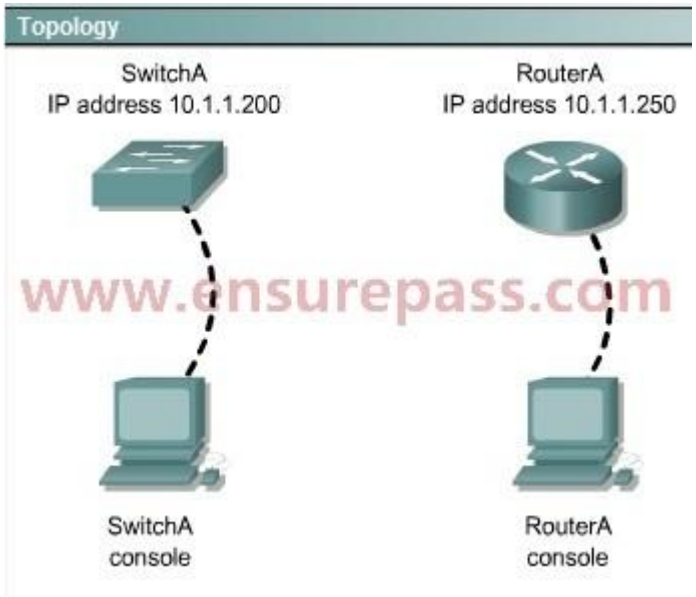
RouterA and SwitchA have been configured to operate in a private network which will connect to the Internet. You have been asked to review the configuration prior to cabling and implementation.

This task requires the use of various IOS commands to access and inspect the running configuration of RouterA and SwitchA. No configuration changes are necessary.

You will connect to RouterA and SwitchA via the console devices that are attached to each.

There are 4 multiple-choice questions with this task. Be sure to answer all of them before leaving this item. In order to score the maximum points you will need to have accessed both SwitchA and RouterA.

NOTE: The configuration command has been disabled for both the router and switch in this simulation.



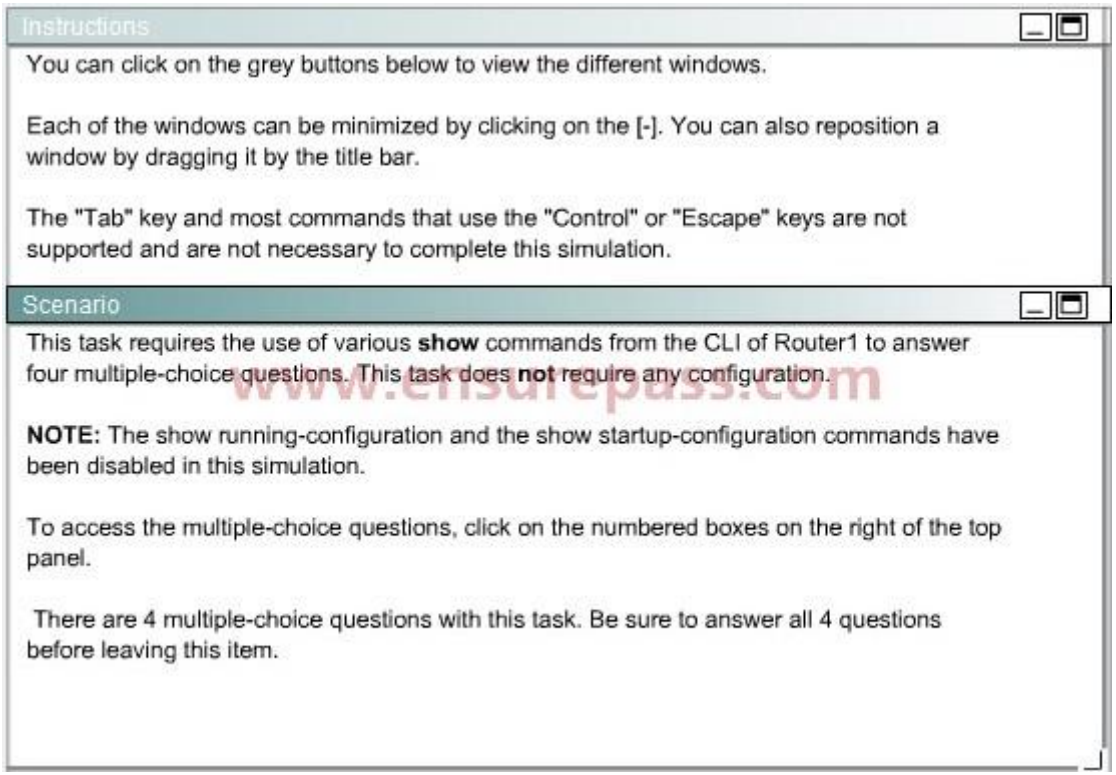
Which of the following is true regarding the configuration of SwitchA?

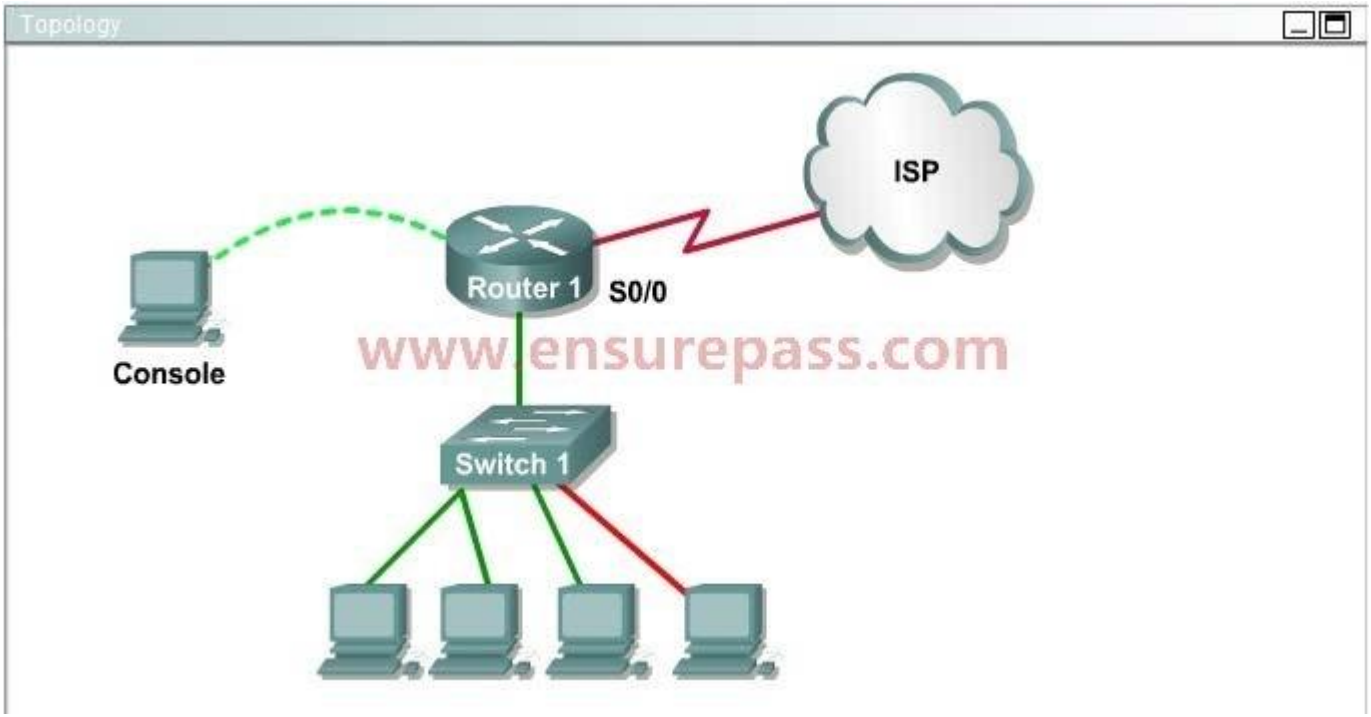
A. only 5 simultaneous remote connections are possible
B. remote connections using ssh will require a username and password
C. only connections from the local network will be possible
D. console access to SwitchA requires a password

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 12





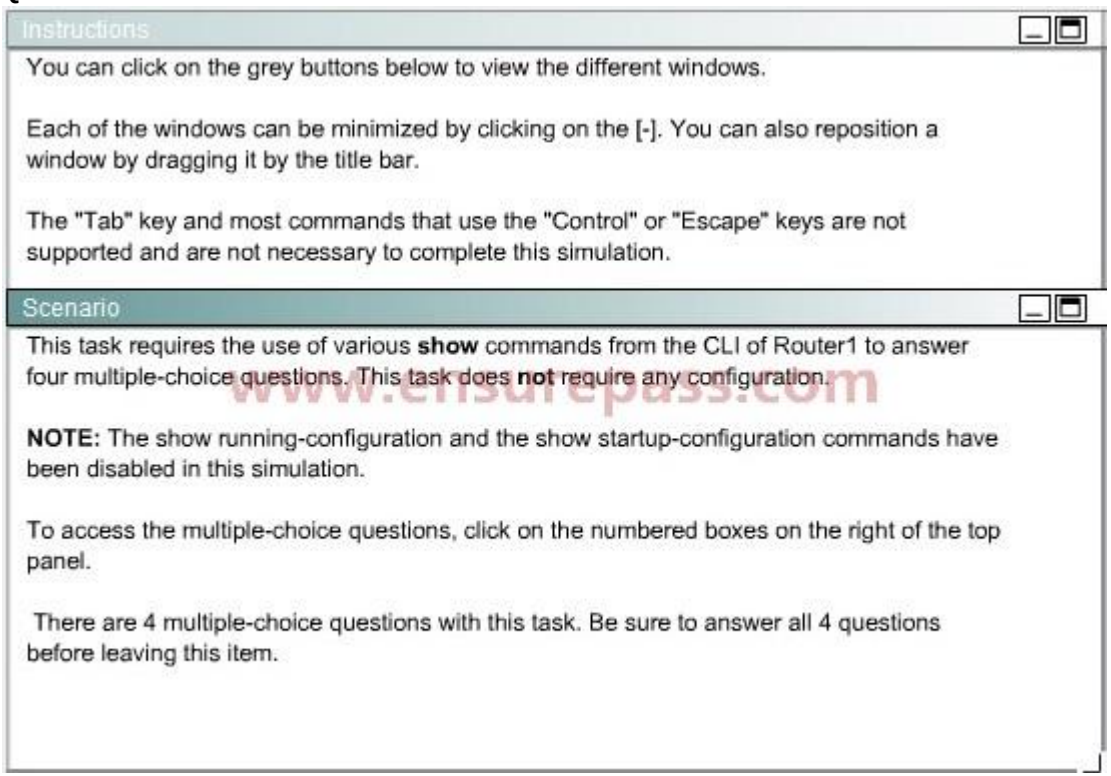
What is the subnet broadcast address of the LAN connected to Router1?

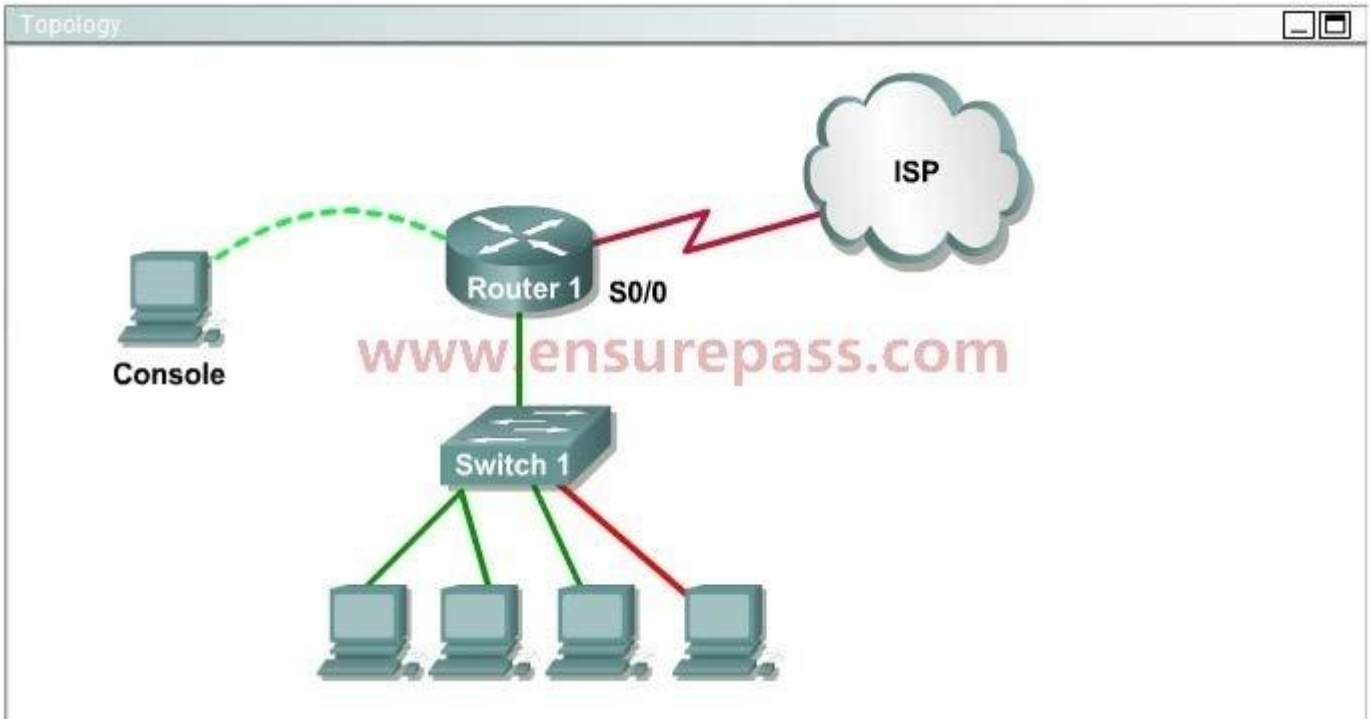
A. 192.168.8.15
B. 192.168.8.31
C. 192.168.8.63
D. 192.168.8.127

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 13





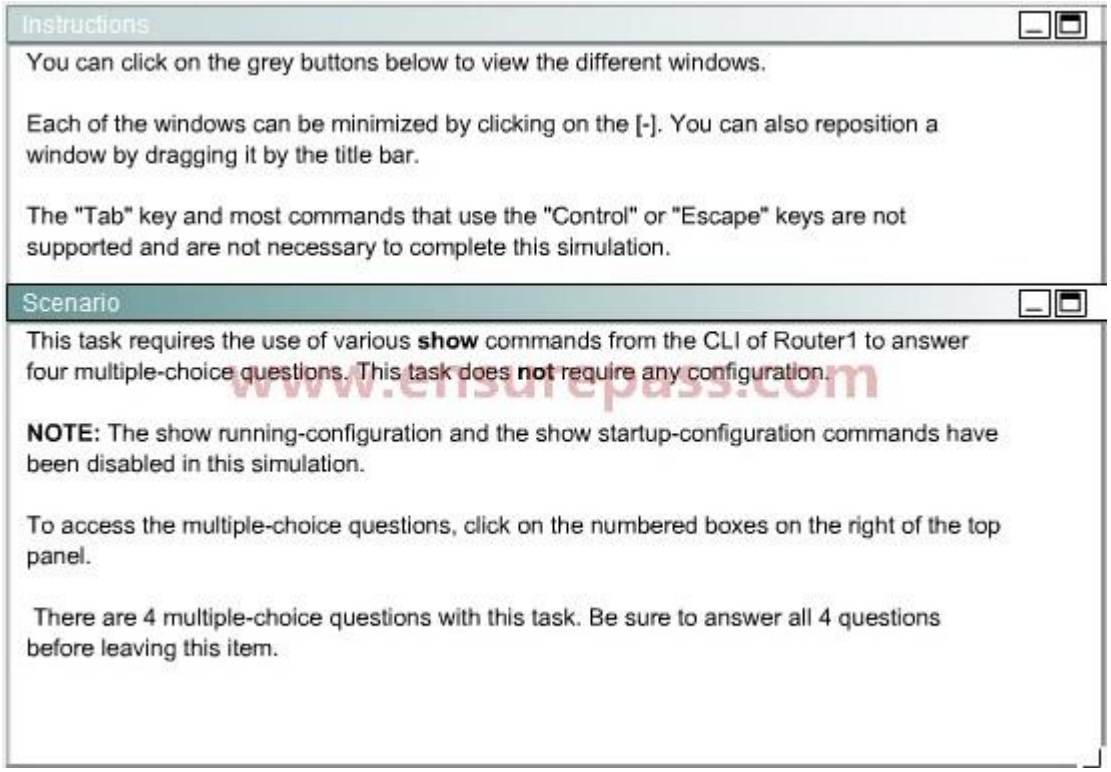
What is the bandwidth on the WAN interface of Router 1?

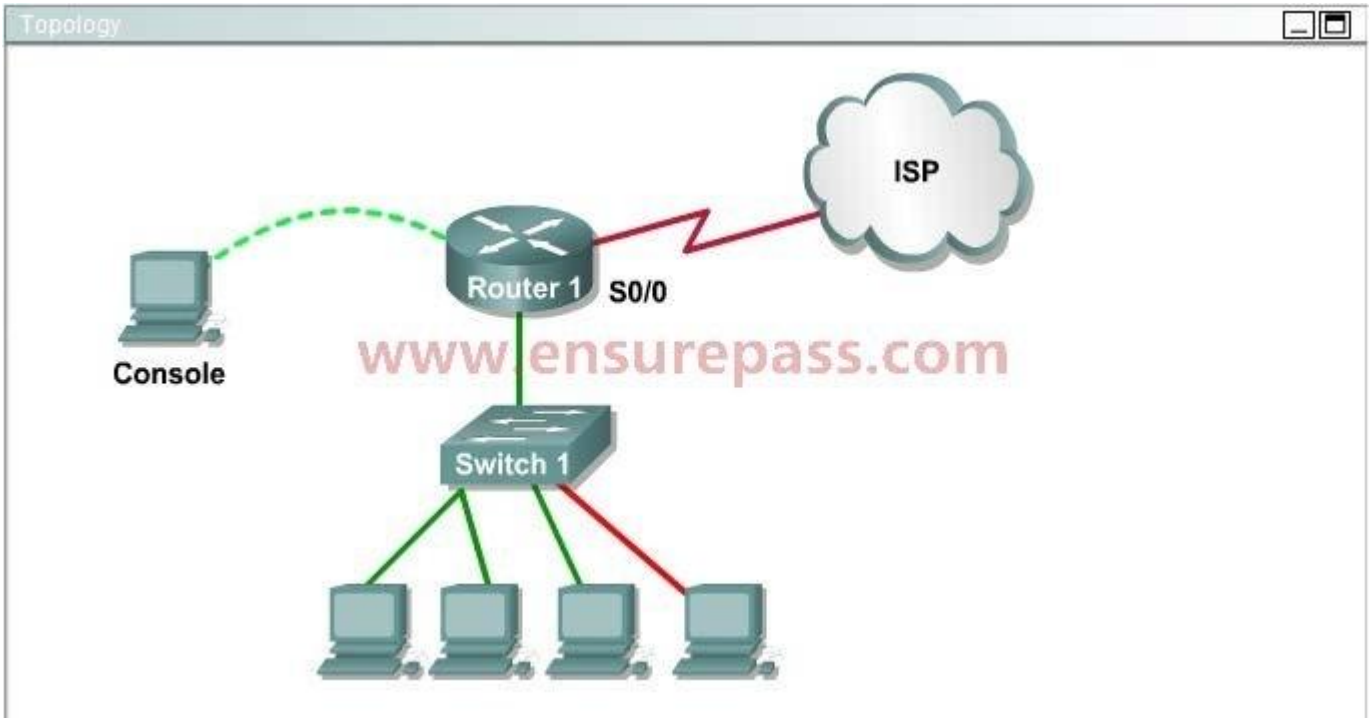
A. 16 Kbit/sec
B. 32 Kbit/sec
C. 64 Kbit/sec
D. 128 Kbit/sec
E. 512 Kbit/sec
F. 1544 Kbit/sec

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 14





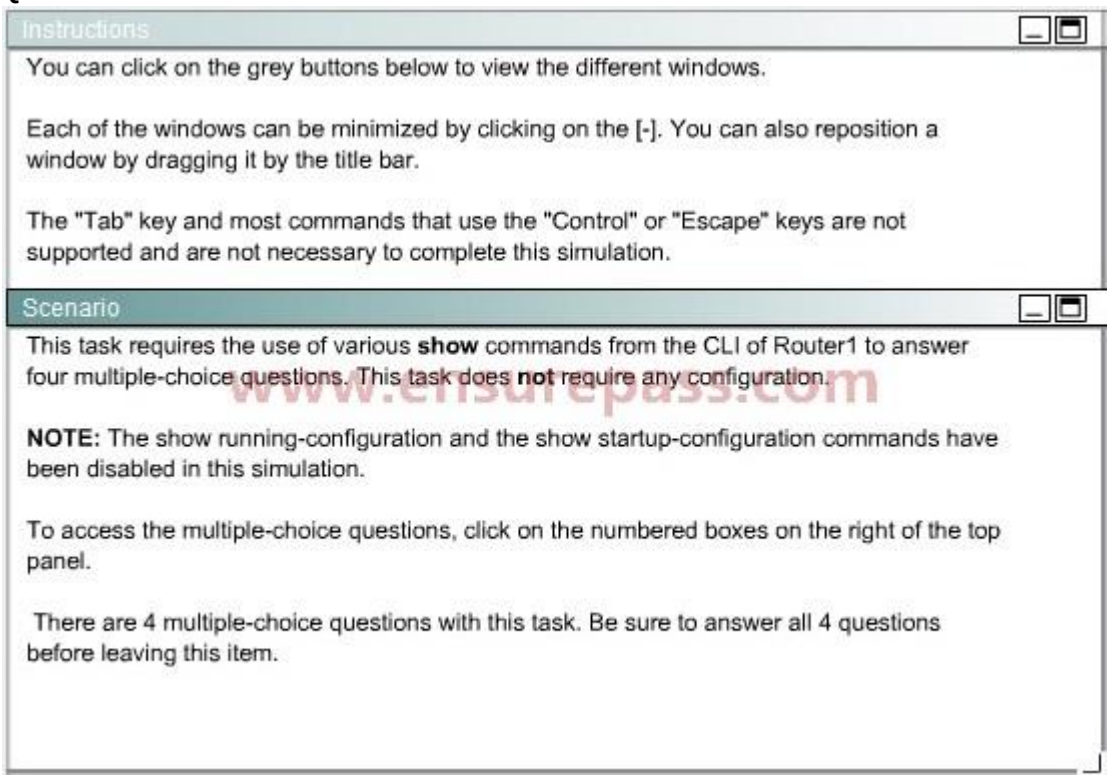
Including the address on the Routed Ethernet interface, how many hosts can have IP addresses on the LAN to which Routed is connected?

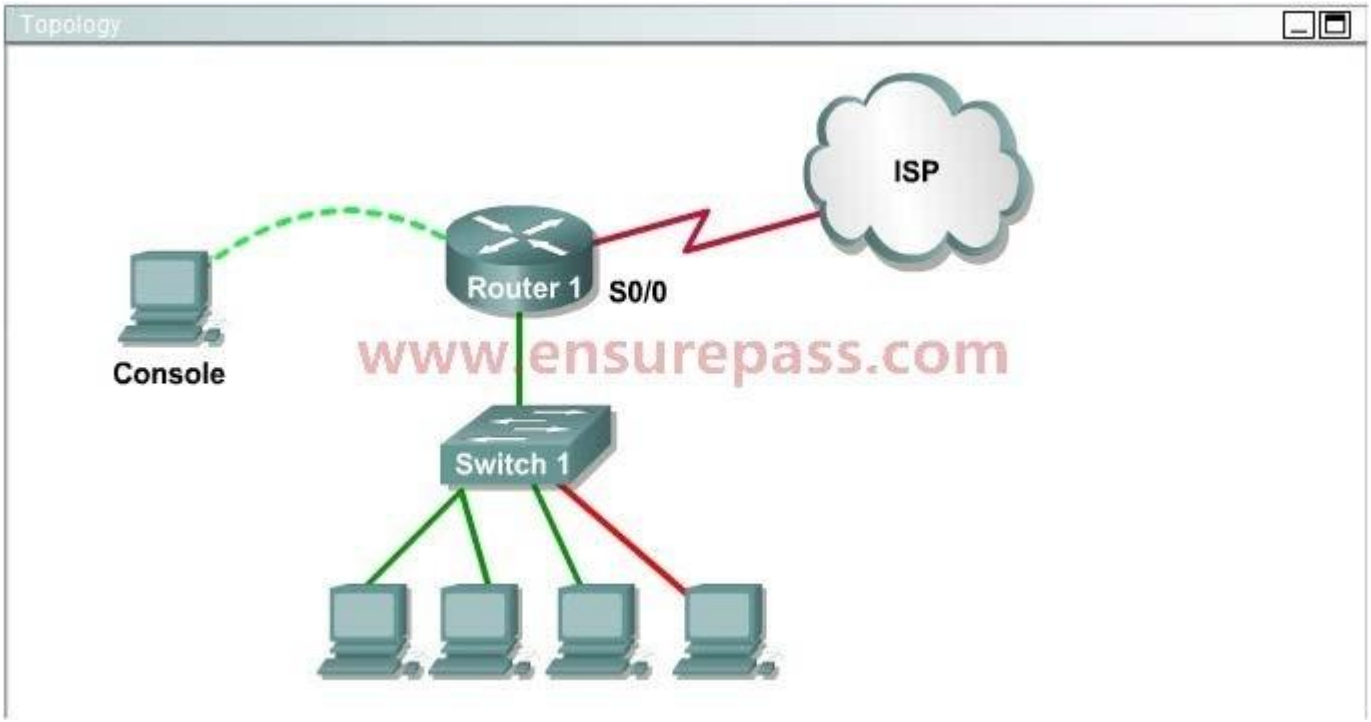
A. 6
B. 30
C. 62
D. 126

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 15





The hosts in the LAN are not able to connect to the Internet. Which commands will correct this issue?

A. Router1(conf)#interface fa0/0
Router1(conf-if)#no shutdown
B. Router1(conf)#interface fa0/1
Router1(conf-if)#no shutdown
C. Router1(conf)#interface s0/0
Router1(conf-if)#no shutdown
D. Router1(conf)#interface s0/1
Router1(conf-if)#no shutdown
E. Router1(conf)#interface s0/0
Router1(conf-if)#ip address 10.11.12.13 255.255.255.252
F. Router1(conf)#interface s0/1
Router1(conf-if)#ip address 10.100.1.1 255.255.255.252

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference: