Test-king100-101.163questions

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Number: 100-101
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File Version: 12.3

100-101

Cisco Interconnecting Cisco Networking Devices Part 1 (ICND)

I) I passed the exam 96% with flying colors.
II) I loved the way the this dump provided me the necessary explanations that were easily retained by me during my exam period.
III) Around a third of the questions were similar but a slightly different scenario.
IV) This vce file will definitely help you.
V) I believe all that I have achieved is just because of this outstanding dump.

Sections

1. Operation of IP Data Networks
2. LAN Switching Technologies
3. IP addressing (IPv4 / IPv6)
4. IP Routing Technologies
5. IP Services
6. Network Device Security
7. Troubleshooting

Exam A

QUESTION 1
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: Operation of IP Data Networks
Explanation

Explanation/Reference:

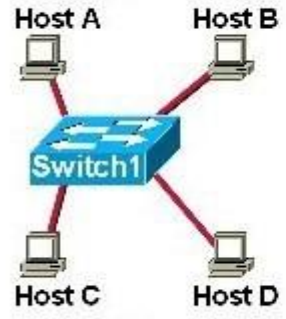
QUESTION 2
Which two characteristics describe the access layer of the hierarchical network design model? (Choose two.)

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

Correct Answer: BD
Section: Operation of IP Data Networks
Explanation

Explanation/Reference:

QUESTION 3
Refer to the topology and switching table shown in the graphic.



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

Host B sends a frame to Host C. What will the switch do with the frame?

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: Operation of IP Data Networks
Explanation

Explanation/Reference:

QUESTION 4
Refer to the exhibit.

```
RouterA# show ip route
Codes: C - connected, S - static, 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
       i - IS-IS, su - IS-IS summary, 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 0.0.0.0 to network 0.0.0.0

     172.16.0.0/24 is subnetted, 1 subnets
C       172.16.1.0 is directly connected, Ethernet0/1
     10.0.0.0/30 is subnetted, 1 subnets
C       10.255.255.200 is directly connected, Serial0/0
S*   0.0.0.0/0 is directly connected, Serial0/0
RouterA#
```

The output is from a router in a large enterprise. From the output, determine the role of the router.

A. A Core router.
B. The HQ Internet gateway router.
C. The WAN router at the central site.
D. Remote stub router at a remote site.

Correct Answer: D
Section: Operation of IP Data Networks
Explanation

Explanation/Reference:

QUESTION 5
To what type of port would a cable with a DB-60 connector attach?

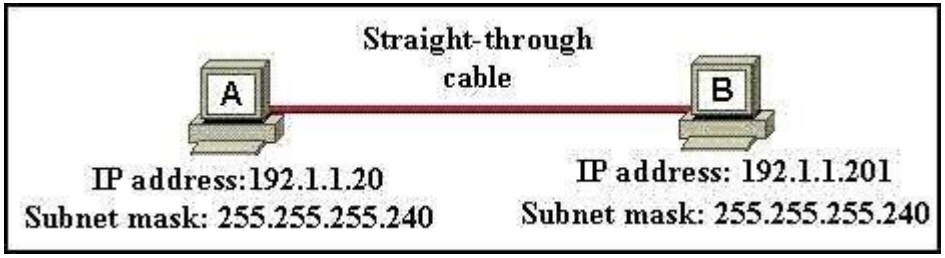
A. Serial port
B. Console port
C. Ethernet port

D. Fibre optic port

Correct Answer: A
Section: Operation of IP Data Networks
Explanation

Explanation/Reference:

QUESTION 6
A network administrator is connecting PC hosts A and B directly through their Ethernet interfaces as shown in the graphic. Ping attempts between the hosts are unsuccessful. What can be done to provide connectivity between the hosts? (Choose two.)

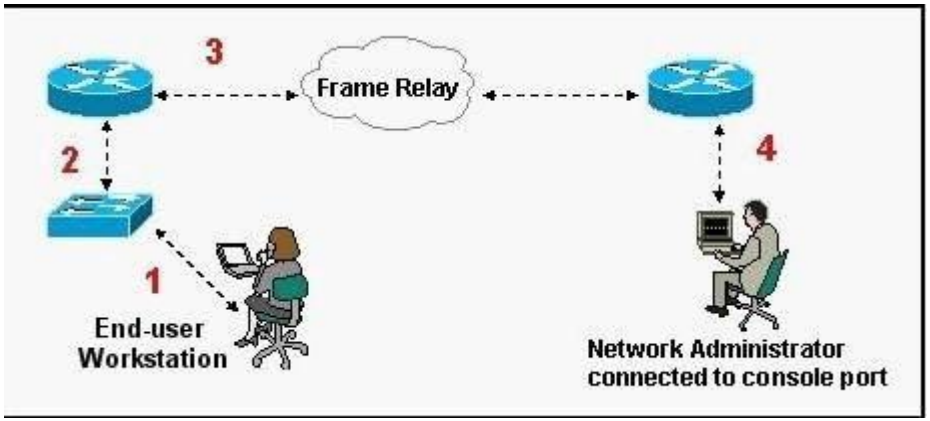


A. A crossover cable should be used in place of the straight-through cable.
B. A rollover cable should be used in place of the straight-through cable.
C. The subnet masks should be set to 255.255.255.192
D. A default gateway needs to be set on each host.
E. The hosts must be reconfigured to use private IP addresses for direct connections of this type.
F. The subnet masks should be set to 255.255.255.0

Correct Answer: AF
Section: Operation of IP Data Networks
Explanation

Explanation/Reference:

QUESTION 7
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 cable2 - Ethernet straight-through cable3 - Fiber Optic cable4 - Rollover cable
B. 1 - Ethernet straight-through cable2 - Ethernet straight-through cable3 - Serial cable4 - Rollover cable
C. 1 - Ethernet rollover cable2 - Ethernet crossover cable3 - Serial cable4 - Null-modem cable
D. 1 - Ethernet straight-through cable2 - Ethernet Crossover cable3 - Serial cable4 - Rollover cable
E. 1 - Ethernet straight-through cable2 - Ethernet Crossover cable3 - Serial cable4 - Ethernet Straight- through cable

Correct Answer: B
Section: Operation of IP Data Networks
Explanation

Explanation/Reference:

QUESTION 8
Which of the following are types of flow control? (Choose three.)

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

Correct Answer: ACD
Section: Operation of IP Data Networks

Explanation

Explanation/Reference:

QUESTION 9
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: LAN Switching Technologies
Explanation

Explanation/Reference:

QUESTION 10
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: LAN Switching Technologies
Explanation

Explanation/Reference:

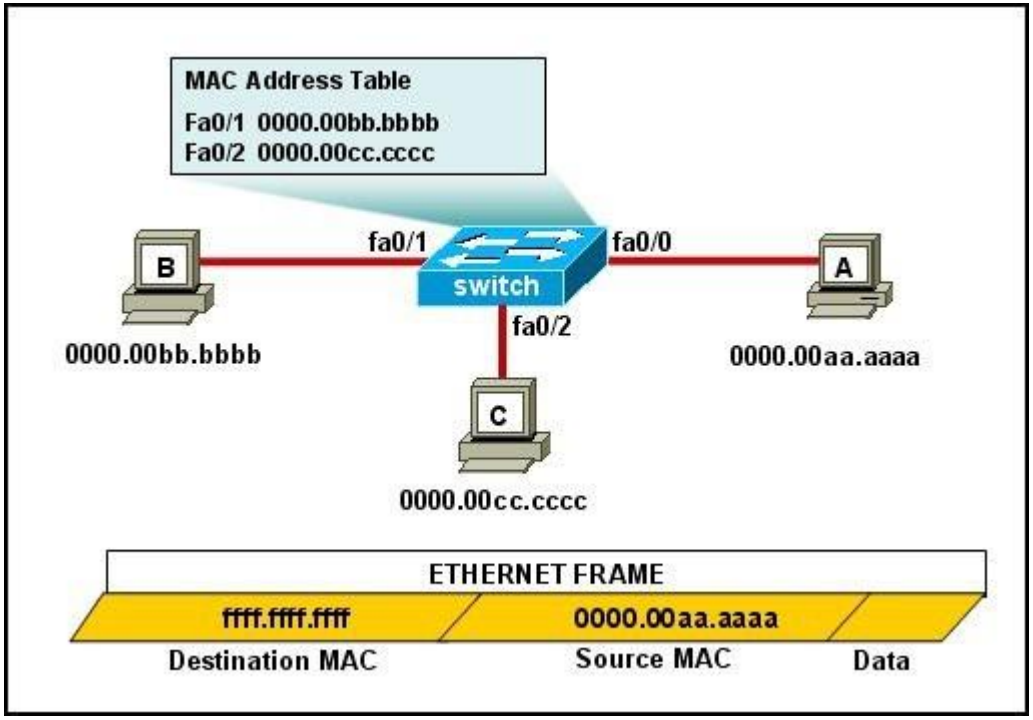
QUESTION 11
Which address type does a switch use to make selective forwarding decisions?

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: LAN Switching Technologies
Explanation

Explanation/Reference:

QUESTION 12
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: LAN Switching Technologies
Explanation

Explanation/Reference:

QUESTION 13
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: LAN Switching Technologies
Explanation

Explanation/Reference:

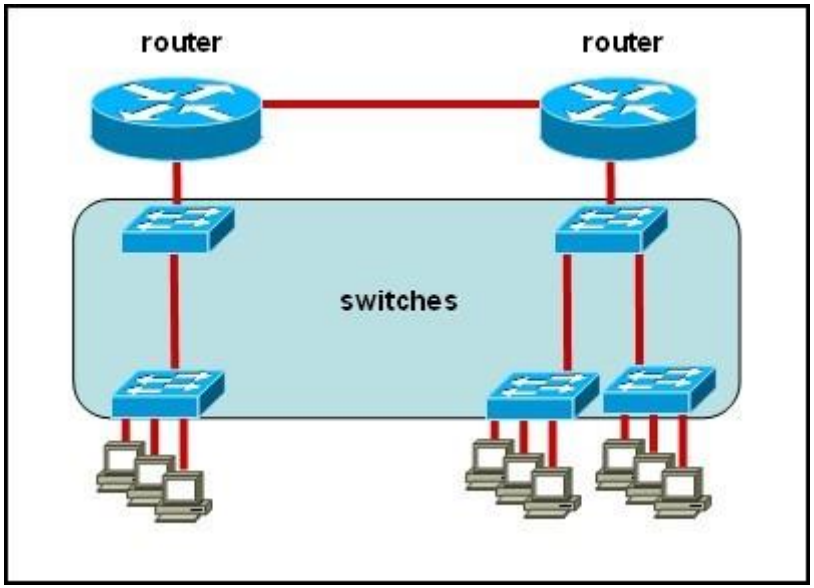
QUESTION 14
A switch has 48 ports and 4 VLANs. How many collision and broadcast domains exist on the switch (collision, broadcast)?

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

Correct Answer: B
Section: LAN Switching Technologies
Explanation

Explanation/Reference:

QUESTION 15
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: LAN Switching Technologies

Explanation

Explanation/Reference:

QUESTION 16
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: IP addressing (IPv4 / IPv6)
Explanation

Explanation/Reference:

QUESTION 17
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: IP addressing (IPv4 / IPv6)
Explanation

Explanation/Reference:

QUESTION 18
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

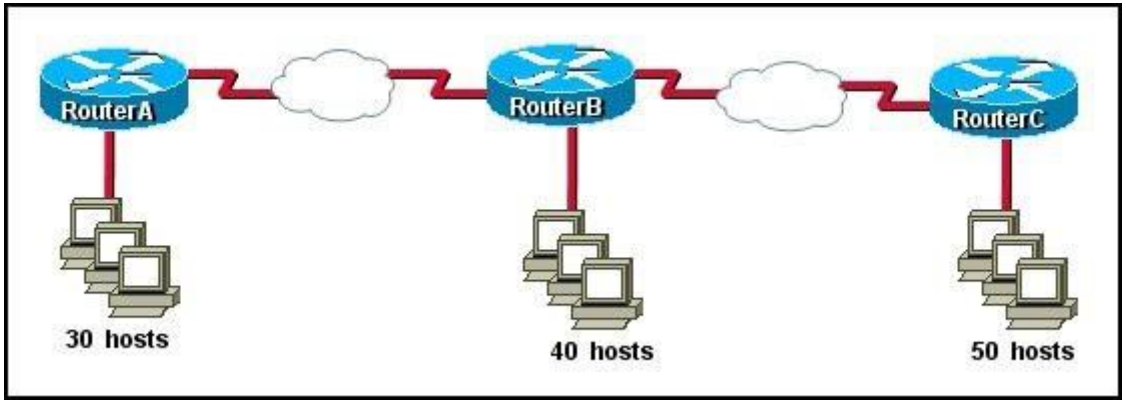
within the same subnet? (Choose two.)

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: IP addressing (IPv4 / IPv6)
Explanation

Explanation/Reference:

QUESTION 19
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: IP addressing (IPv4 / IPv6)
Explanation

Explanation/Reference:

QUESTION 20
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: IP addressing (IPv4 / IPv6)
Explanation

Explanation/Reference:

QUESTION 21
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: IP addressing (IPv4 / IPv6)

Explanation

Explanation/Reference:

QUESTION 22
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: IP addressing (IPv4 / IPv6)
Explanation

Explanation/Reference:

QUESTION 23
An administrator must assign static IP addresses to the servers in a network. For network 192.168.20.24/29, the router is assigned the first usable host address while the sales server is given the last usable host address.

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

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

Correct Answer: C
Section: IP addressing (IPv4 / IPv6)
Explanation

Explanation/Reference:

QUESTION 24
Which IP address is a private address?

A. 12.0.0.1
B. 168.172.19.39
C. 172.20.14.36
D. 172.33.194.30
E. 192.169.42.34

Correct Answer: C
Section: IP addressing (IPv4 / IPv6)
Explanation

Explanation/Reference:

QUESTION 25
Which command can you use to manually assign a static IPV6 address to a router interface?

A. ipv6 address PREFIX_1::1/64
B. ipv6 autoconfig 2001:db8:2222:7272::72/64
C. ipv6 autoconfig
D. ipv6 address 2001:db8:2222:7272::72/64

Correct Answer: D
Section: IP addressing (IPv4 / IPv6)
Explanation

Explanation/Reference:

QUESTION 26
Which two of these statements are true of IPv6 address representation? (Choose two.)

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

Correct Answer: BC

Section: IP addressing (IPv4 / IPv6)
Explanation

Explanation/Reference:

QUESTION 27
Which option is a valid IPv6 address?

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

Correct Answer: D
Section: IP addressing (IPv4 / IPv6)
Explanation

Explanation/Reference:

QUESTION 28
How many bits are contained in each field of an IPv6 address?

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

Correct Answer: D
Section: IP addressing (IPv4 / IPv6)
Explanation

Explanation/Reference:

QUESTION 29
Which three approaches can be used while migrating from an IPv4 addressing scheme to an IPv6 scheme? (Choose three)

A. static mapping of IPv4 address to IPv6 addresses

B. configuring IPv4 tunnels between IPv6 islands
C. use DHCPv6 to map IPv4 addresses to IPv6 addresses
D. use proxying and translation (NAT-PT) to translate IPv6 packets into IPv4 packets
E. configure IPv6 directly
F. enable dual-stack routing

Correct Answer: BDF
Section: IP addressing (IPv4 / IPv6)
Explanation

Explanation/Reference:

QUESTION 30
Which statement about IPv6 is true?

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

Correct Answer: D
Section: IP addressing (IPv4 / IPv6)
Explanation

Explanation/Reference:

QUESTION 31
Which command enables IPv6 forwarding on a Cisco router?

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

Correct Answer: B
Section: IP addressing (IPv4 / IPv6)
Explanation

Explanation/Reference:

QUESTION 32
Identify the four valid IPv6 addresses. (Choose four.)

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

Correct Answer: ABEF
Section: IP addressing (IPv4 / IPv6)
Explanation

Explanation/Reference:

QUESTION 33
Which two statements describe characteristics of IPv6 unicast addressing? (Choose two.)

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

Correct Answer: AD
Section: IP addressing (IPv4 / IPv6)
Explanation

Explanation/Reference:

QUESTION 34
Which statement is true?

A. An IPv6 address is 64 bits long and is represented as hexadecimal characters.

B. An IPv6 address is 32 bits long and is represented as decimal digits.
C. An IPv6 address is 128 bits long and is represented as decimal digits.
D. An IPv6 address is 128 bits long and is represented as hexadecimal characters.

Correct Answer: D
Section: IP addressing (IPv4 / IPv6)
Explanation

Explanation/Reference:

QUESTION 35
If an Ethernet port on a router was assigned an IP address of 172.16.112.1/20, what is the maximum number of hosts allowed on this subnet?

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

Correct Answer: C
Section: IP addressing (IPv4 / IPv6)
Explanation

Explanation/Reference:

QUESTION 36
Which statements are TRUE regarding Internet Protocol version 6 (IPv6) addresses? (Choose three.)

A. An IPv6 address is divided into eight 16-bit groups.
B. A double colon (::) can only be used once in a single IPv6 address.
C. IPv6 addresses are 196 bits in length.
D. Leading zeros cannot be omitted in an IPv6 address.
E. Groups with a value of 0 can be represented with a single 0 in IPv6 address.

Correct Answer: ABE
Section: IP addressing (IPv4 / IPv6)
Explanation

Explanation/Reference:

QUESTION 37
Which of the following IP addresses are valid Class B host addresses if a default Class B mask is in use? (Choose two.)

A. 10.6.8.35
B. 133.6.5.4
C. 192.168.5.9
D. 127.0.0.1
E. 190.6.5.4

Correct Answer: BE
Section: IP addressing (IPv4 / IPv6)
Explanation

Explanation/Reference:

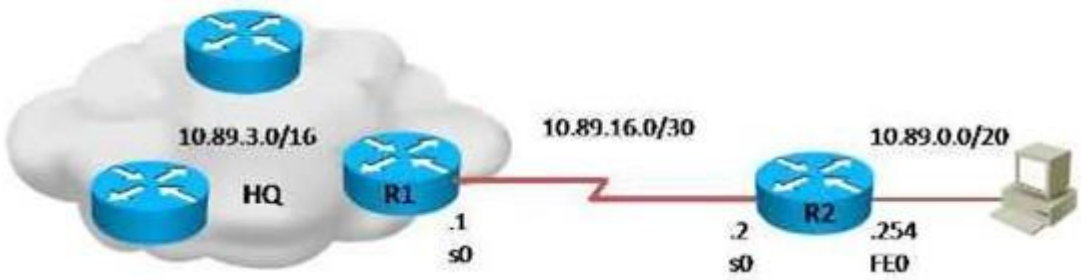
QUESTION 38
What two things does a router do when it forwards a packet? (Choose two.)

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: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 39
Refer to the exhibit.



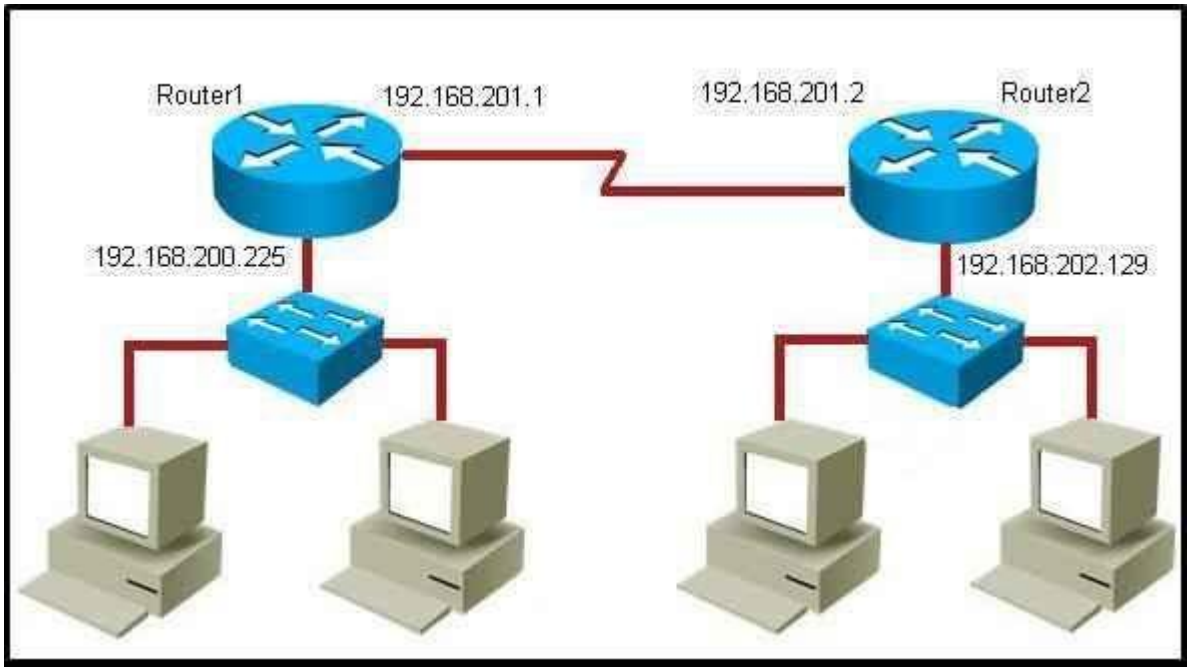
What is the simplest way to configure routing between the regional office network 10.89.0.0/20 and the corporate network?

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: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 40
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: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 41
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: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 42
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: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 43
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: IP Routing Technologies
Explanation

Explanation/Reference:

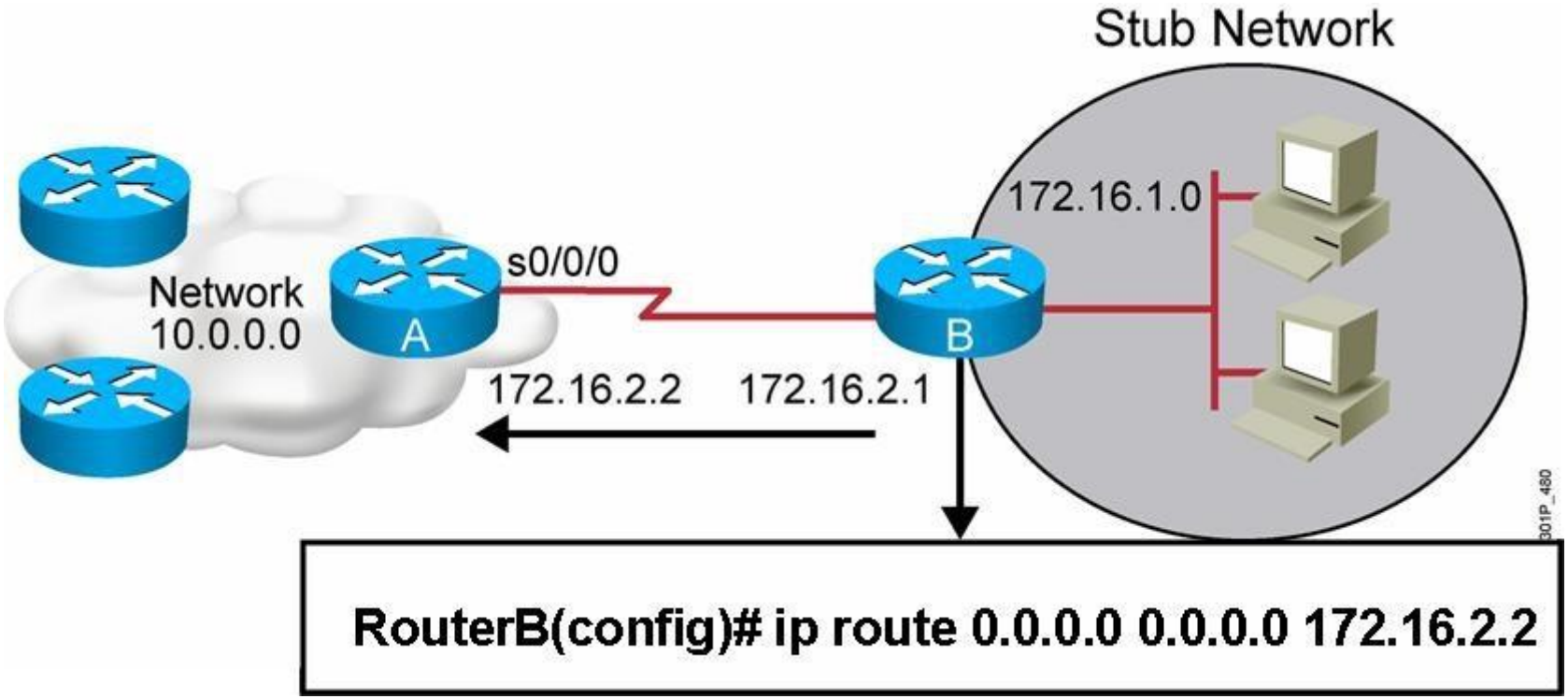
QUESTION 44
Which two of these functions do routers perform on packets? (Choose two.)

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: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 45
Refer to the exhibit.



Which two statements are correct? (Choose two.)

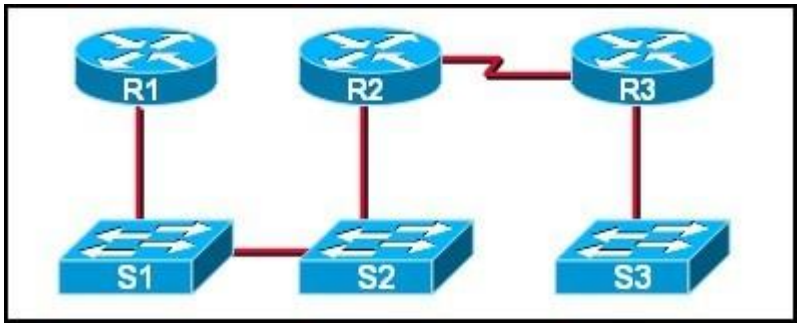
A. This is a default route.
B. Adding the subnet mask is optional for the ip route command.
C. This will allow any host on the 172.16.1.0 network to reach all known destinations beyond RouterA.
D. This command is incorrect, it needs to specify the interface, such as s0/0/0 rather than an IP address.
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: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 46

Refer to the exhibit.



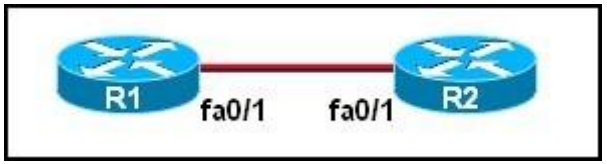
If CDP is enabled on all devices and interfaces, which devices will appear in the output of a show cdp neighbors command issued from R2?

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: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 47
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: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 48
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: BC
Section: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 49
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: IP Routing Technologies

Explanation

Explanation/Reference:

QUESTION 50
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: IP Routing Technologies
Explanation

Explanation/Reference:

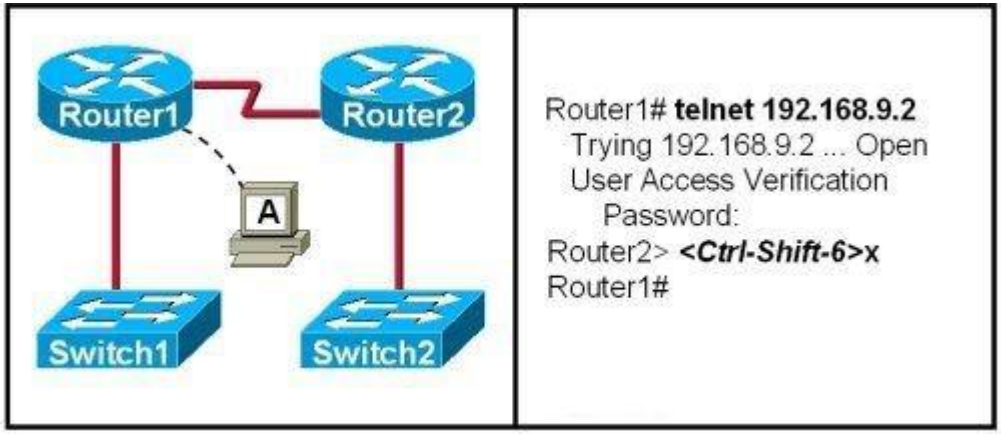
QUESTION 51
Which router command will configure an interface with the IP address 10.10.80.1/19?

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: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 52
Refer to the exhibit.



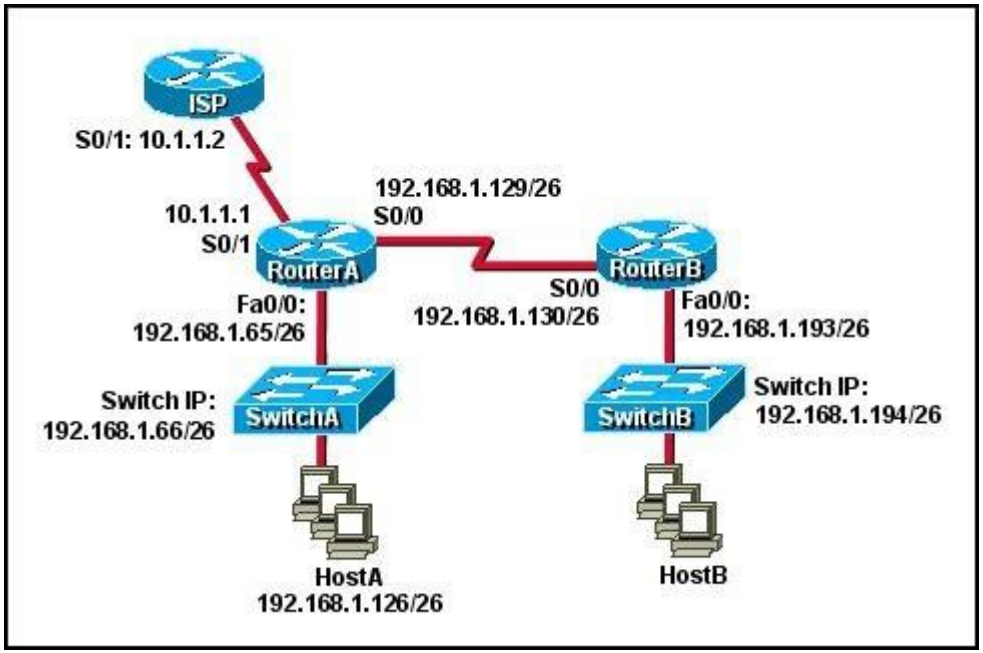
If the resume command is entered after the sequence that is shown in the exhibit, which router prompt will be displayed?

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

Correct Answer: C
Section: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 53
Refer to the exhibit.



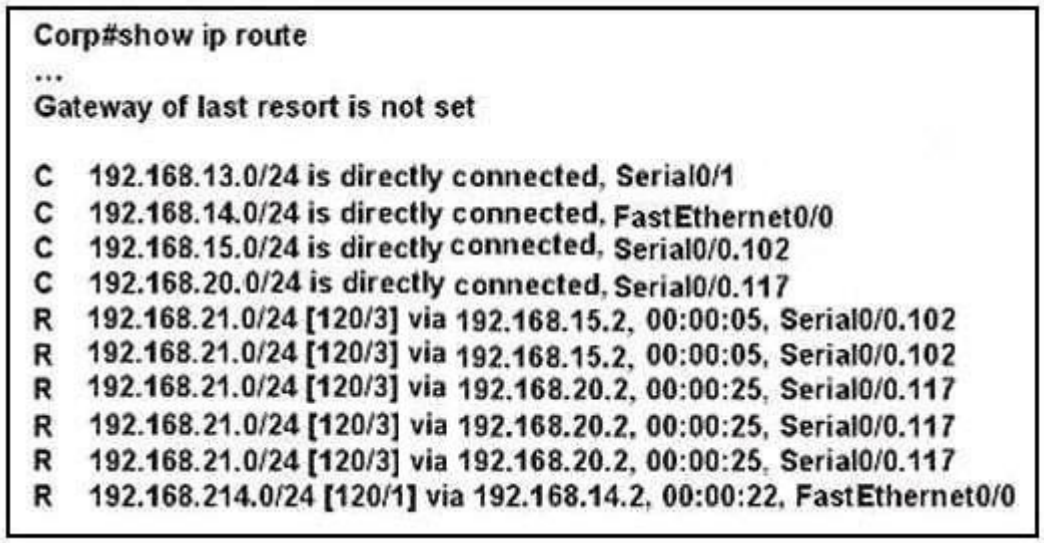
Which default gateway address should be assigned to HostA?

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: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 54
Refer to the output of the corporate router routing table shown in the graphic.



The corporate router receives an IP packet with a source IP address of 192.168.214.20 and a destination address of 192.168.22.3.

What will the router do with this packet?

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

Correct Answer: B
Section: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 55
What is the default administrative distance of the OSPF routing protocol?

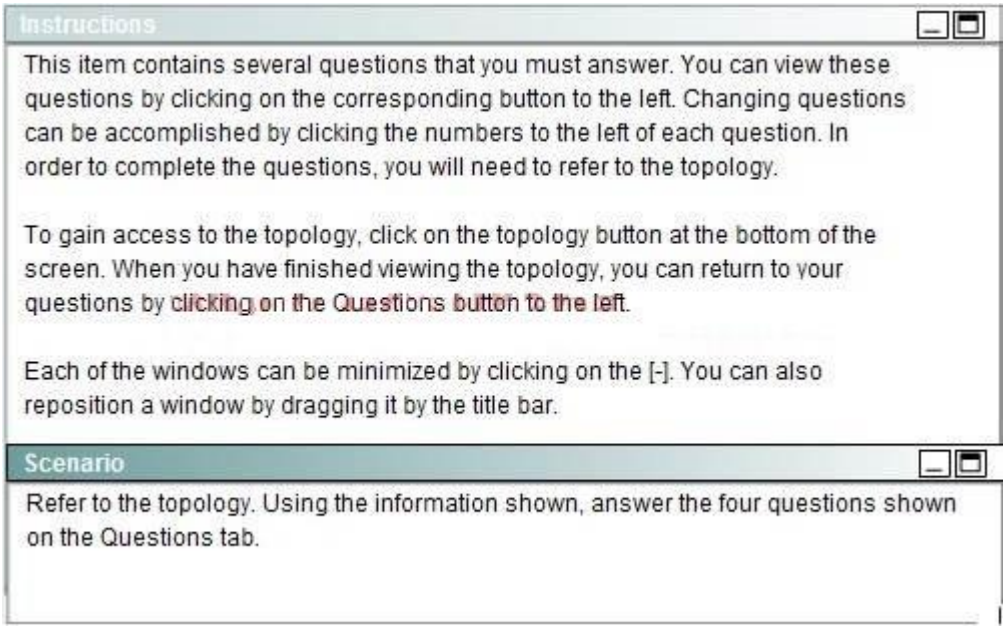
A. 90
B. 100
C. 110

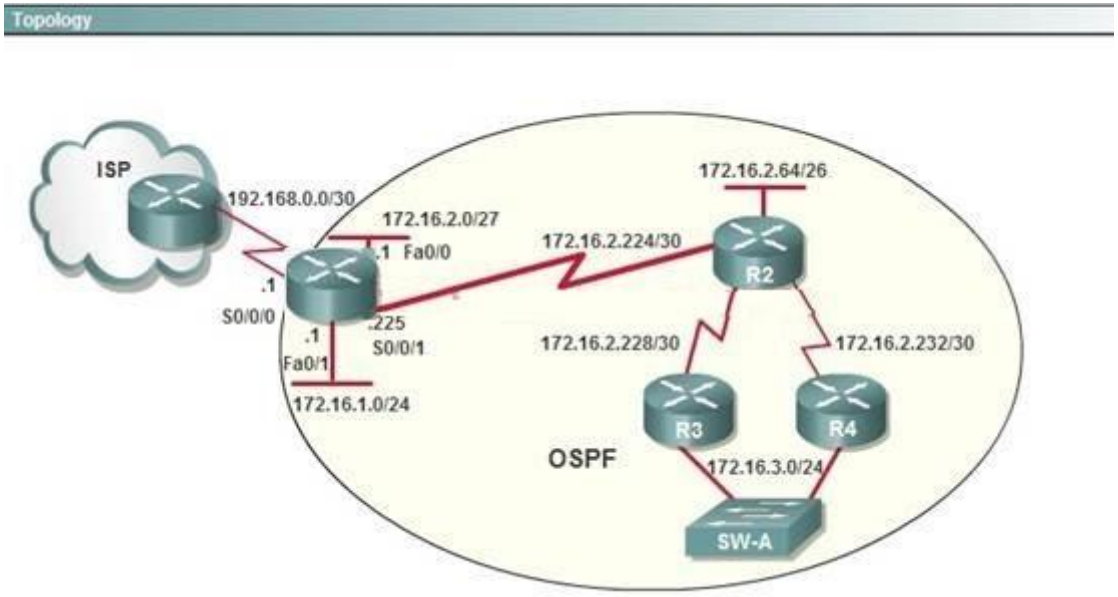
D. 120
E. 130
F. 170

Correct Answer: C
Section: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 56
To allow or prevent load balancing to network 172.16.3.0/24, which of the following commands could be used in R2? (Choose two.)



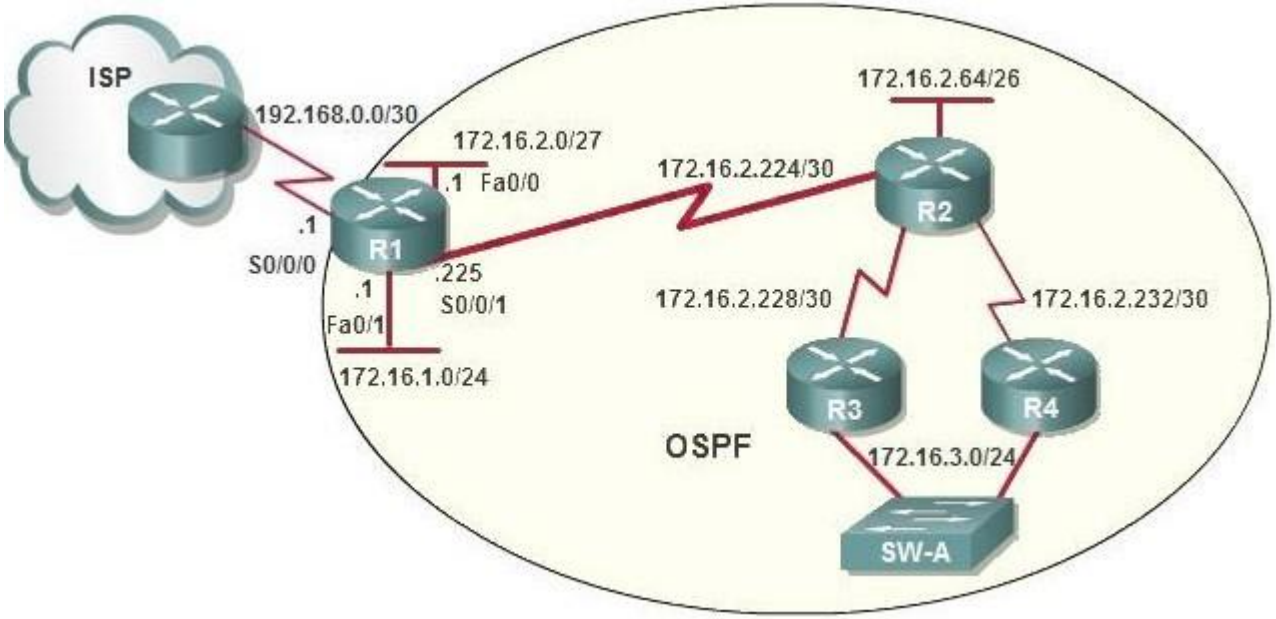


A. R2(config-if)#clock rate
B. R2(config-if)#bandwidth
C. R2(config-if)#ip ospf cost
D. R2(config-if)#ip ospf priority
E. R2(config-router)#distance ospf

Correct Answer: BC
Section: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 57
After the network has converged, what type of messaging, if any, occurs between R3 and R4?

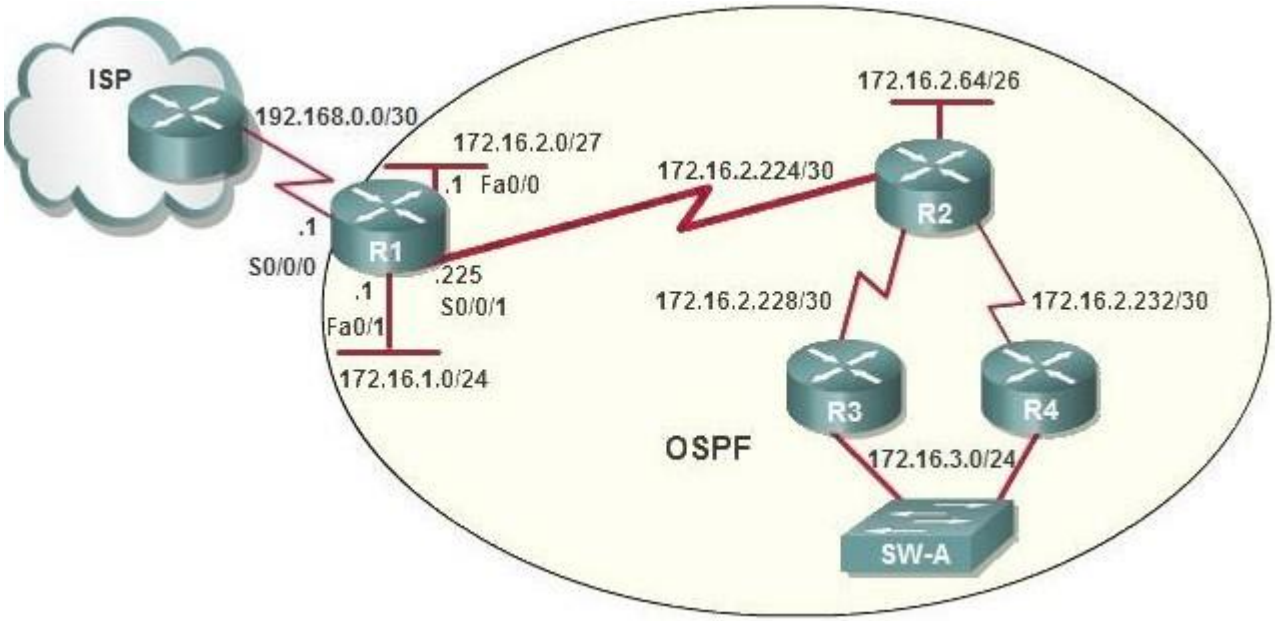


A. No messages are exchanged
B. Hellos are sent every 10 seconds.
C. The full database from each router is sent every 30 seconds.
D. The routing table from each router is sent every 60 seconds.

Correct Answer: B
Section: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 58
OSPF is configured using default classful addressing. With all routers and interfaces operational, how many networks will be in the routing table of R1 that are indicated to be learned by OSPF?

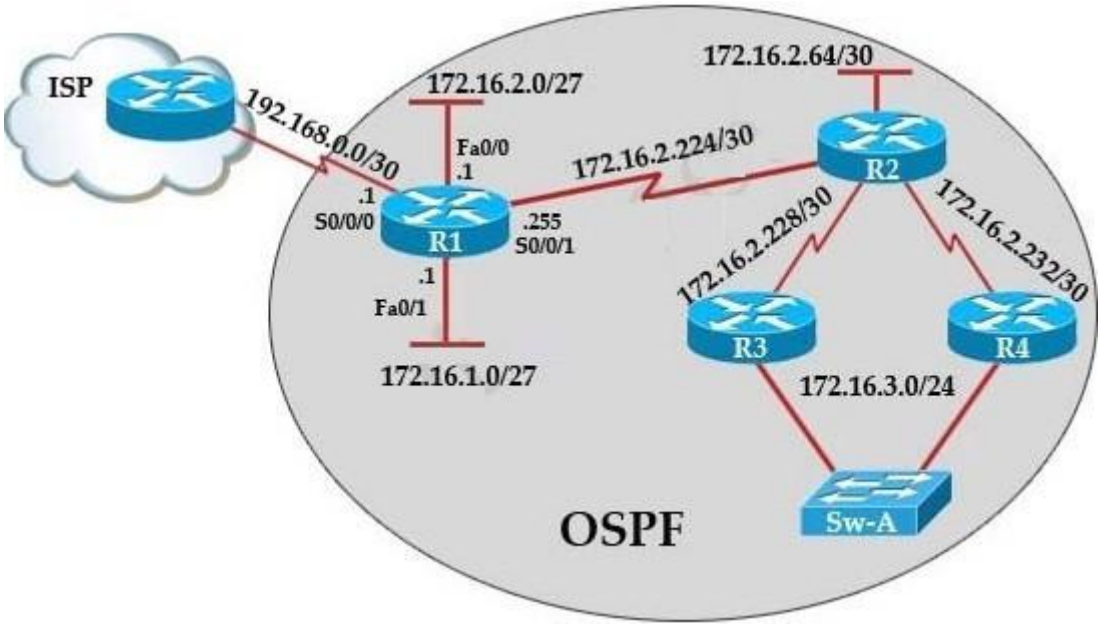


A. 2
B. 3
C. 4
D. 5
E. 6
F. 7

Correct Answer: C
Section: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 59
R1 is configured with the default configuration of OSPF. From the following list of IP addresses configured on R1, which address will the OSPF process select as the router ID?



A. 192.168.0.1
B. 172.16.1.1
C. 172.16.2.1
D. 172.16.2.225

Correct Answer: A
Section: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 60
ROUTER# show ip route

192.168.12.0/24 is variably subnetted, 9 subnets, 3 masks C 192.168.12.64 /28 is directly connected, Loopback1
C 192.168.12.32 /28 is directly connected, Ethernet0
C 192.168.12.48 /28 is directly connected, Loopback0
O 192.168.12.236 /30 [110/128] via 192.168.12.233, 00:35:36, Serial0 C 192.168.12.232 /30 is directly connected, Serial0
O 192.168.12.245 /30 [110/782] via 192.168.12.233, 00:35:36, Serial0 O 192.168.12.240 /30 [110/128] via 192.168.12.233, 00:35:36, Serial0 O

192.168.12.253 /30 [110/782] via 192.168.12.233, 00:35:37, Serial0 O 192.168.12.249 /30 [110/782] via 192.168.12.233, 00:35:37, Serial0 O 192.168.12.240/30 [110/128] via 192.168.12.233, 00:35:36, Serial 0

To what does the 128 refer to in the router output above?

A. OSPF cost
B. OSPF priority
C. OSPF hop count
D. OSPF ID number
E. OSPF administrative distance

Correct Answer: A
Section: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 61
Which of the following describe the process identifier that is used to run OSPF on a router? (Choose two)

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

Correct Answer: AC
Section: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 62
Which address are OSPF hello packets addressed to on point-to-point networks?

A. 224.0.0.5
B. 172.16.0.1
C. 192.168.0.5

D. 223.0.0.1
E. 254.255.255.255

Correct Answer: A
Section: IP Routing Technologies
Explanation

Explanation/Reference:

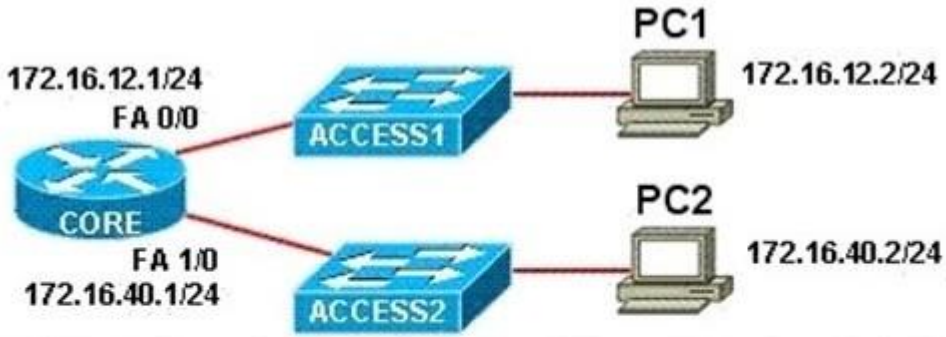
QUESTION 63
Some routers have been configured with default routes. What are some of the advantages of using default routes? (Choose two)

A. They establish routes that will never go down.
B. They keep routing tables small.
C. They require a great deal of CPU power.
D. They allow connectivity to remote networks that are not in the routing table
E. They direct traffic from the internet into corporate networks.

Correct Answer: BD
Section: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 64
Refer to the exhibit.




```
CORE# show arp
Protocol  Address          Age (min)  Hardware Addr   Type   Interface
Internet  172.16.12.1            -   0001.4210.3BA9  ARPA   FastEthernet0/0
Internet  172.16.12.2            0   0010.111A.7AB0  ARPA   FastEthernet0/0
Internet  172.16.40.1            -   00D0.FF59.4A85  ARPA   FastEthernet1/0
Internet  172.16.40.2            0   00E0.B0B7.EAB1  ARPA   FastEthernet1/0
CORE#
```

PC1 pings PC2. What three things will CORE router do with the data that is received from PC1? (Choose three.)

A. The data frames will be forwarded out interface FastEthernet0/1 of CORE router.
B. The data frames will be forwarded out interface FastEthernet1/0 of CORE router.
C. CORE router will replace the destination IP address of the packets with the IP address of PC2.
D. CORE router will replace the MAC address of PC2 in the destination MAC address of the frames.
E. CORE router will put the IP address of the forwarding FastEthernet interface in the place of the source IP address in the packets.
F. CORE router will put the MAC address of the forwarding FastEthernet interface in the place of the source MAC address.

Correct Answer: BDF
Section: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 65
Which three statements are correct about RIP version 2? (Choose three)

A. It uses broadcast for its routing updates.
B. It supports authentication.

C. It is a classless routing protocol.
D. It has a lower default administrative distance then RIP version 1.
E. It has the same maximum hop count as RIP version 1.
F. It does not send the subnet mask any updates.

Correct Answer: BCE
Section: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 66
Refer to the exhibit.

Neighbor_ID	Pri	State	Dead Time	Address	Interface
208.149.23.194	1	Full/DR	00:00:33	190.172.32.10	Ethernet1
208.149.23.60	1	Full/BDR	00:00:33	190.172.32.10	Ethernet0
208.149.23.130	1	Full/DR	00:00:39	190.172.32.10	Ethernet0

Why are two OSPF designated routers identified on Core-Router?

A. Core-Router is connected to more than one multi-access network.
B. The router at 208.149.23.130 is a secondary DR in case the primary fails.
C. Two router IDs have the same OSPF priority and are therefore tied for DR election
D. The DR election is still underway and there are two contenders for the role.

Correct Answer: A
Section: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 67
What is the OSPF default frequency, in seconds, at which a Cisco router sends hello packets on a multi- access network?

A. 10

B. 40
C. 30
D. 20

Correct Answer: A
Section: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 68
Which parameter or parameters are used to calculate OSPF cost in Cisco routers?

A. Bandwidth
B. Bandwidth and Delay
C. Bandwidth, Delay, and MTU
D. Bandwidth, MTU, Reliability, Delay, and Load

Correct Answer: A
Section: IP Routing Technologies
Explanation

Explanation/Reference:

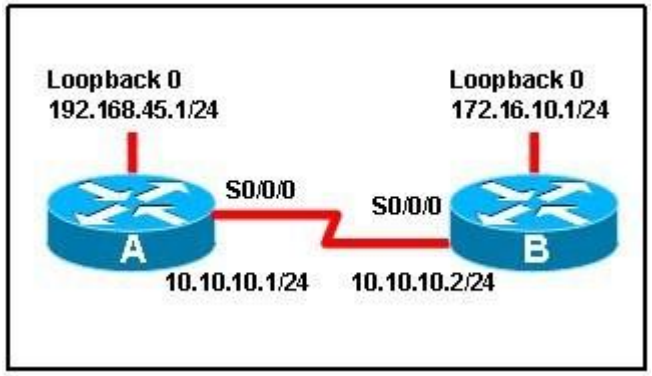
QUESTION 69
Why do large OSPF networks use a hierarchical design? (Choose three.)

A. to decrease latency by increasing bandwidth
B. to reduce routing overhead
C. to speed up convergence
D. to confine network instability to single areas of the network
E. to reduce the complexity of router configuration
F. to lower costs by replacing routers with distribution layer switches

Correct Answer: BCD
Section: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 70
Refer to the exhibit.



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

A. The loopback addresses are on different subnets.
B. The values of the dead timers on the routers are different.
C. Route summarization is enabled on both routers.
D. The process identifier on router A is different than the process identifier on router B.

Correct Answer: B
Section: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 71
A router has learned three possible routes that could be used to reach a destination network. One route is from EIGRP and has a composite metric of 20514560. Another route is from OSPF with a metric of 782. The last is from RIPv2 and has a metric of 4. Which route or routes will the router install in the routing table?

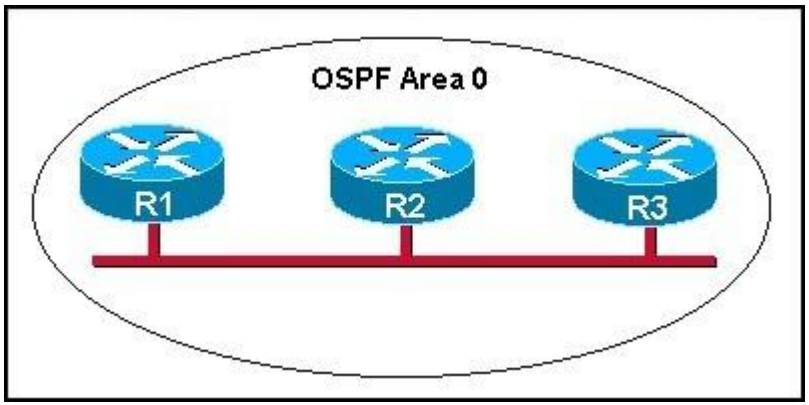
A. the OSPF route
B. the EIGRP route
C. the RIPv2 route

D. all three routes
E. the OSPF and RIPv2 routes

Correct Answer: B
Section: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 72
Refer to the graphic.



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

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

Correct Answer: DF
Section: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 73
Which command is used to display the collection of OSPF link states?

A. show ip ospf link-state
B. show ip ospf lsa database
C. show ip ospf neighbors
D. show ip ospf database

Correct Answer: D
Section: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 74
Refer to the exhibit.

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 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.)

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

Correct Answer: BCD
Section: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 75
Which statements describe the routing protocol OSPF? (Choose three.)

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

Correct Answer: ACE
Section: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 76
What is the default administrative distance of OSPF?

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

Correct Answer: C
Section: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 77
Refer to the exhibit.

```
RouterD# show ip interface brief
Interface        IP-Address     OK?  Method  Status  Protocol
FastEthernet0/0  192.168.5.3    YES  manual  up      up
FastEthernet0/1  10.1.1.2       YES  manual  up      up
Loopback0        172.16.5.1     YES  NVRAM   up      up
Loopback1        10.154.154.1   YES  NVRAM   up      up
```

Given the output for this command, if the router ID has not been manually set, what router ID will OSPF use for this router?

A. 10.1.1.2
B. 10.154.154.1
C. 172.16.5.1
D. 192.168.5.3

Correct Answer: C
Section: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 78
Which two statements describe the process identifier that is used in the command to configure OSPF on a router? (Choose two.)
Router(config)# router ospf 1

A. All OSPF routers in an area must have the same process ID.
B. Only one process number can be used on the same router.
C. Different process identifiers can be used to run multiple OSPF processes
D. The process number can be any number from 1 to 65,535.

E. Hello packets are sent to each neighbor to determine the processor identifier.

Correct Answer: CD
Section: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 79
Which commands are required to properly configure a router to run OSPF and to add network 192.168.16.0/24 to OSPF area 0? (Choose two.)

A. Router(config)# router ospf 0
B. Router(config)# router ospf 1
C. Router(config)# router ospf area 0
D. Router(config-router)# network 192.168.16.0 0.0.0.255 0
E. Router(config-router)# network 192.168.16.0 0.0.0.255 area 0
F. Router(config-router)# network 192.168.16.0 255.255.255.0 area 0

Correct Answer: BE
Section: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 80
What is the default maximum number of equal-cost paths that can be placed into the routing table of a Cisco OSPF router?

A. 2
B. 8
C. 16
D. unlimited

Correct Answer: B
Section: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 81
A network administrator is trying to add a new router into an established OSPF network. The networks attached to the new router do not appear in the routing tables of the other OSPF routers. Given the information in the partial configuration shown below, what configuration error is causing this problem?

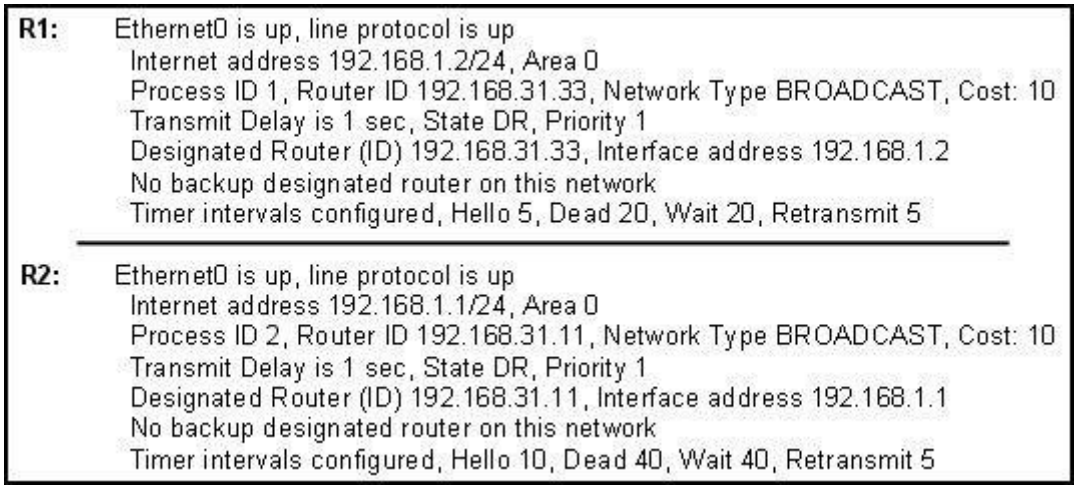
Router(config)# router ospf 1
Router(config-router)# network 10.0.0.0 255.0.0.0 area 0

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

Correct Answer: C
Section: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 82
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.



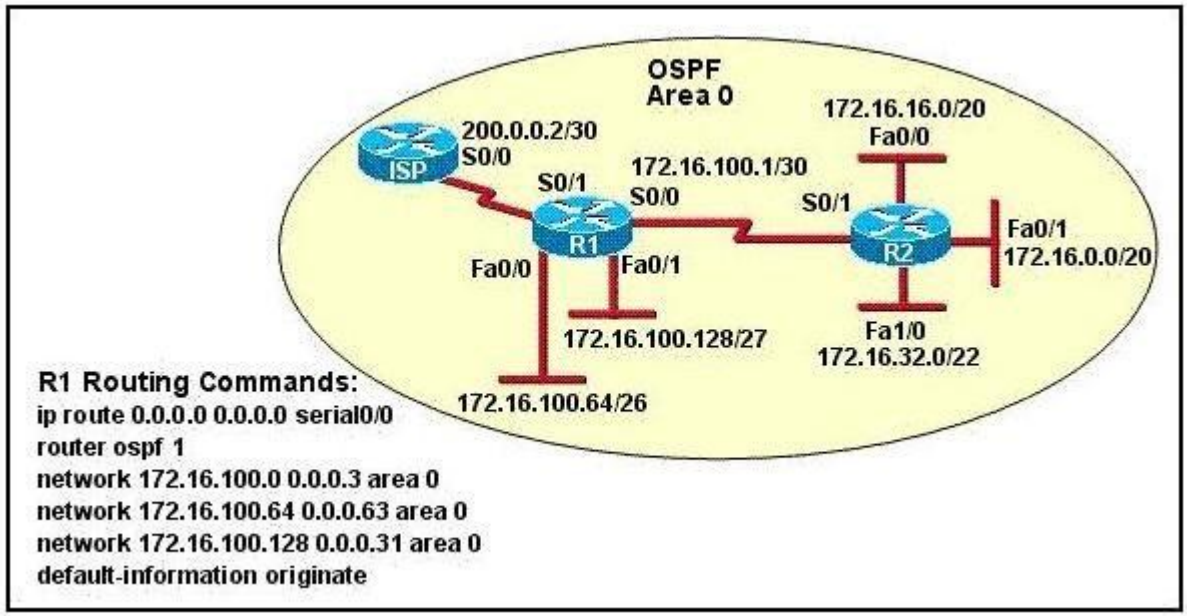
The graphic shows the output of the show ip ospf interface e0 command for routers R1 and R2. Based on the information in the graphic, what is the cause of this problem?

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 Answer: D
Section: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 83
Refer to the exhibit.



Assume that all router interfaces are operational and correctly configured. In addition, assume that OSPF has been correctly configured on router R2. How will the default route configured on R1 affect the operation of R2?

A. Any packet destined for a network that is not directly connected to router R2 will be dropped immediately.
B. Any packet destined for a network that is not referenced in the routing table of router R2 will be directed to R1. R1 will then send that packet back to R2 and a routing loop will occur.
C. Any packet destined for a network that is not directly connected to router R1 will be dropped.
D. The networks directly connected to router R2 will not be able to communicate with the 172.16.100.0, 172.16.100.128, and 172.16.100.64 subnetworks.
E. Any packet destined for a network that is not directly connected to router R2 will be dropped immediately because of the lack of a gateway on R1.

Correct Answer: B
Section: IP Routing Technologies
Explanation

Explanation/Reference:

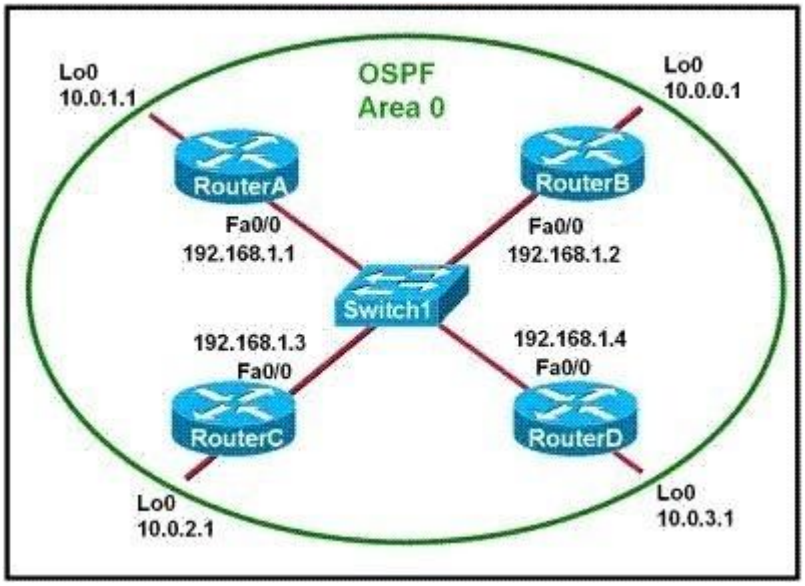
QUESTION 84
OSPF routing uses the concept of areas. What are the characteristics of OSPF areas? (Choose Three.)

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

Correct Answer: BCE
Section: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 85
Refer to the exhibit.



Which two statements are true about the loopback address that is configured on RouterB? (Choose two.)

A. It ensures that data will be forwarded by RouterB.

B. It provides stability for the OSPF process on RouterB.
C. It specifies that the router ID for RouterB should be 10.0.0.1.
D. It decreases the metric for routes that are advertised from RouterB.
E. It indicates that RouterB should be elected the DR for the LAN.

Correct Answer: BC
Section: IP Routing Technologies
Explanation

Explanation/Reference:

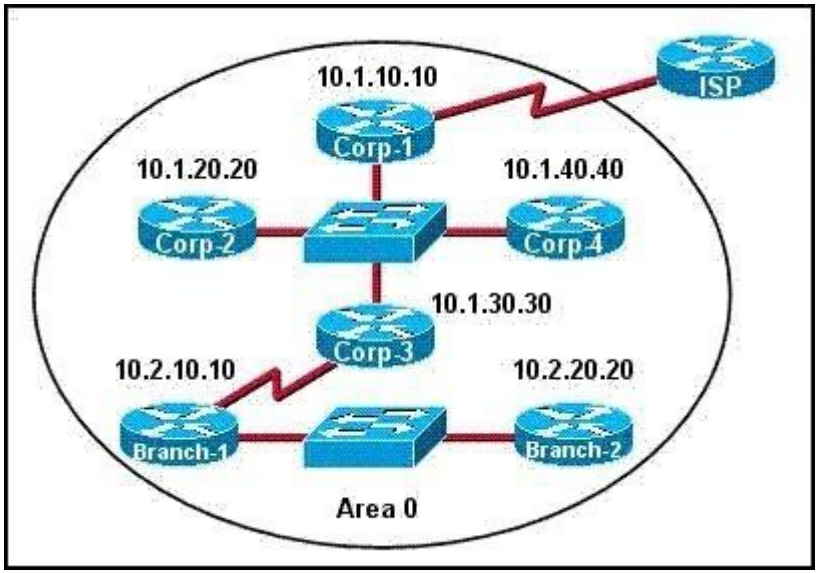
QUESTION 86
Which characteristics are representative of a link-state routing protocol? (Choose three.)

A. provides common view of entire topology
B. exchanges routing tables with neighbors
C. calculates shortest path
D. utilizes event-triggered updates
E. utilizes frequent periodic updates

Correct Answer: ACD
Section: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 87
The internetwork infrastructure of company XYZ consists of a single OSPF area as shown in the graphic. There is concern that a lack of router resources is impeding internetwork performance. As part of examining the router resources, the OSPF DRs need to be known. All the router OSPF priorities are at the default and the router IDs are shown with each router.



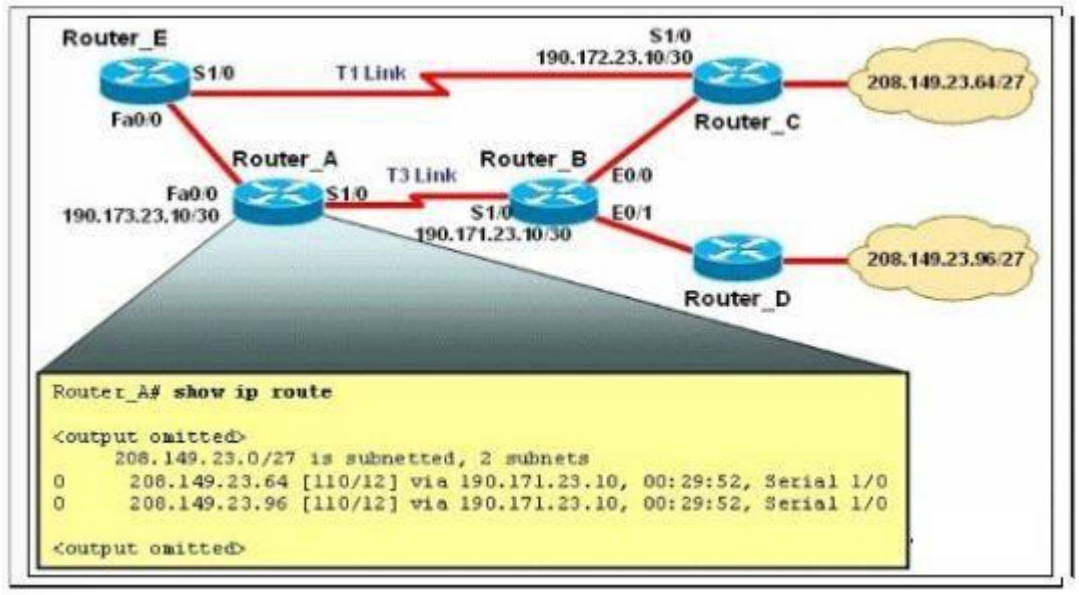
Which routers are likely to have been elected as DR? (Choose two.)

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

Correct Answer: DF
Section: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 88
Refer to the exhibit.



The network is converged.After link-state advertisements are received from Router_A, what information will Router_E contain in its routing table for the subnets 208.149.23.64 and 208.149.23.96?

A. 208.149.23.64[110/13] via 190.173.23.10, 00:00:07, FastEthemet0/0208.149.23.96[110/13] via 190.173.23.10, 00:00:16, FastEthemet0/0
B. 208.149.23.64[110/1] via 190.172.23.10, 00:00:07, Serial1/0208.149.23.96[110/3] via 190.173.23.10, 00:00:16, FastEthemet0/0
C. 208.149.23.64[110/13] via 190.173.23.10, 00:00:07, Serial1/0208.149.23.96[110/13] via 190.173.23.10, 00:00:16, Serial1/0208.149.23.96[110/13] via 190.173.23.10, 00:00:16, FastEthemet0/0
D. 208.149.23.64[110/3] via 190.172.23.10, 00:00:07, Serial1/0208.149.23.96[110/3] via 190.173.23.10, 00:00:16, Serial1/0

Correct Answer: A
Section: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 89
What information can be used by a router running a link-state protocol to build and maintain its topological database? (Choose two.)

A. hello packets

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

Correct Answer: AC
Section: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 90
What are two benefits of using a single OSPF area network design? (Choose two.)

A. It is less CPU intensive for routers in the single area.
B. It reduces the types of LSAs that are generated.
C. It removes the need for virtual links.
D. It increases LSA response times.
E. It reduces the number of required OSPF neighbor adjacencies.

Correct Answer: BC
Section: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 91
What command sequence will configure a router to run OSPF and add network 10.1.1.0 /24 to area 0?

A. router ospf area 0network 10.1.1.0 255.255.255.0 area 0
B. router ospfnetwork 10.1.1.0 0.0.0.255
C. router ospf 1network 10.1.1.0 0.0.0.255 area 0
D. router ospf area 0network 10.1.1.0 0.0.0.255 area 0
E. router ospfnetwork 10.1.1.0 255.255.255.0 area 0
F. router ospf 1network 10.1.1.0 0.0.0.255

Correct Answer: C
Section: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 92
Refer to the exhibit.

```
Cisco#show ip interface brief
Interface              IP-Address      OK? Method Status                Protocol

FastEthernet0/0        192.168.1.1     YES manual up                    up

FastEthernet0/1        172.16.1.1      YES manual up                    up

Loopback0              1.1.1.1         YES manual up                    up

Loopback1              2.2.2.2         YES manual up                    up

Vlan1                  unassigned      YES unset  administratively down down
```

If the router Cisco returns the given output and has not had its router ID set manually, what value will OSPF use as its router ID?

A. 192.168.1.1
B. 172.16.1.1
C. 1.1.1.1
D. 2.2.2.2

Correct Answer: D
Section: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 93
What OSPF command, when configured, will include all interfaces into area 0?

A. network 0.0.0.0 255.255.255.255 area 0
B. network 0.0.0.0 0.0.0.0 area 0
C. network 255.255.255.255 0.0.0.0 area 0
D. network all-interfaces area 0

Correct Answer: A
Section: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 94
Which statement describes the process ID that is used to run OSPF on a router?

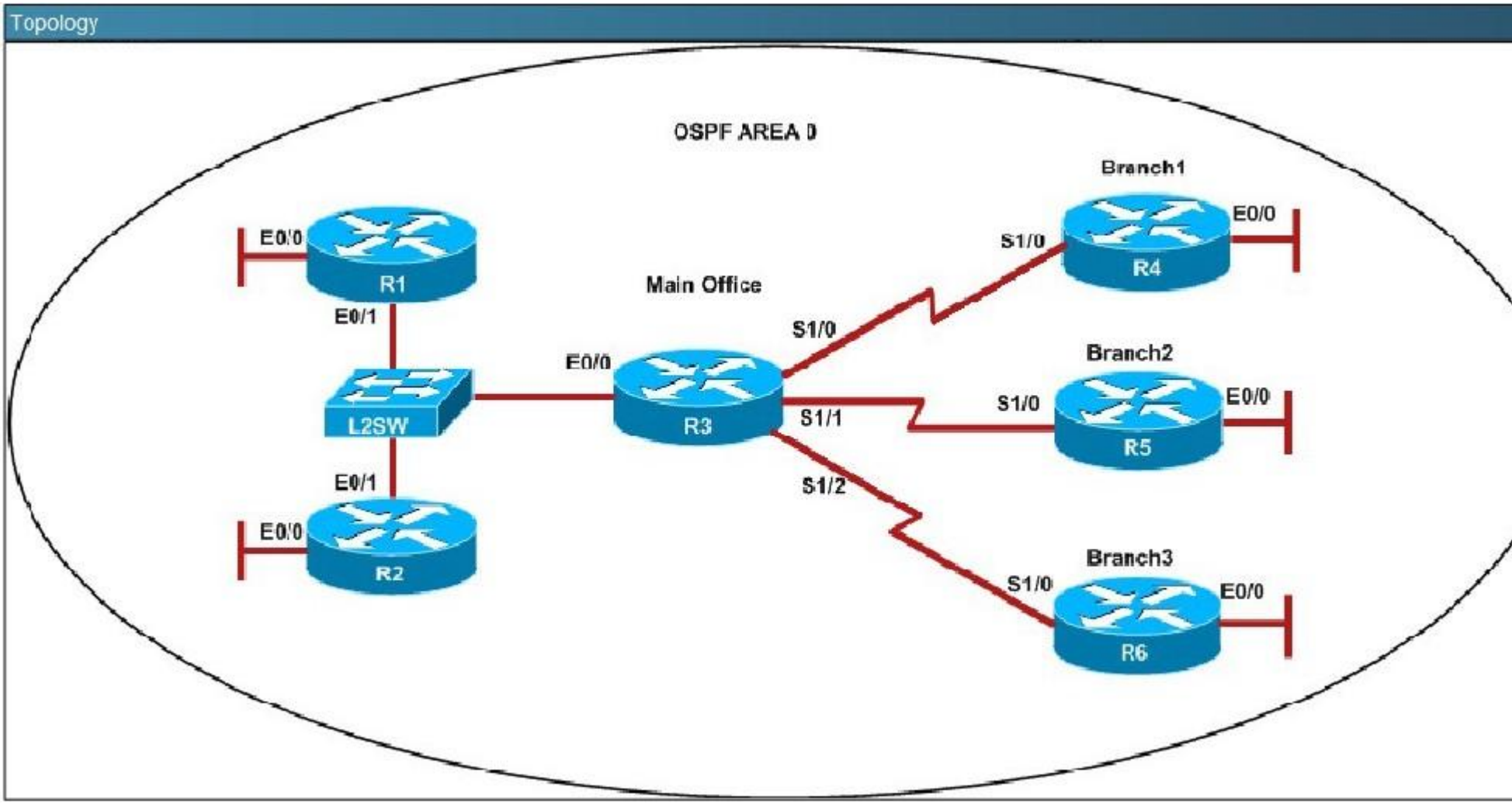
A. It is globally significant and is used to represent the AS number.
B. It is locally significant and is used to identify an instance of the OSPF database.
C. It is globally significant and is used to identify OSPF stub areas.
D. It is locally significant and must be the same throughout an area.

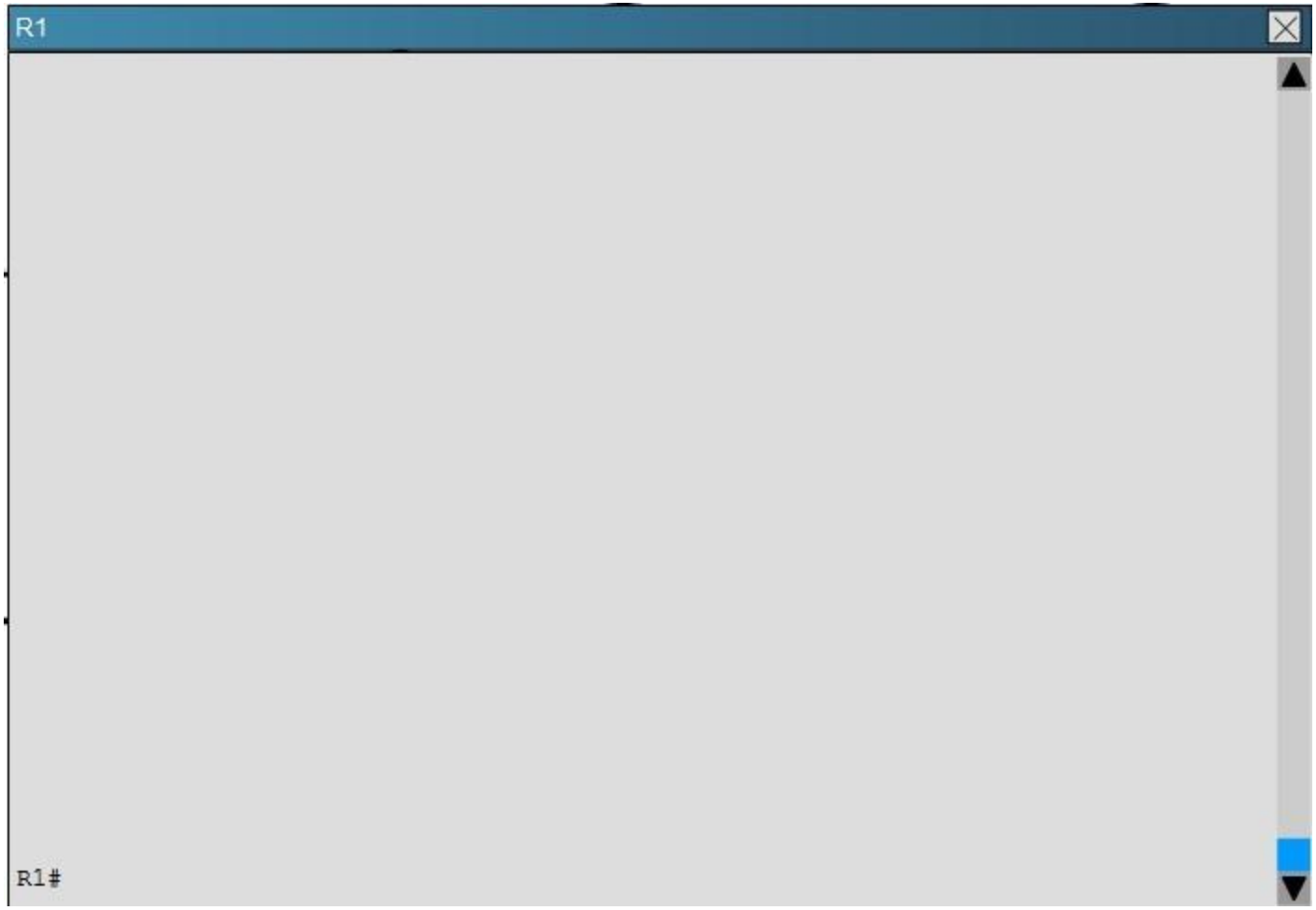
Correct Answer: B
Section: IP Routing Technologies
Explanation

Explanation/Reference:

QUESTION 95
Scenario
Refer to the topology. Your company has decided to connect the main office with three other remote branch offices using point-to-point serial links. You are required to troubleshoot and resolve OSPF neighbor adjacency issues between the main office and the routers located in the remote branch offices.

Topology





An OSPF neighbor adjacency is not formed between R3 in the main office and R5 in the Branch2 office. What is causing the problem?

A. There is an area ID mismatch.
B. There is a PPP authentication issue; a password mismatch.
C. There is an OSPF hello and dead interval mismatch.
D. There is a missing network command in the OSPF process on R5.

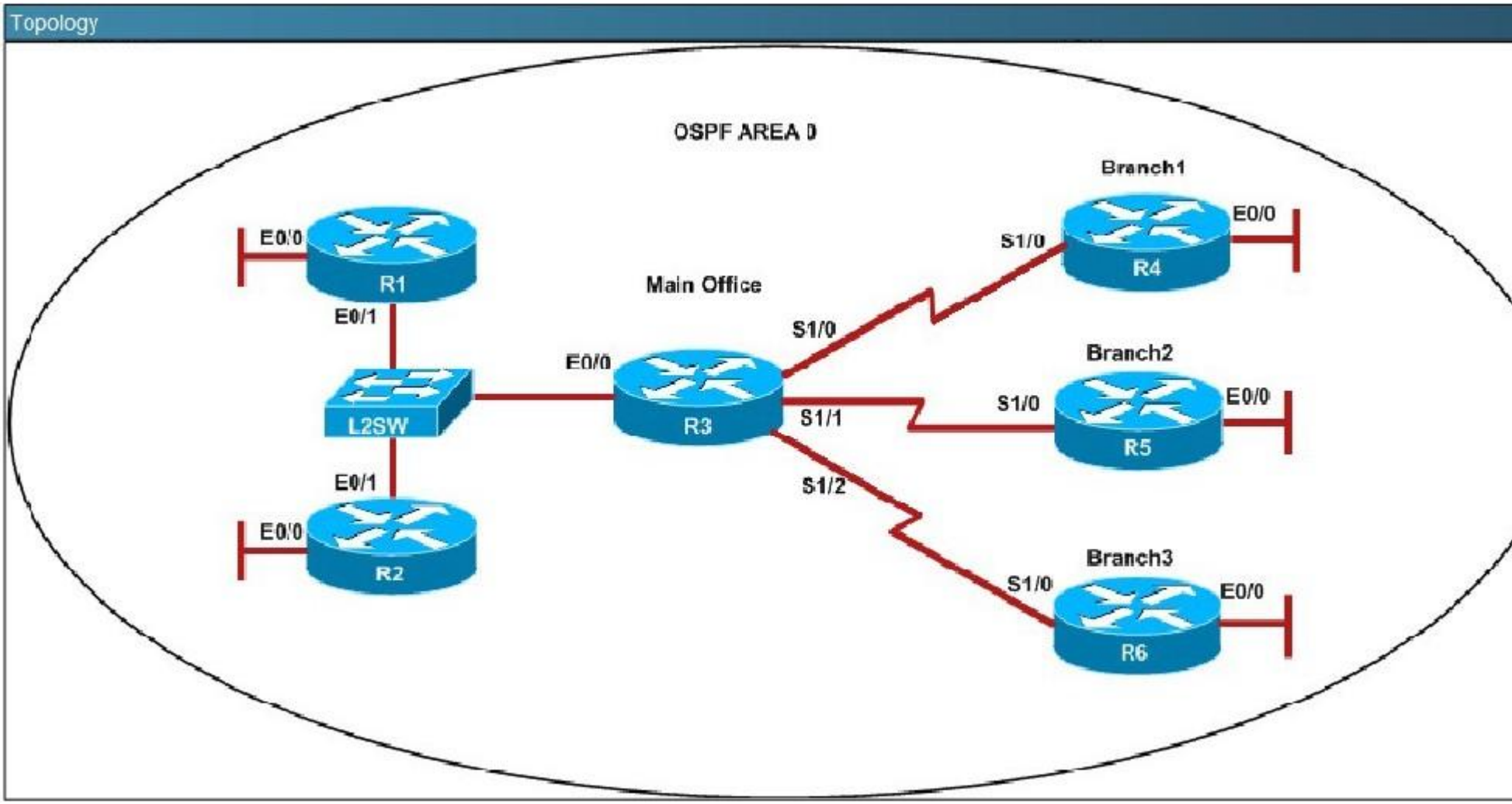
Correct Answer: C
Section: IP Routing Technologies

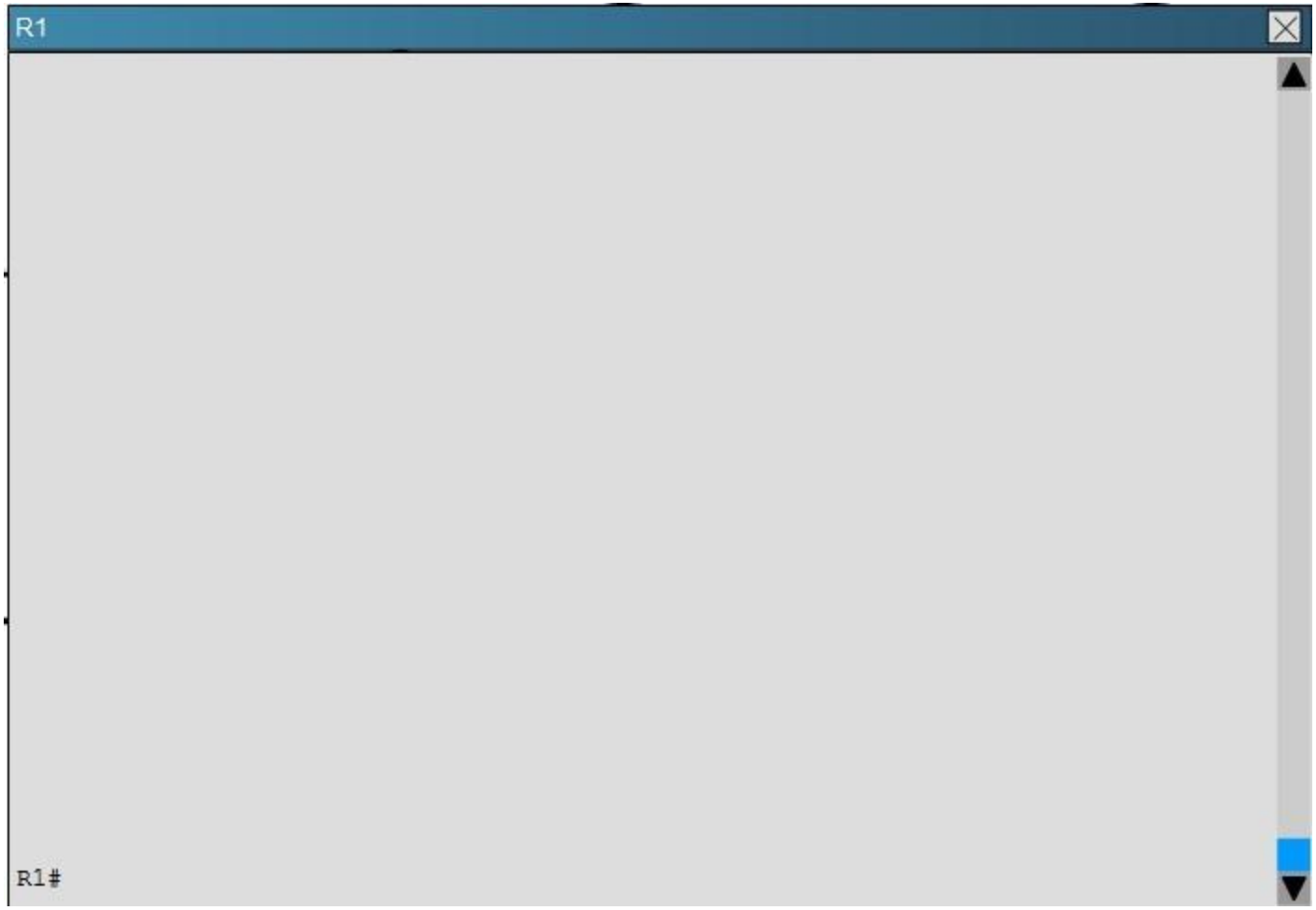
Explanation

Explanation/Reference:

QUESTION 96
Scenario
Refer to the topology. Your company has decided to connect the main office with three other remote branch offices using point-to-point serial links. You are required to troubleshoot and resolve OSPF neighbor adjacency issues between the main office and the routers located in the remote branch offices.

Topology





R1 does not form an OSPF neighbor adjacency with R2. Which option would fix the issue?

A. R1 ethernetO/1 is shutdown. Configure no shutdown command.
B. R1 ethernetO/1 configured with a non-default OSPF hello interval of 25: configure no ip ospf hello- interval 25
C. R2 ethernetO/1 and R3 ethernetO/O are configured with a non-default OSPF hello interval of 25; configure no ip ospf hello-interval 25
D. Enable OSPF for R1 ethernetO/1; configure ip ospf 1 area 0 command under ethernetO/1

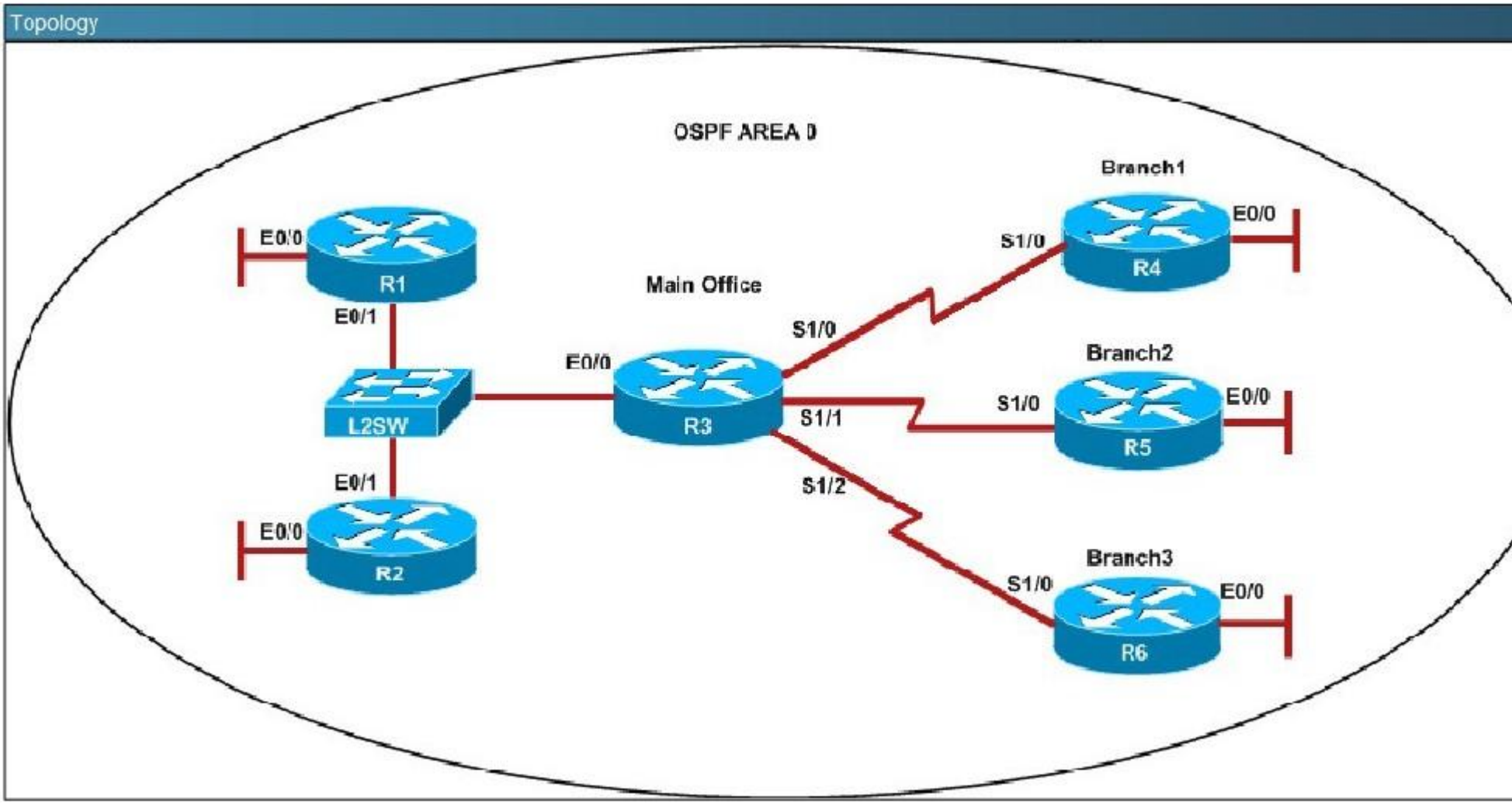
Correct Answer: B
Section: IP Routing Technologies

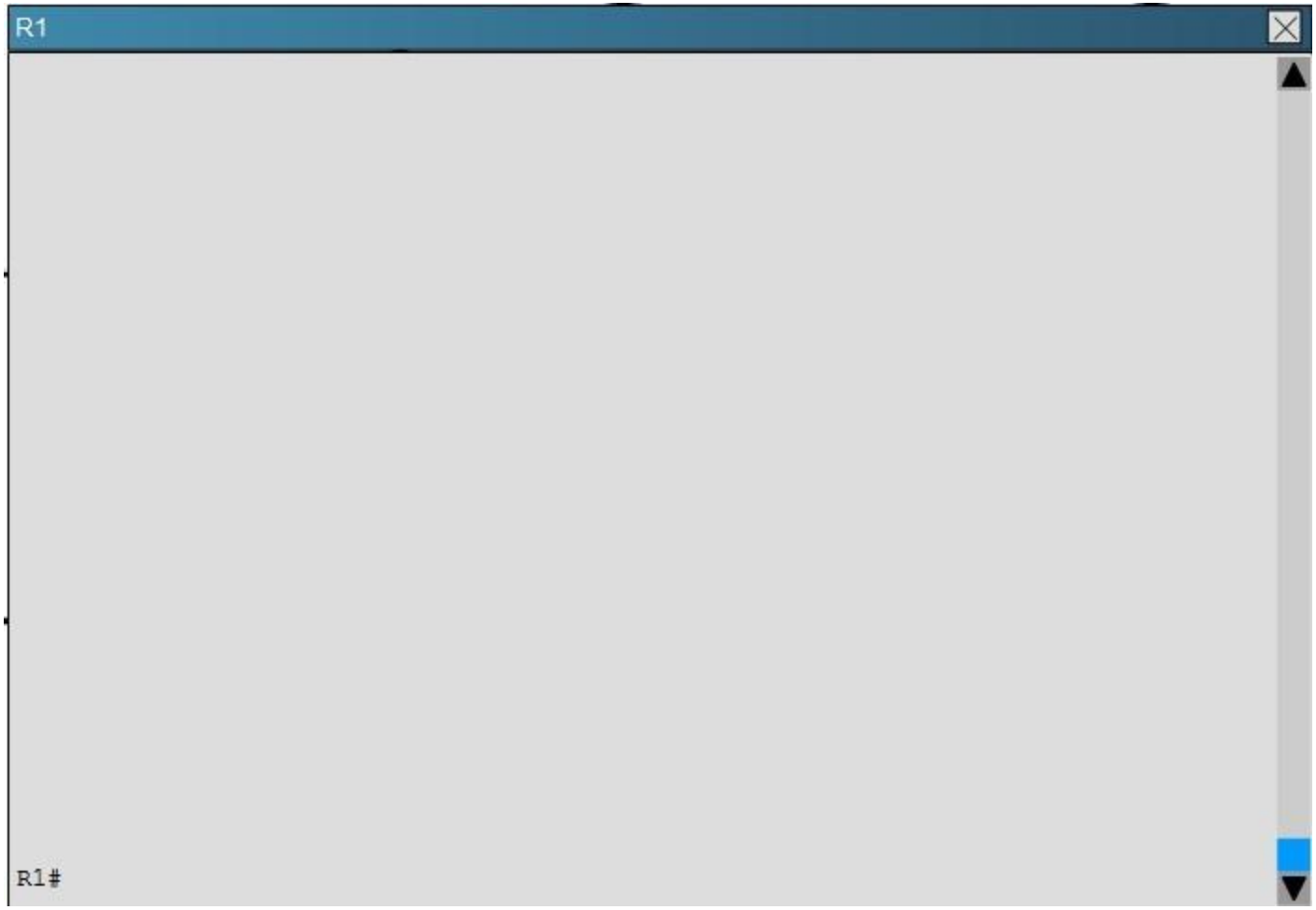
Explanation

Explanation/Reference:

QUESTION 97
Scenario
Refer to the topology. Your company has decided to connect the main office with three other remote branch offices using point-to-point serial links. You are required to troubleshoot and resolve OSPF neighbor adjacency issues between the main office and the routers located in the remote branch offices.

Topology





An OSPF neighbor adjacency is not formed between R3 in the main office and R6 in the Branch3 office. What is causing the problem?

A. There is an area ID mismatch.
B. There is a PPP authentication issue; the username is not configured on R3 and R6.
C. There is an OSPF hello and dead interval mismatch.
D. The R3 router ID is configured on R6.

Correct Answer: D
Section: IP Routing Technologies

Explanation

Explanation/Reference:

QUESTION 98
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: IP Services
Explanation

Explanation/Reference:

QUESTION 99
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: IP Services
Explanation

Explanation/Reference:

QUESTION 100
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: IP Services
Explanation

Explanation/Reference:

QUESTION 101
When configuring NAT, the Internet interface is considered to be what?

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

Correct Answer: D
Section: IP Services
Explanation

Explanation/Reference:

QUESTION 102
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: IP Services
Explanation

Explanation/Reference:

QUESTION 103
The network administrator is using a Windows PC application that is called putty.exe for remote communication to a switch for network troubleshooting. Which two protocols could be used during this communication? (Choose two.)

A. SNMP
B. HTTP
C. Telnet
D. RMON
E. SSH

Correct Answer: CE
Section: IP Services
Explanation

Explanation/Reference:

QUESTION 104
Which of the following statements are TRUE regarding Cisco access lists? (Choose two.)

A. In an inbound access list, packets are filtered as they enter an interface.
B. In an inbound access list, packets are filtered before they exit an interface.
C. Extended access lists are used to filter protocol-specific packets.
D. You must specify a deny statement at the end of each access list to filter unwanted traffic.
E. When a line is added to an existing access list, it is inserted at the beginning of the access list.

Correct Answer: AC
Section: IP Services
Explanation

Explanation/Reference:

QUESTION 105
How many addresses will be available for dynamic NAT translation when a router is configured with the following commands?

Router(config)#ip nat pool TAME 209.165.201.23 209.165.201.30 netmask 255.255.255.224 Router(config)#ip nat inside source list 9 pool TAME

A. 7
B. 8

C. 9
D. 10
E. 24
F. 32

Correct Answer: B
Section: IP Services
Explanation

Explanation/Reference:

QUESTION 106
Refer to the exhibit.

```
Router# configure terminal
Router(config)# hostname Router1
Router1(config)# enable secret sanfran
Router1(config)# enable password cisco
Router1(config)# line vty 0 4
Router1(config-line)# password sanjose
Router1(config-line)#
```

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: Network Device Security
Explanation

Explanation/Reference:

QUESTION 107
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: Network Device Security
Explanation

Explanation/Reference:

QUESTION 108
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: Network Device Security
Explanation

Explanation/Reference:

QUESTION 109
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: Network Device Security
Explanation

Explanation/Reference:

QUESTION 110
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: Network Device Security
Explanation

Explanation/Reference:

QUESTION 111
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: Network Device Security
Explanation

Explanation/Reference:

QUESTION 112
What should be part of a comprehensive network security plan?

A. Allow users to develop their own approach to network security.
B. Physically secure network equipment from potential access by unauthorized individuals.
C. Encourage users to use personal information in their passwords to minimize the likelihood of passwords being forgotten.
D. Delay deployment of software patches and updates until their effect on end-user equipment is well known and widely reported.
E. Minimize network overhead by deactivating automatic antivirus client updates.

Correct Answer: B
Section: Network Device Security
Explanation

Explanation/Reference:

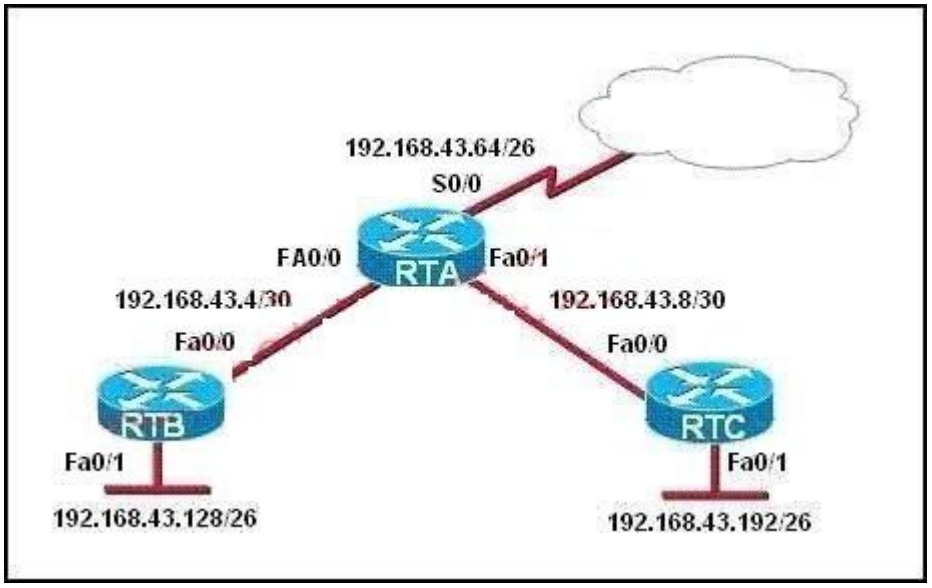
QUESTION 113
What are two recommended ways of protecting network device configuration files from outside network security threats? (Choose two.)

A. Allow unrestricted access to the console or VTY ports.
B. Use a firewall to restrict access from the outside to the network devices.
C. Always use Telnet to access the device command line because its data is automatically encrypted.
D. Use SSH or another encrypted and authenticated transport to access device configurations.
E. Prevent the loss of passwords by disabling password encryption.

Correct Answer: BD
Section: Network Device Security
Explanation

Explanation/Reference:

QUESTION 114
Refer to the exhibit.



For security reasons, information about RTA, including platform and IP addresses, should not be accessible from the Internet. This information should, however, be accessible to devices on the internal networks of RTA.

Which command or series of commands will accomplish these objectives?

A. RTA(config)#no cdp run
B. RTA(config)#no cdp enable
C. RTA(config)#interface s0/0RTA(config-if)#no cdp run
D. RTA(config)#interface s0/0RTA(config-if)#no cdp enable

Correct Answer: D
Section: Network Device Security

Explanation

Explanation/Reference:

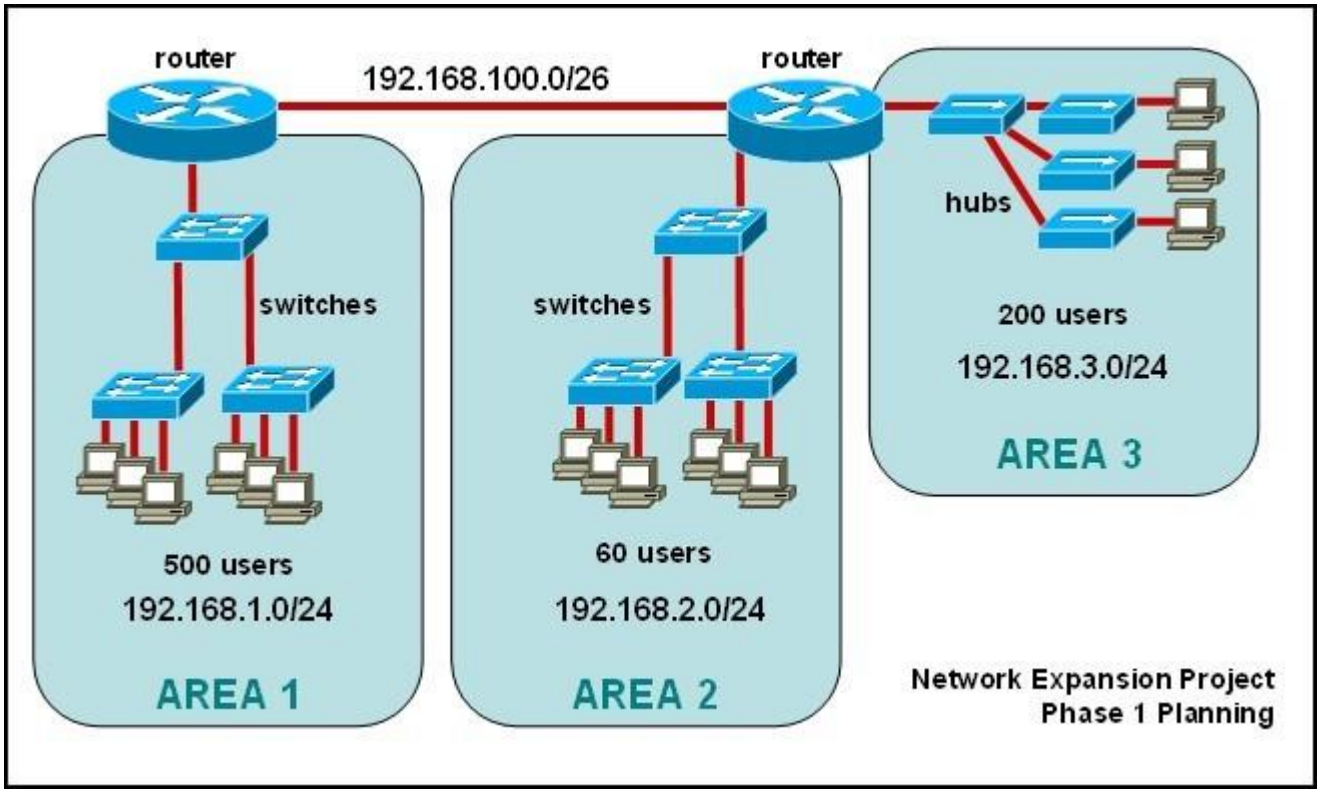
QUESTION 115
From which of the following attacks can Message Authentication Code (MAC) shield your network?

A. DoS
B. DDoS
C. spoofing
D. SYN floods

Correct Answer: C
Section: Network Device Security
Explanation

Explanation/Reference:

QUESTION 116
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.)

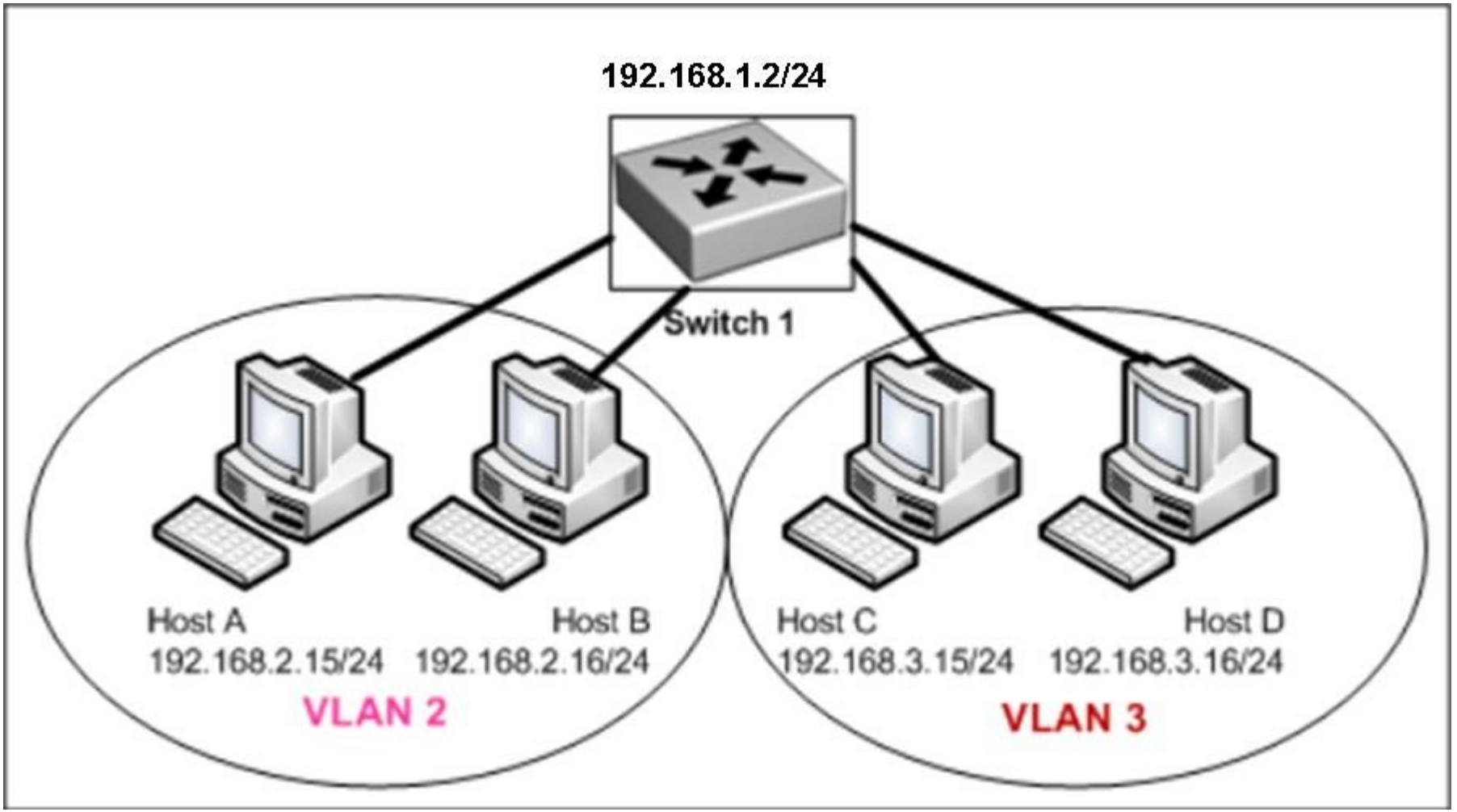
A. The AREA 1 IP address space is inadequate for the number of users.
B. The AREA 3 IP address space is inadequate for the number of users.
C. AREA 2 could use a mask of /25 to conserve IP address space.
D. The network address space that is provided requires a single network-wide mask.
E. The router-to-router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

Correct Answer: ACE

Section: Troubleshooting
Explanation

Explanation/Reference:

QUESTION 117
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: Troubleshooting
Explanation

Explanation/Reference:

QUESTION 118
Refer to the exhibit.

```
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
```

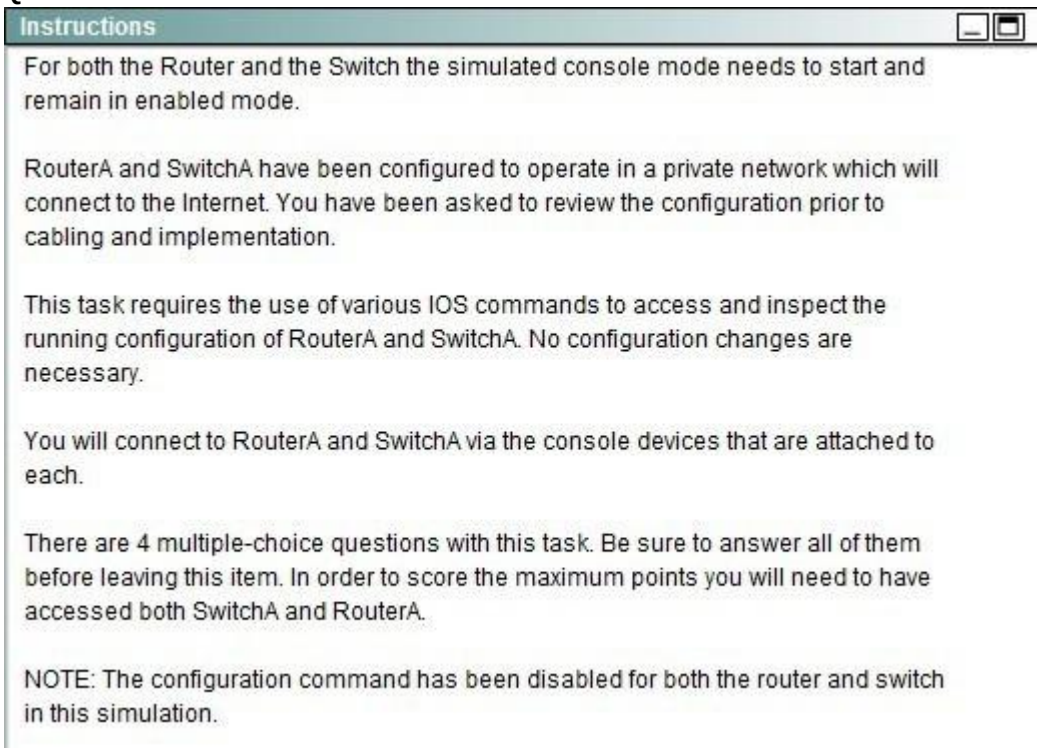
A network administrator has configured a Catalyst 2950 switch for remote management by pasting into the console the configuration commands that are shown in the exhibit. However, a Telnet session cannot be successfully established from a remote host. What should be done to fix this problem?

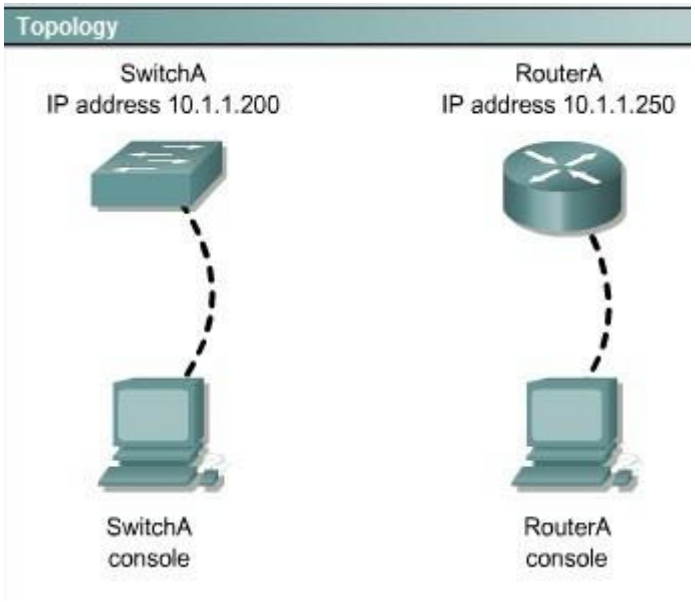
A. Change the first line to interface fastethernet 0/1.
B. Change the first line to interface vlan 0/1.
C. Change the fifth line to ip default-gateway 192.168.17.241.
D. Change the fifth line to ip route 0.0.0.0 0.0.0.0 192.168.17.1.
E. Change the sixth line to line con 0.

Correct Answer: C
Section: Troubleshooting
Explanation

Explanation/Reference:

QUESTION 119





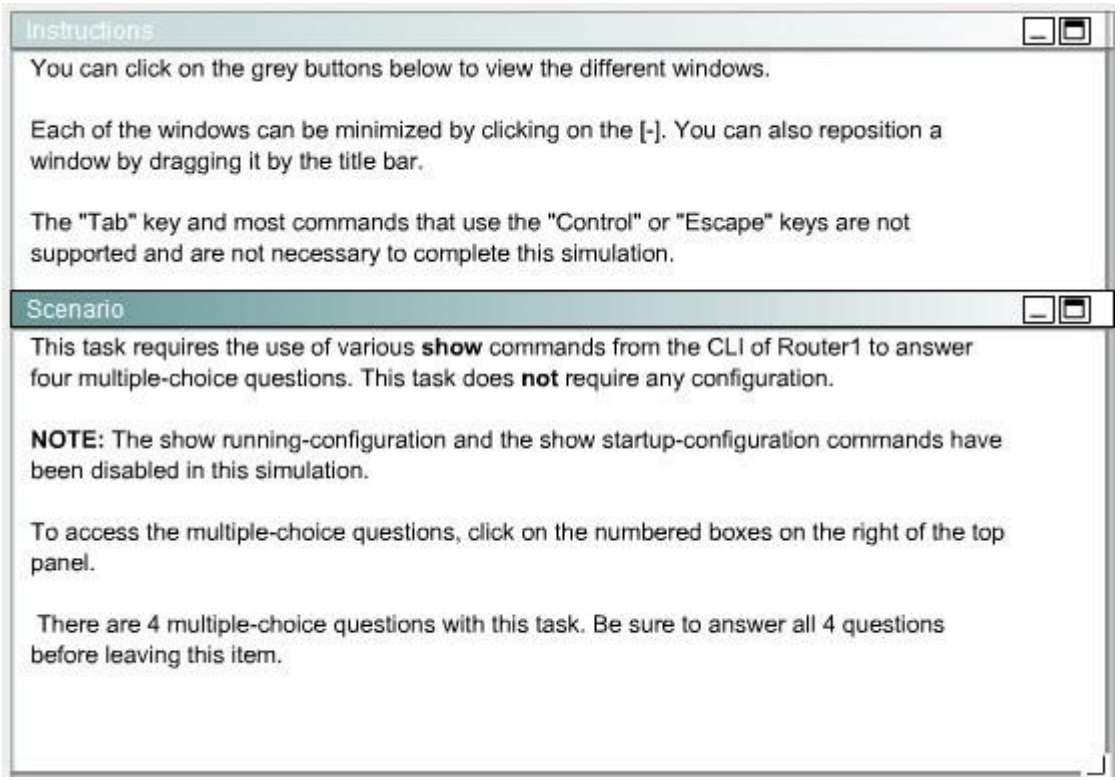
Select three options which are security issues with the current configuration of SwitchA. (Choose three.)

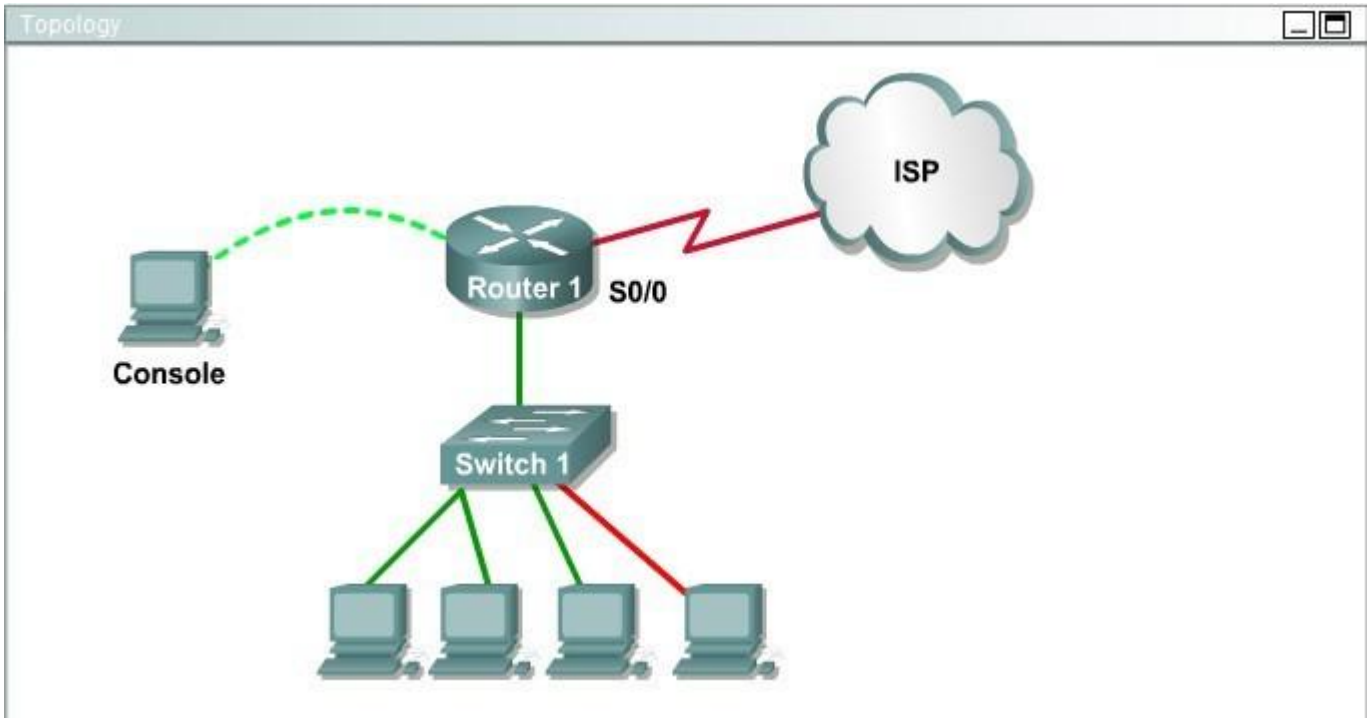
A. Privilege mode is protected with an unencrypted password
B. Inappropriate wording in banner message
C. Virtual terminal lines are protected only by a password requirement
D. Both the username and password are weak
E. Telnet connections can be used to remotely manage the switch
F. Cisco user will be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

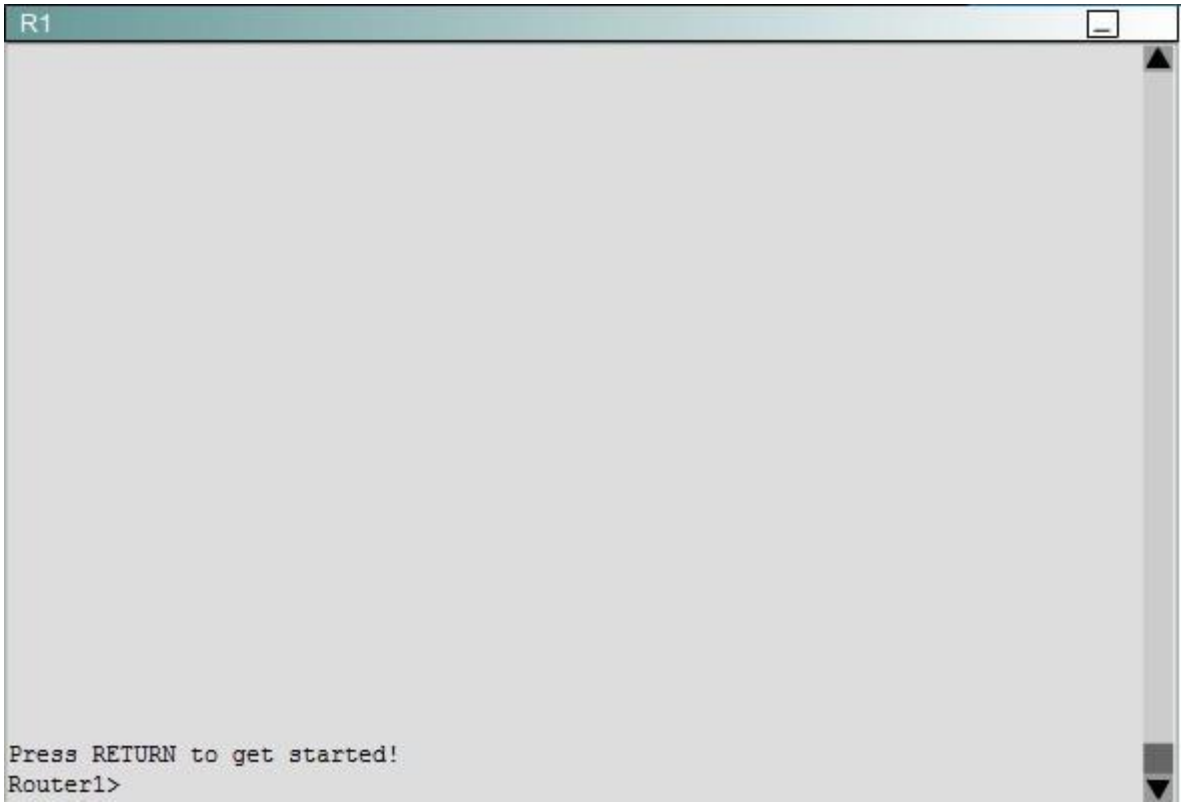
Correct Answer: ABD
Section: Troubleshooting
Explanation

Explanation/Reference:

QUESTION 120


Instructions
You can click on the grey buttons below to view the different windows.
Each of the windows can be minimized by clicking on the [-]. You can also reposition a window by dragging it by the title bar.
The "Tab" key and most commands that use the "Control" or "Escape" keys are not supported and are not necessary to complete this simulation.
Scenario
This task requires the use of various **show** commands from the CLI of Router1 to answer four multiple-choice questions. This task does **not** require any configuration.
NOTE: The show running-configuration and the show startup-configuration commands have been disabled in this simulation.
To access the multiple-choice questions, click on the numbered boxes on the right of the top panel.
There are 4 multiple-choice questions with this task. Be sure to answer all 4 questions before leaving this item.


Topology
ISP
Router 1
S0/0
Console
Switch 1



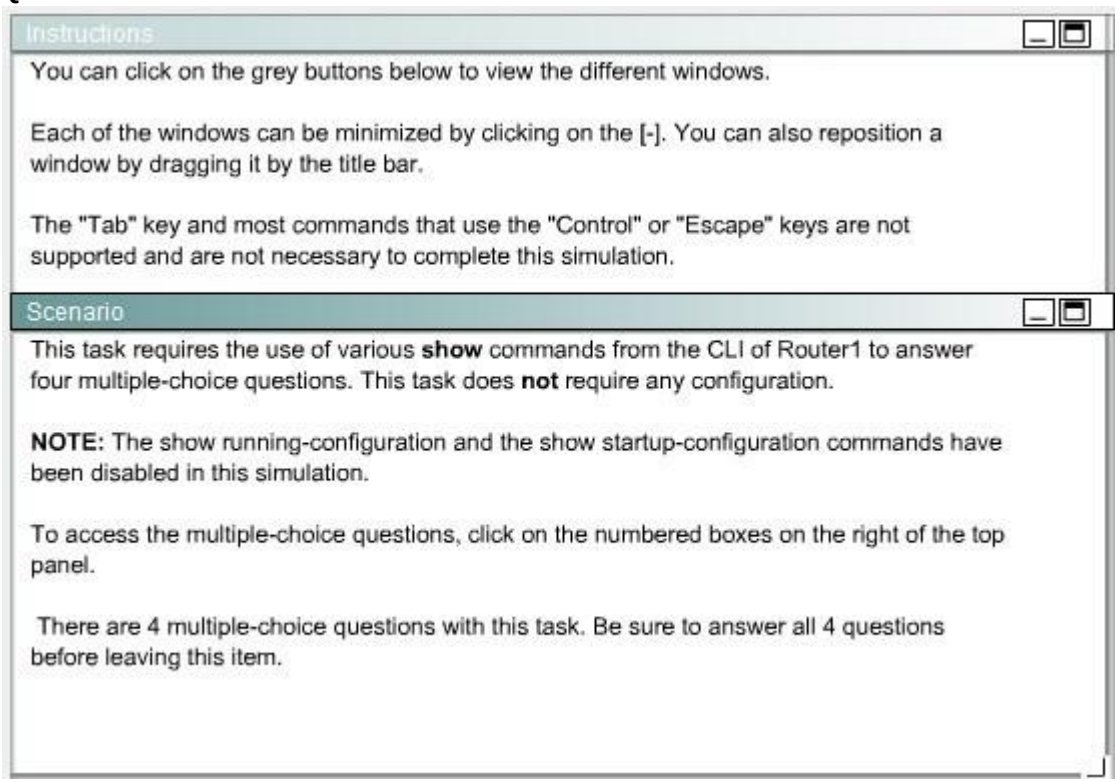
What is the subnet broadcast address of the LAN connected to Router1?

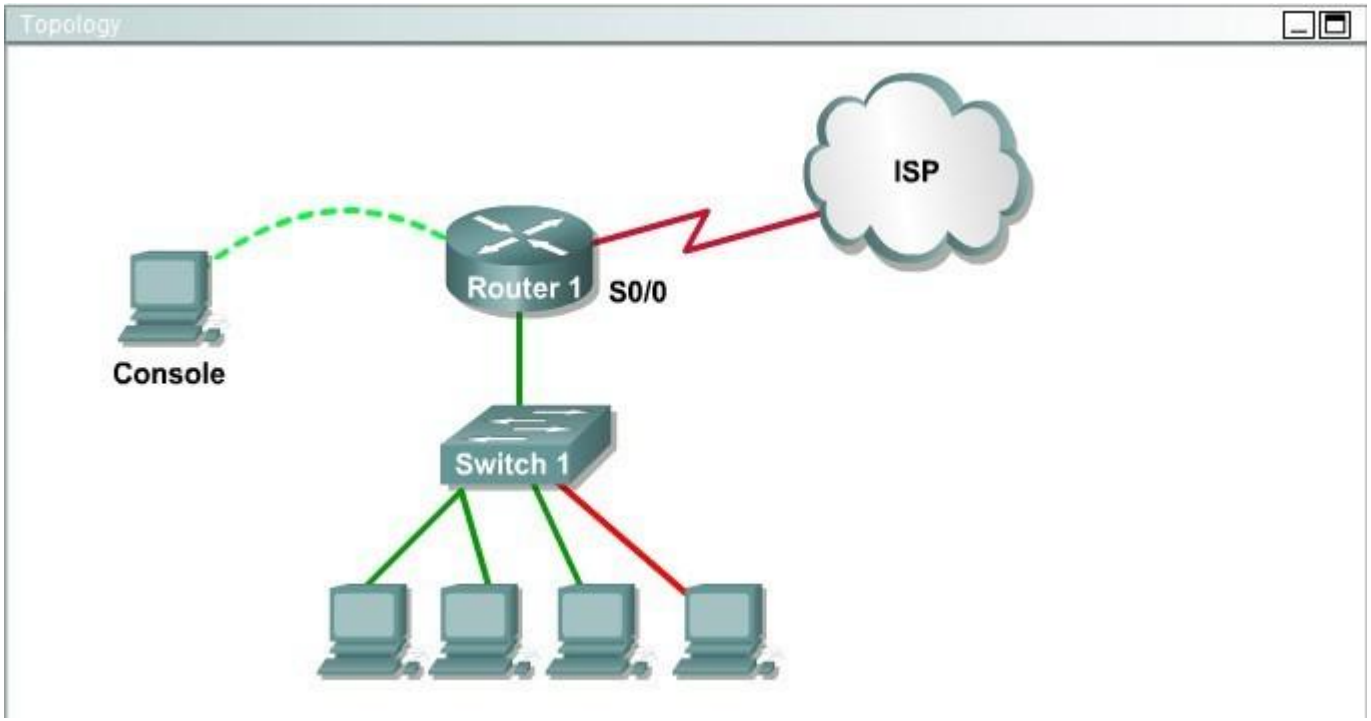
A. 192.168.8.15
B. 192.168.8.31
C. 192.168.8.63
D. 192.168.8.127

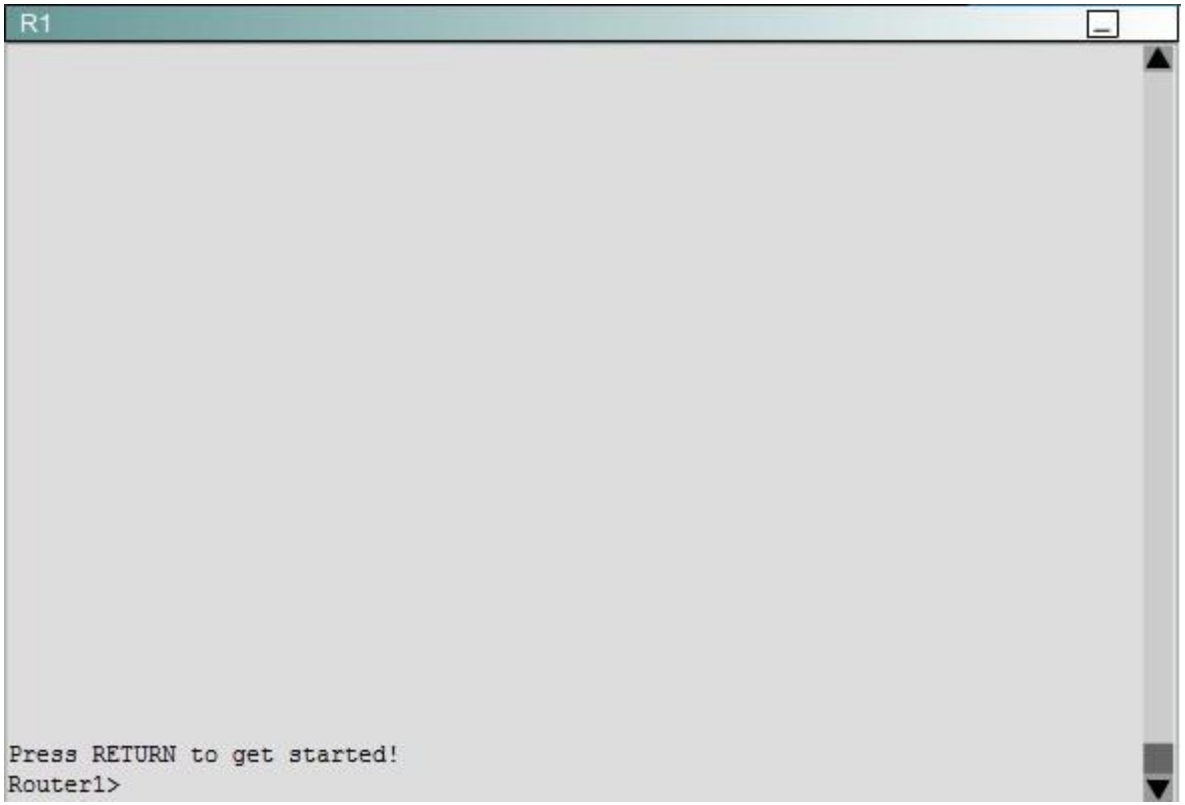
Correct Answer: A
Section: Troubleshooting
Explanation

Explanation/Reference:

QUESTION 121




Topology
ISP
Router 1
S0/0
Console
Switch 1



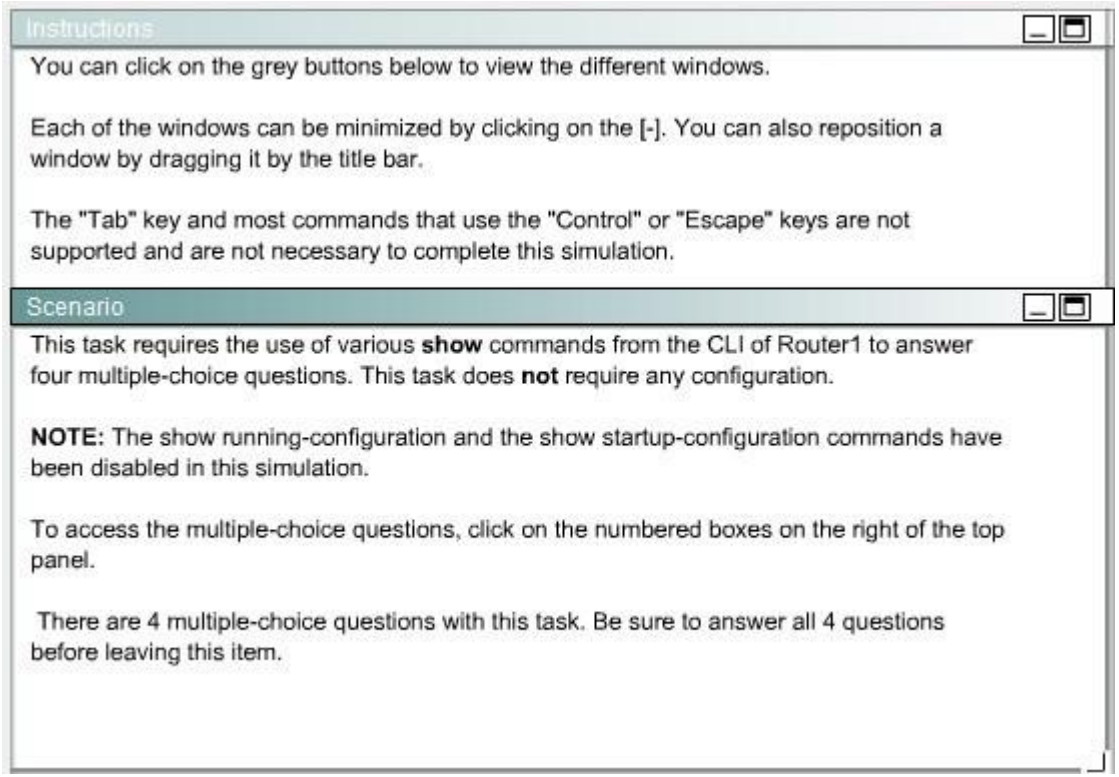
What is the bandwidth on the WAN interface of Router 1?

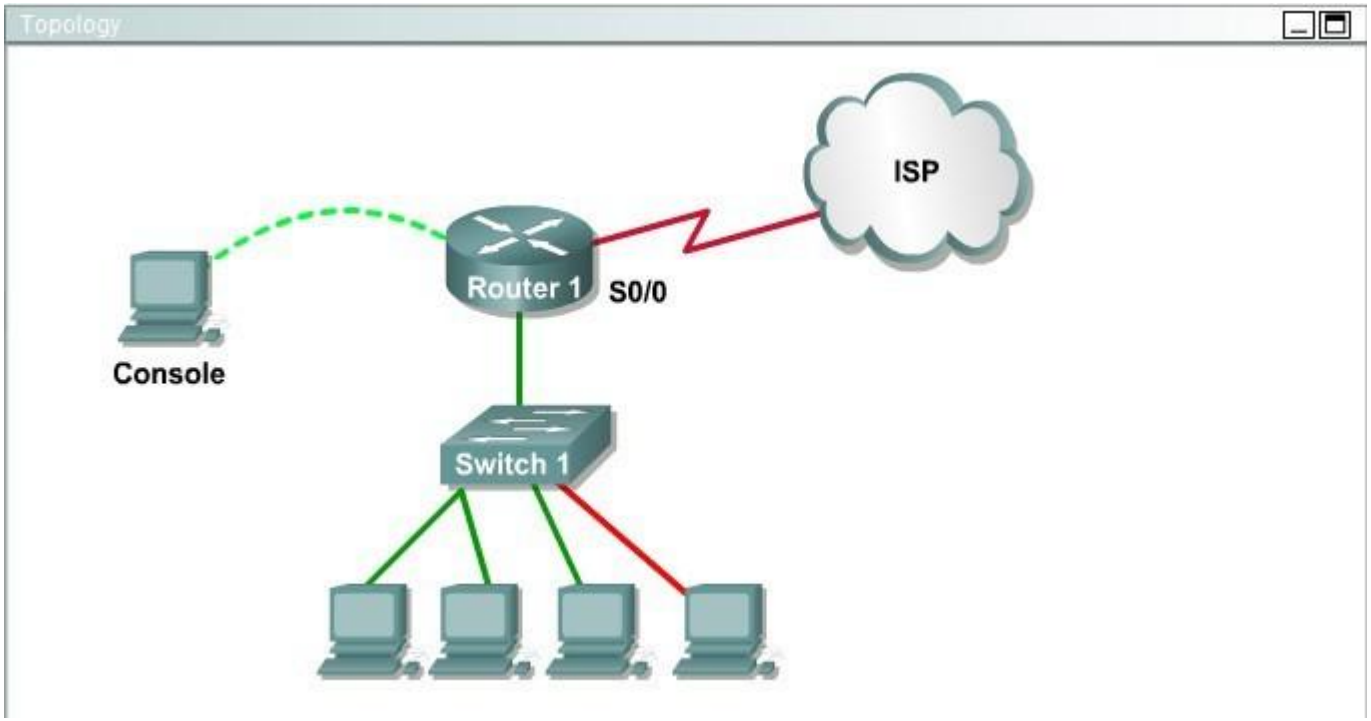
A. 16 Kbit/sec
B. 32 Kbit/sec
C. 64 Kbit/sec
D. 128 Kbit/sec
E. 512 Kbit/sec
F. 1544 Kbit/sec

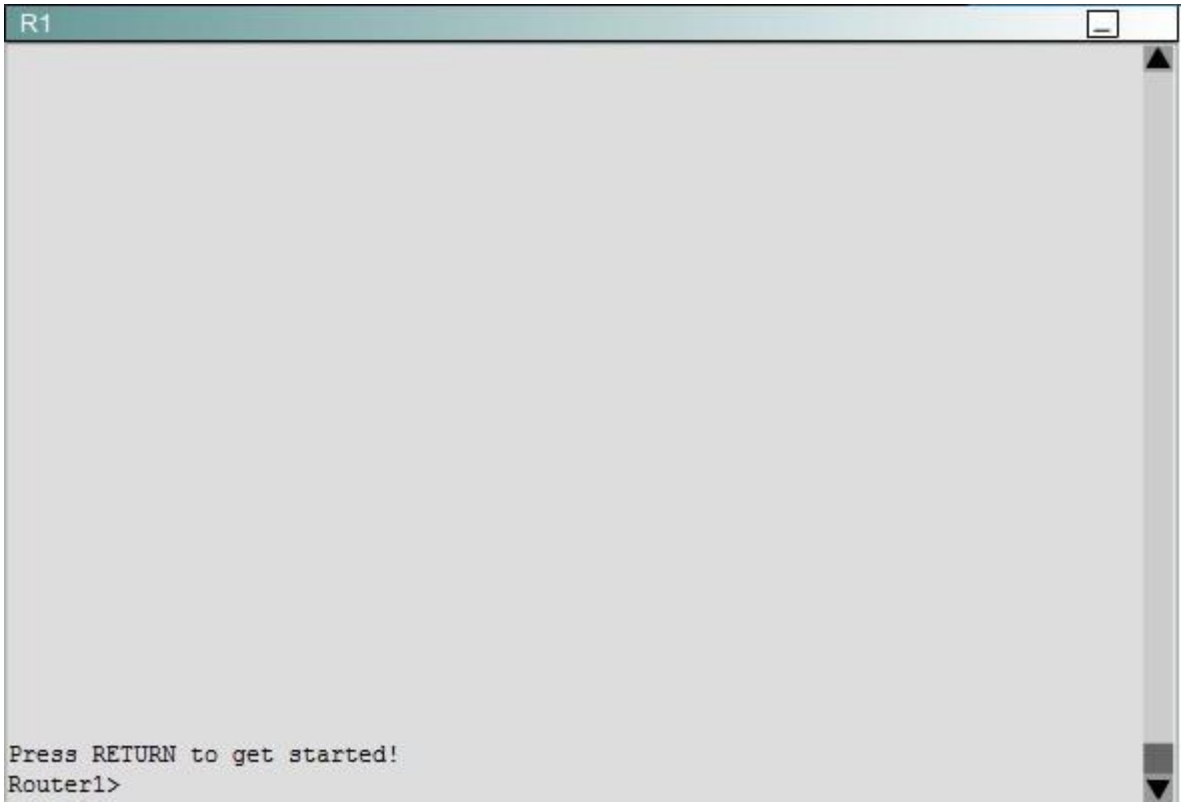
Correct Answer: A
Section: Troubleshooting
Explanation

Explanation/Reference:

QUESTION 122




Topology
ISP
Router 1
S0/0
Console
Switch 1



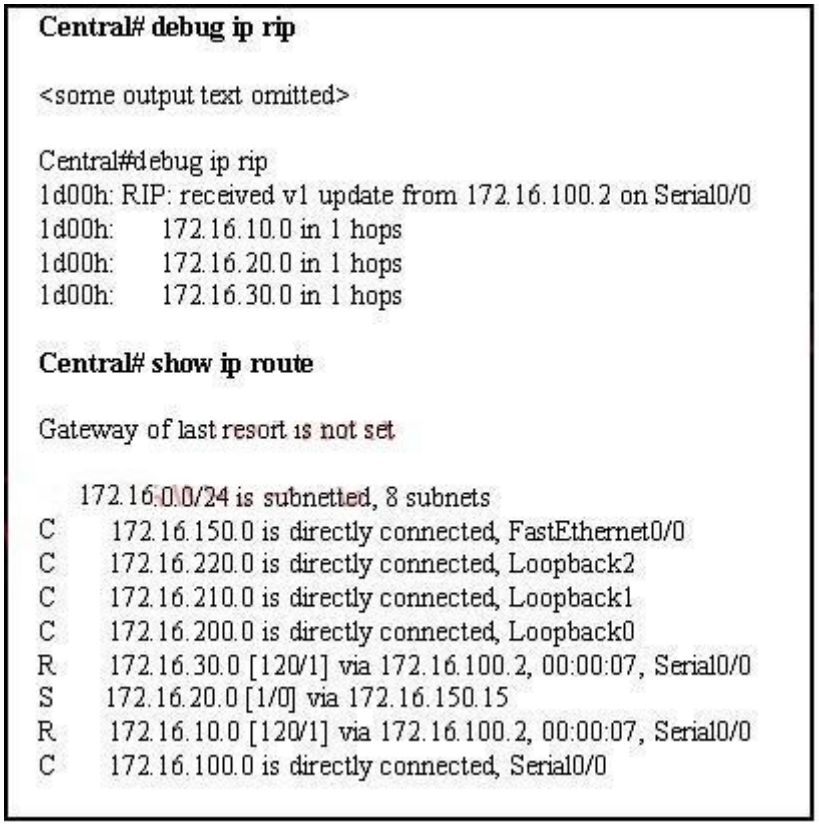
Including the address on the Routed Ethernet interface, how many hosts can have IP addresses on the LAN to which Routed is connected?

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

Correct Answer: A
Section: Troubleshooting
Explanation

Explanation/Reference:

QUESTION 123
The network administrator has found the following problem.



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

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

Correct Answer: C
Section: Troubleshooting
Explanation

Explanation/Reference:

QUESTION 124
Refer to the exhibit.

```
WG1R2#show ru
% Ambiguous command:  "show ru"
WG1R2#_
```

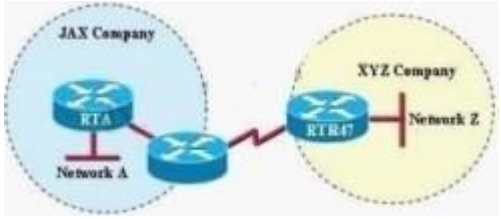
Why did the device return this message?

A. The command requires additional options or parameters
B. There is no show command that starts with ru.
C. The command is being executed from the wrong router mode.
D. There is more than one show command that starts with the letters ru.

Correct Answer: D
Section: Troubleshooting
Explanation

Explanation/Reference:

QUESTION 125
Refer to the exhibit.



A person is trying to send a file from a host on Network A of the JAX Company to a server on Network Z of the XYZ Company. The file transfer fails. The host on Network A can communicate with other hosts on Network A.

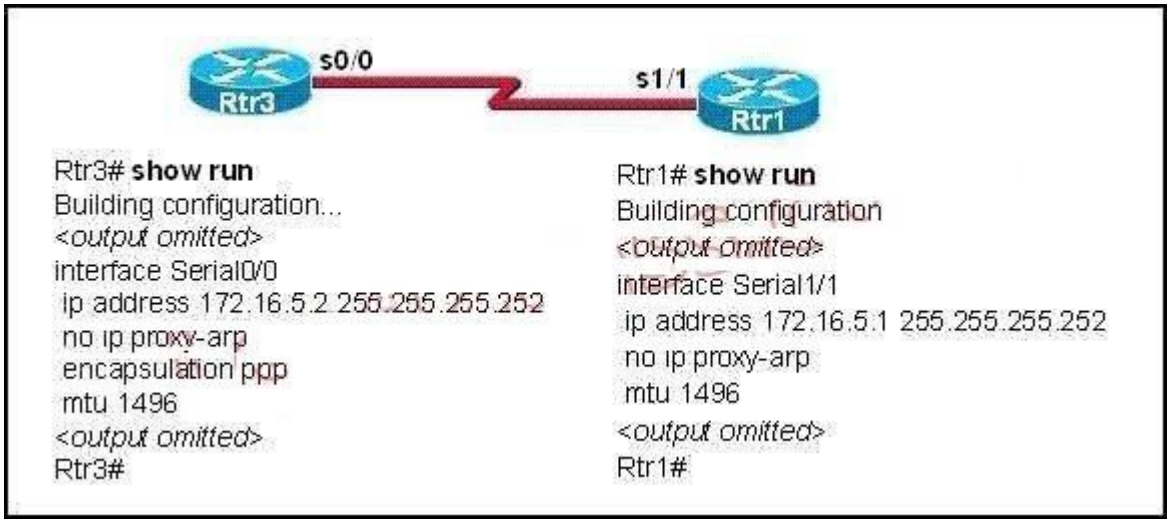
Which command, issued from router RTA, would be the most useful for troubleshooting this problem?

A. show flash:
B. show history
C. show version
D. show interfaces
E. show controllers serial

Correct Answer: D
Section: Troubleshooting
Explanation

Explanation/Reference:

QUESTION 126
Refer to the exhibit.



A network administrator is troubleshooting a connectivity problem on the serial interfaces. The output from the show interfaces command on both routers shows that the serial interface is up, line protocol is down. Given the partial output for the show running-config in the exhibit, what is the most likely cause of this problem?

A. The serial cable is bad.
B. The MTU is incorrectly configured.
C. The Layer 2 framing is misconfigured.
D. The IP addresses are not in the same subnet.

Correct Answer: C
Section: Troubleshooting
Explanation

Explanation/Reference:

QUESTION 127
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: Operation of IP Data Networks
Explanation

Explanation/Reference:

QUESTION 128
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: Operation of IP Data Networks
Explanation

Explanation/Reference:

QUESTION 129
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: Operation of IP Data Networks
Explanation

Explanation/Reference:

QUESTION 130
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: Operation of IP Data Networks
Explanation

Explanation/Reference:

QUESTION 131
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: Operation of IP Data Networks
Explanation

Explanation/Reference:

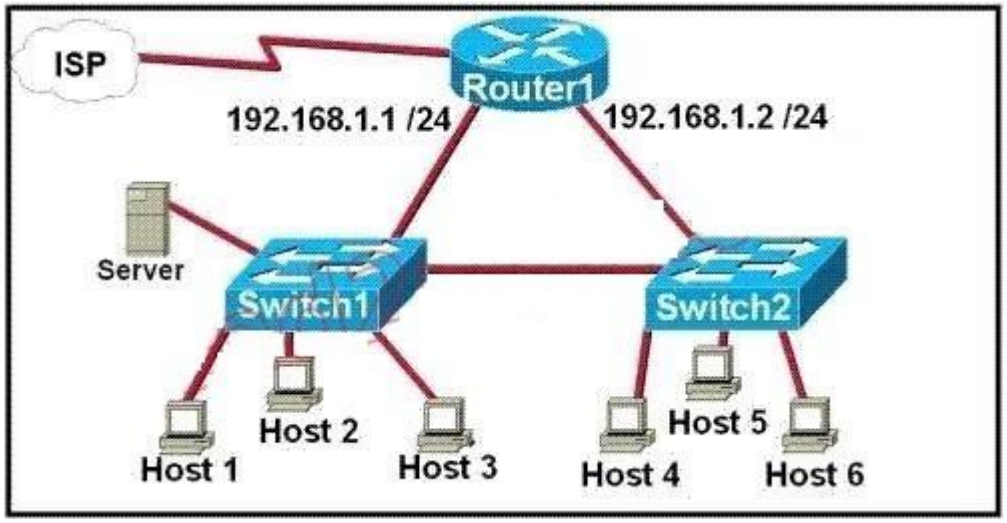
QUESTION 132
How does TCP differ from UDP? (Choose two.)

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: Operation of IP Data Networks
Explanation

Explanation/Reference:

QUESTION 133
Refer to the exhibit.



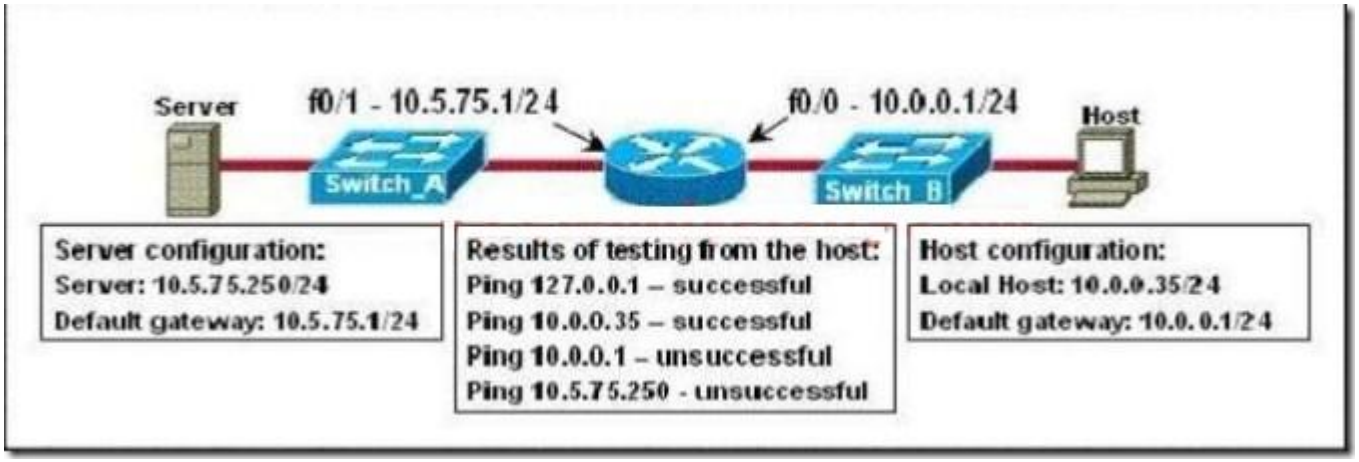
A network technician is asked to design a small network with redundancy. The exhibit represents this design, with all hosts configured in the same VLAN. What conclusions can be made about this design?

A. This design will function as intended.
B. Spanning-tree will need to be used.
C. The router will not accept the addressing scheme.
D. The connection between switches should be a trunk.
E. The router interfaces must be encapsulated with the 802.1Q protocol.

Correct Answer: C
Section: Troubleshooting
Explanation

Explanation/Reference:

QUESTION 134
Refer to the exhibit.



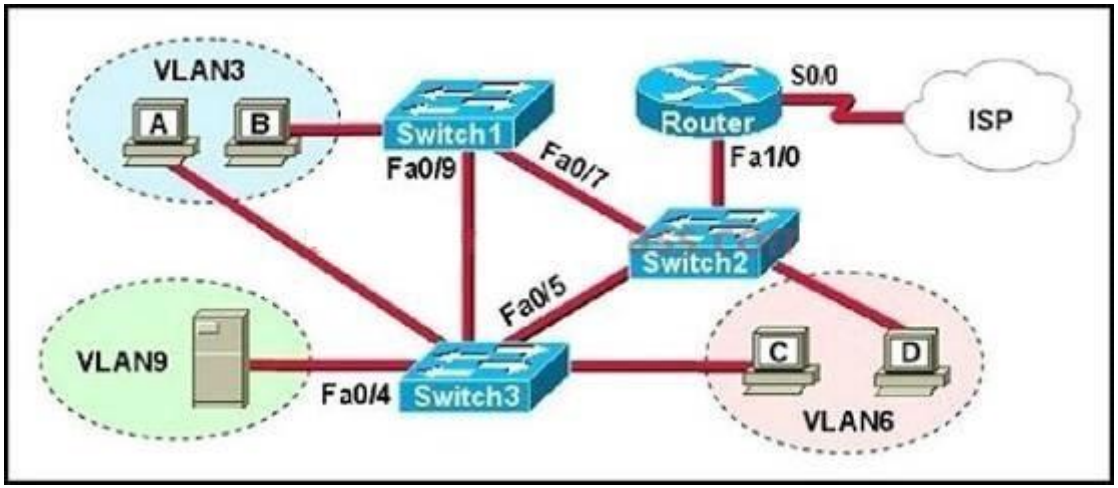
A technician is troubleshooting a host connectivity problem. The host is unable to ping a server connected to Switch_A. Based on the results of the testing, what could be the problem?

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 Answer: D
Section: Troubleshooting
Explanation

Explanation/Reference:

QUESTION 135
Refer to the exhibit.



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

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

Correct Answer: D
Section: Troubleshooting
Explanation

Explanation/Reference:

QUESTION 136
Which layer of the TCP/IP stack combines the OSI model physical and data link layers?

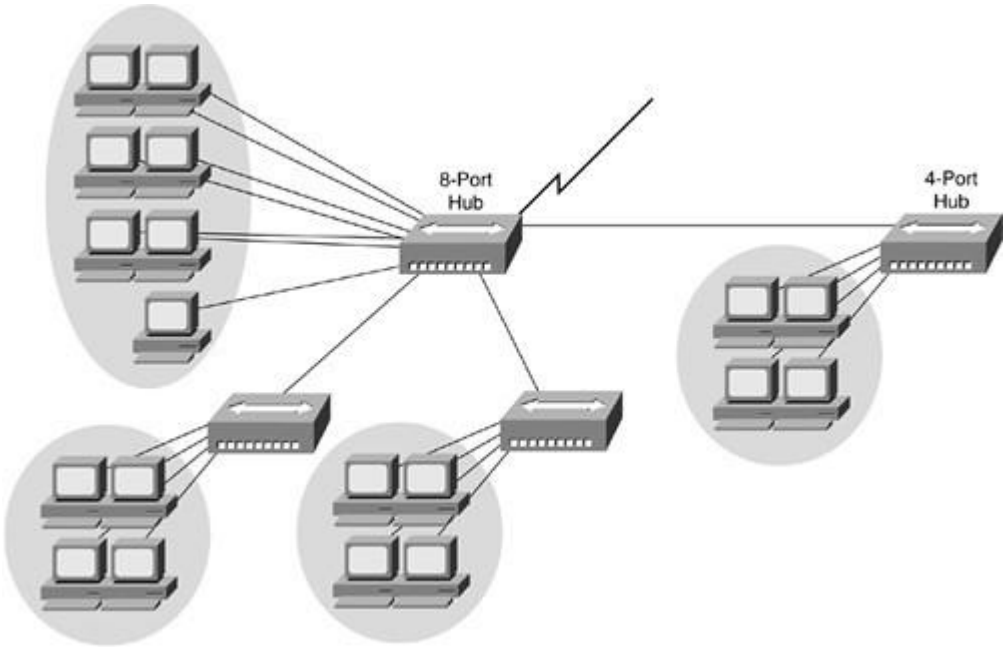
A. Internet layer
B. transport layer
C. application layer
D. network access layer

Correct Answer: D

Section: Operation of IP Data Networks
Explanation

Explanation/Reference:

QUESTION 137
Refer to the exhibit.



If the hubs in the graphic were replaced by switches, what would be virtually eliminated?

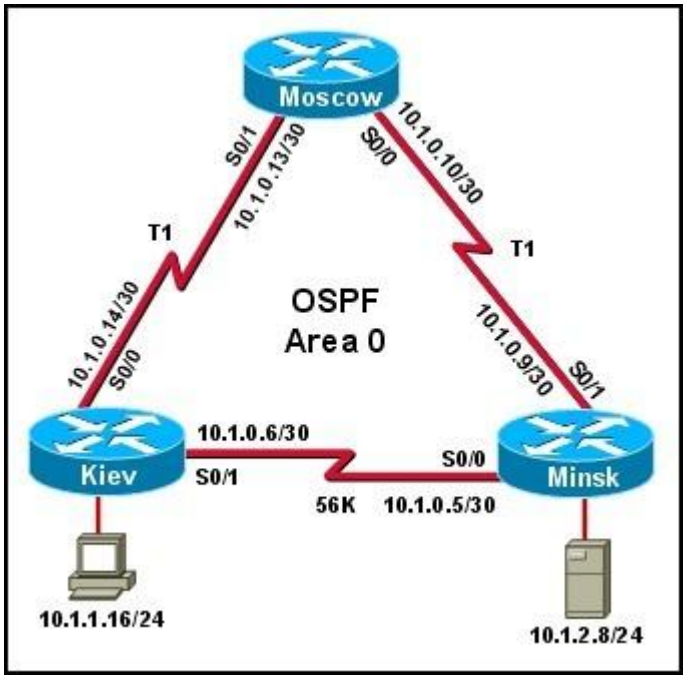
A. broadcast domains
B. repeater domains
C. Ethernet collisions
D. signal amplification
E. Ethernet broadcasts

Correct Answer: C
Section: Operation of IP Data Networks

Explanation

Explanation/Reference:

QUESTION 138
Refer to the exhibit.



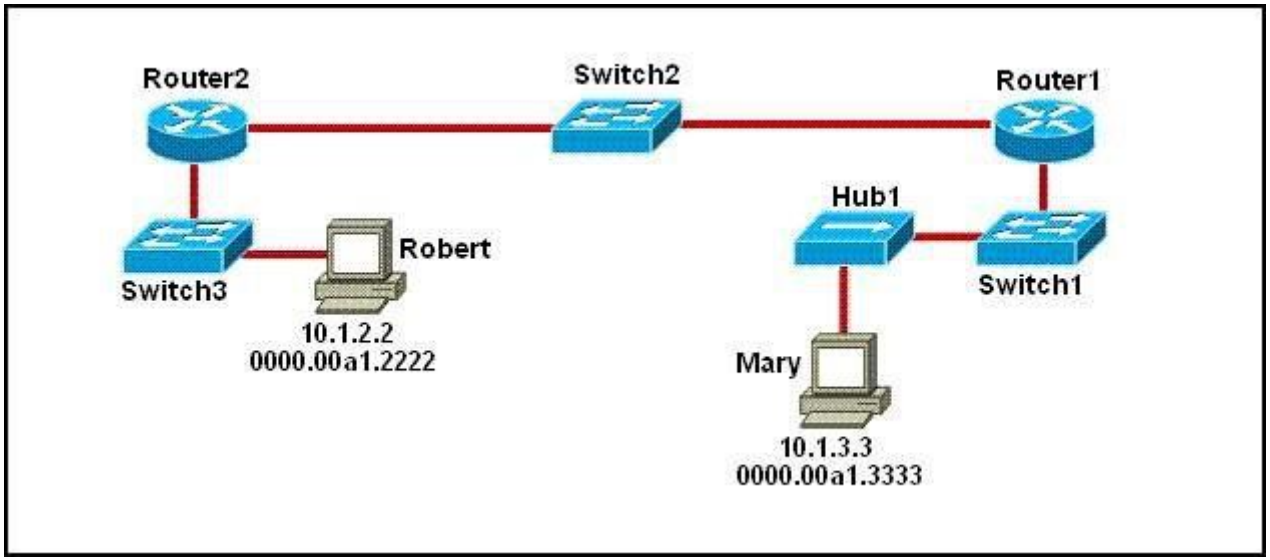
The host in Kiev sends a request for an HTML document to the server in Minsk. What will be the source IP address of the packet as it leaves the Kiev router?

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: Operation of IP Data Networks
Explanation

Explanation/Reference:

QUESTION 139
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.)

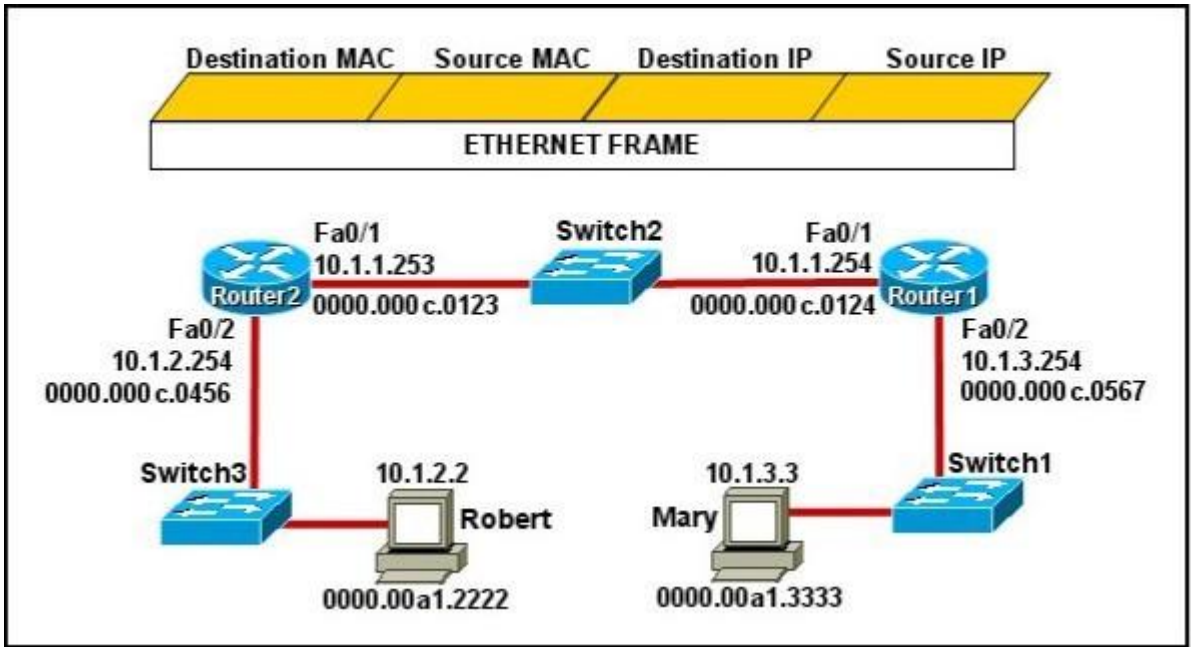
A. Hub1
B. Switch1
C. Router1
D. Switch2
E. Router2
F. Switch3

Correct Answer: BDF
Section: Operation of IP Data Networks

Explanation

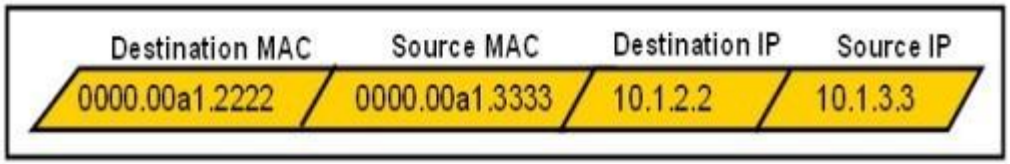
Explanation/Reference:

QUESTION 140
Refer to the exhibit.

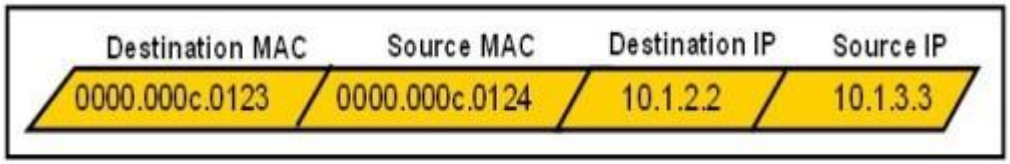


Mary is sending an instant message to Robert. The message will be broken into a series of packets that will traverse all network devices. What addresses will populate these packets as they are forwarded from Router1 to Router2?

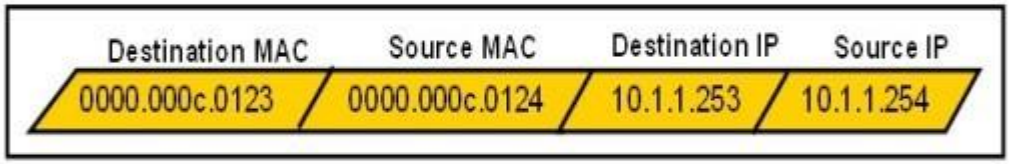
A.



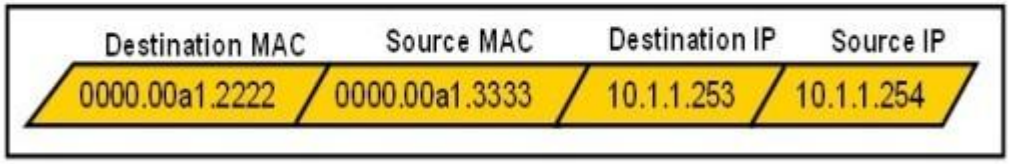
B.



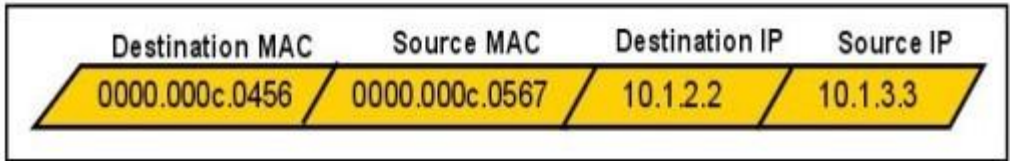
C.



D.



E.



A. Option A
B. Option B
C. Option C
D. Option D
E. Option E

Correct Answer: B
Section: Operation of IP Data Networks
Explanation

Explanation/Reference:

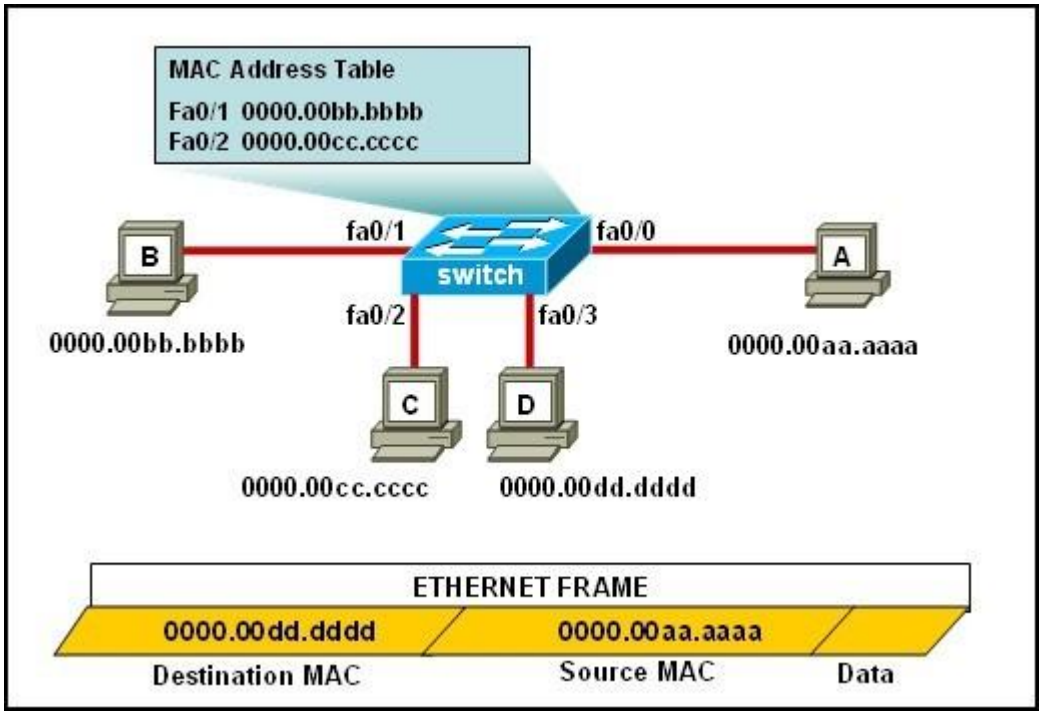
QUESTION 141
Which transport layer protocol provides best-effort delivery service with no acknowledgment receipt required?

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

Correct Answer: E
Section: Operation of IP Data Networks
Explanation

Explanation/Reference:

QUESTION 142
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: LAN Switching Technologies
Explanation

Explanation/Reference:

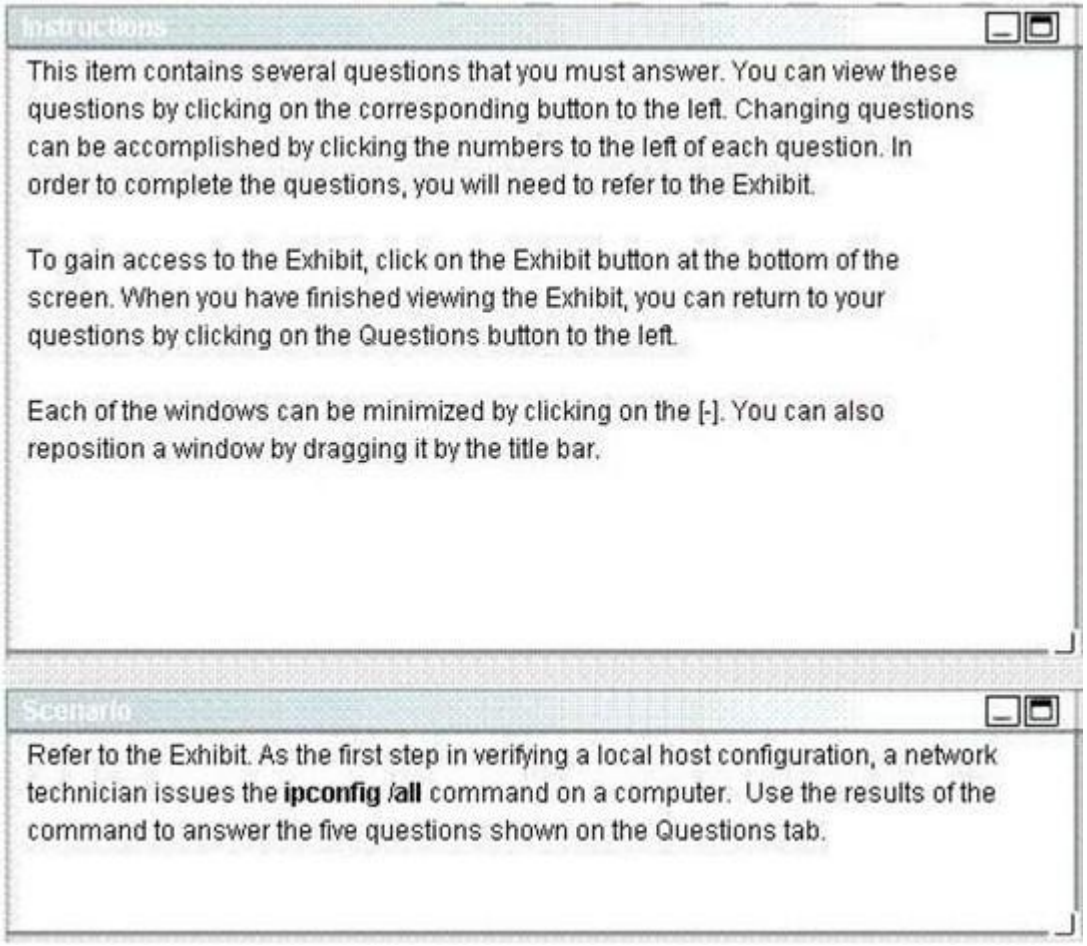
QUESTION 143
How many simultaneous Telnet sessions does a Cisco router support by default?

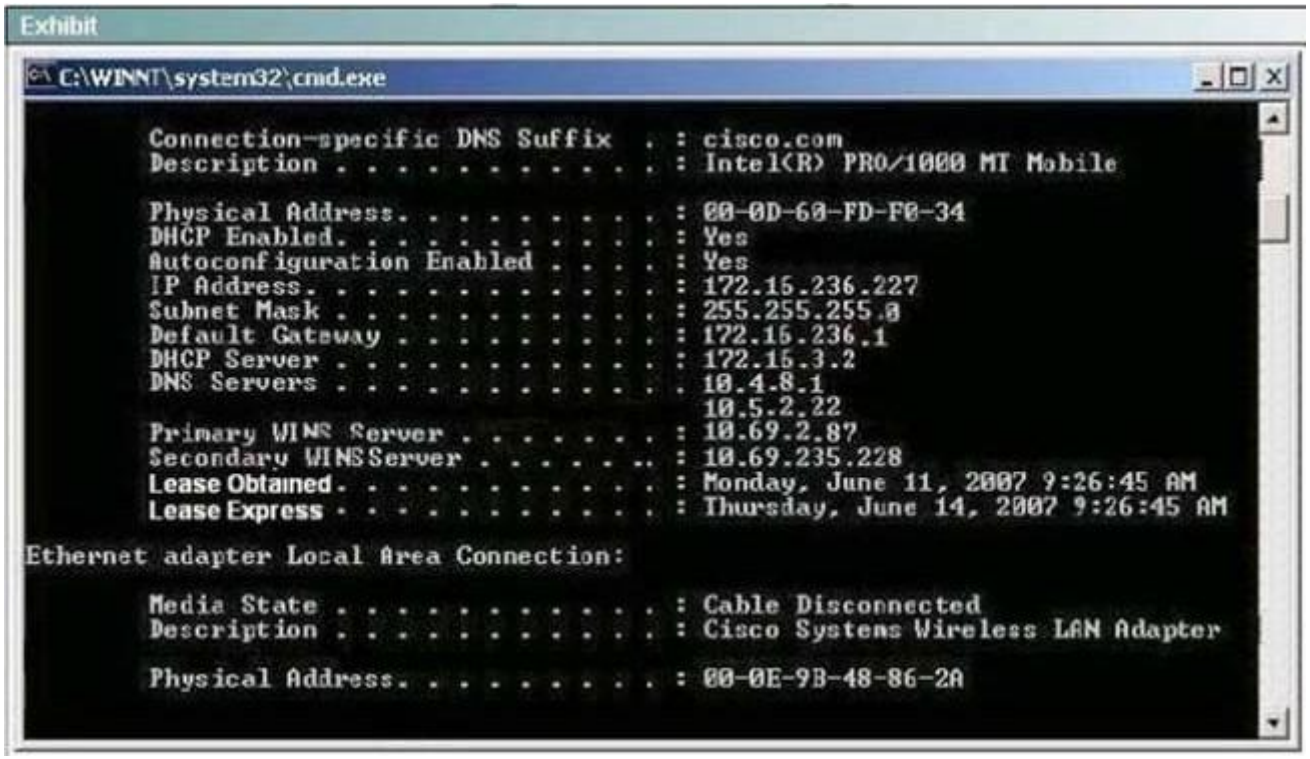
A. 1
B. 2
C. 3
D. 4
E. 5
F. 6

Correct Answer: E
Section: LAN Switching Technologies
Explanation

Explanation/Reference:

QUESTION 144
Refer to the exhibit.





What two things can the technician determine by successfully pinging from this computer to the IP address 172.16.236.1? (Choose two)

A. The network card on the computer is functioning correctly.
B. The default static route on the gateway router is correctly configured.
C. The correct default gateway IP address is configured on the computer.
D. The device with the IP address 172.16.236.1 is reachable over the network.
E. The default gateway at 172.16.236.1 is able to forward packets to the internet.

Correct Answer: AD
Section: LAN Switching Technologies
Explanation

Explanation/Reference:

QUESTION 145

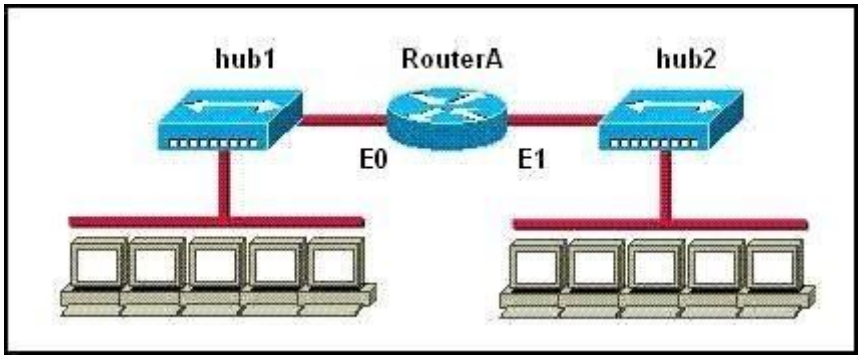
What is the purpose of flow control?

A. To ensure data is retransmitted if an acknowledgement is not received.
B. To reassemble segments in the correct order at the destination device.
C. To provide a means for the receiver to govern the amount of data sent by the sender.
D. To regulate the size of each segment.

Correct Answer: C
Section: LAN Switching Technologies
Explanation

Explanation/Reference:

QUESTION 146
Refer to the exhibit.



How many collision domains are shown?

A. one
B. two
C. three
D. four
E. six
F. twelve

Correct Answer: B
Section: LAN Switching Technologies

Explanation

Explanation/Reference:

QUESTION 147
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: IP addressing (IPv4 / IPv6)
Explanation

Explanation/Reference:

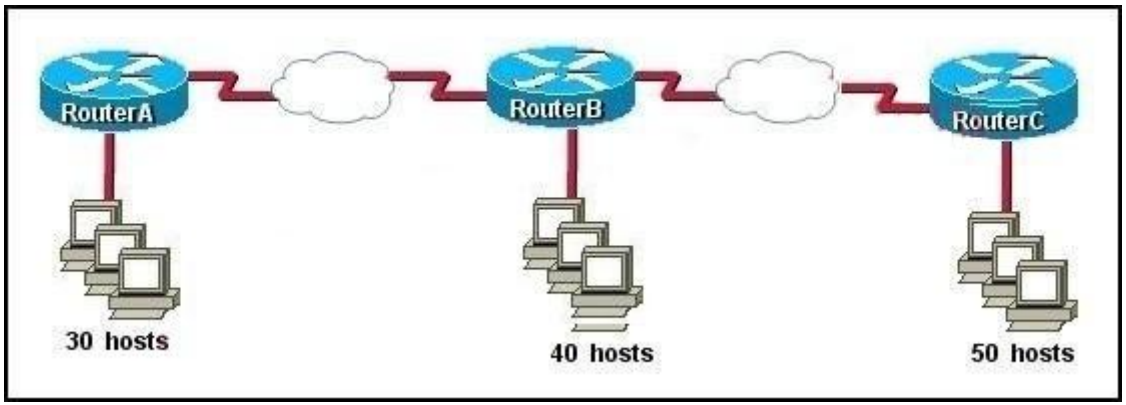
QUESTION 148
Given an IP address of 192.168.1.42 255.255.255.248, what is the subnet address?

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: IP addressing (IPv4 / IPv6)
Explanation

Explanation/Reference:

QUESTION 149
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?

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: IP addressing (IPv4 / IPv6)
Explanation

Explanation/Reference:

QUESTION 150
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: IP addressing (IPv4 / IPv6)
Explanation

Explanation/Reference:

QUESTION 151
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: IP addressing (IPv4 / IPv6)
Explanation

Explanation/Reference:

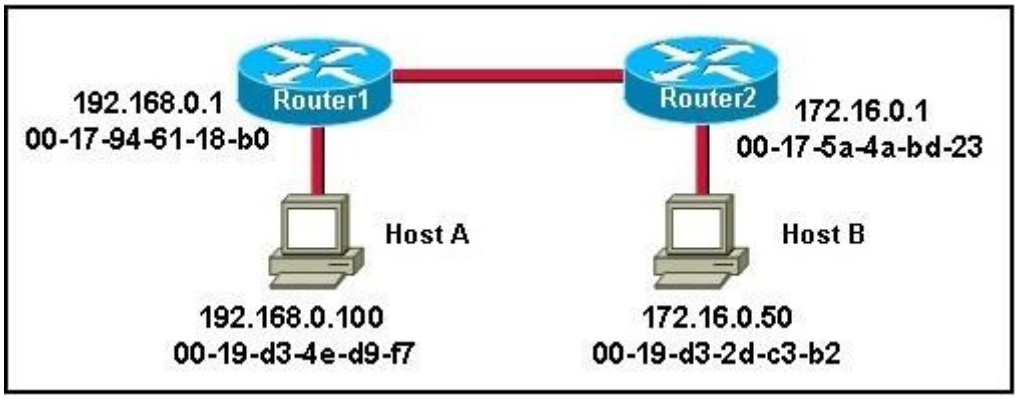
QUESTION 152
Which one of the following IP addresses is the last valid host in the subnet using mask 255.255.255.224?

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: IP addressing (IPv4 / IPv6)
Explanation

Explanation/Reference:

QUESTION 153
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: Operation of IP Data Networks
Explanation

Explanation/Reference:

QUESTION 154
What are two common TCP applications? (Choose two.)

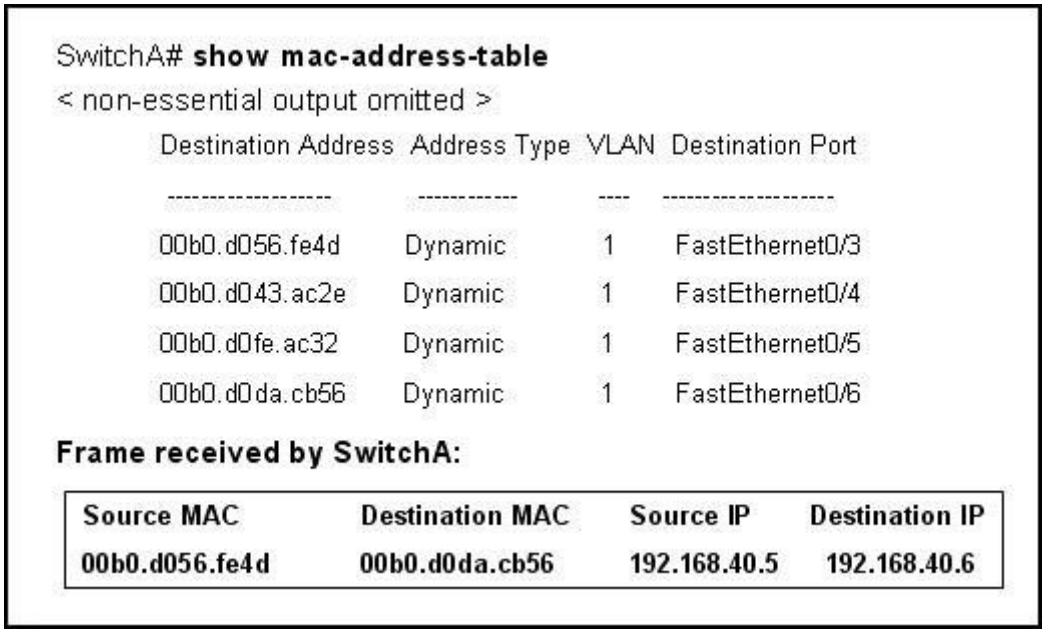
A. TFTP
B. SMTP
C. SNMP
D. FTP

E. DNS

Correct Answer: BD
Section: Operation of IP Data Networks
Explanation

Explanation/Reference:

QUESTION 155
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?

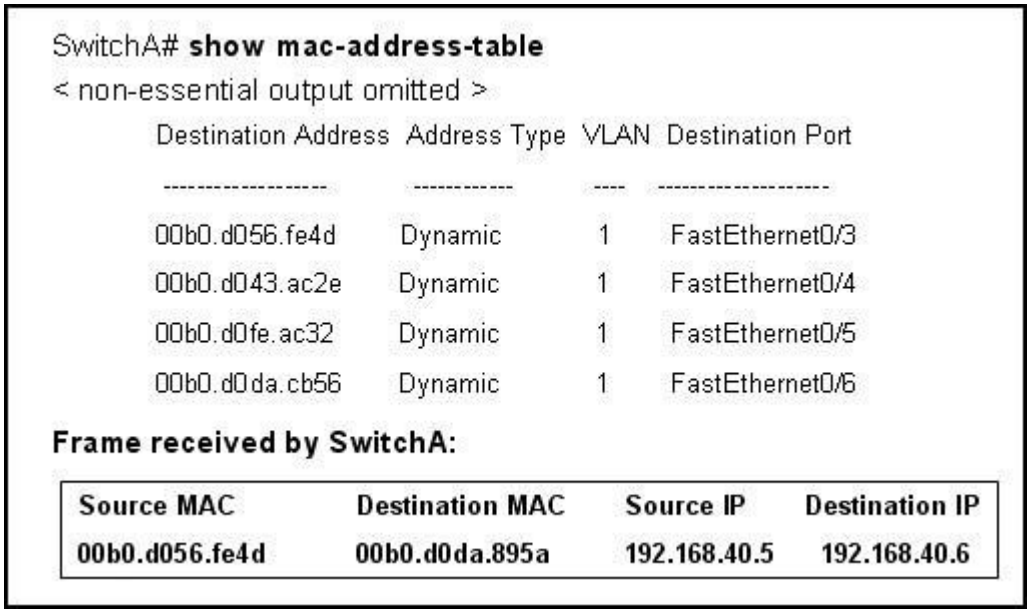
A. It will drop the frame.
B. It will forward the frame out port Fa0/6 only.
C. It will flood the frame out all ports.
D. It will flood the frame out all ports except Fa0/3.

Correct Answer: B

Section: Operation of IP Data Networks
Explanation

Explanation/Reference:

QUESTION 156
Refer to the exhibit.


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

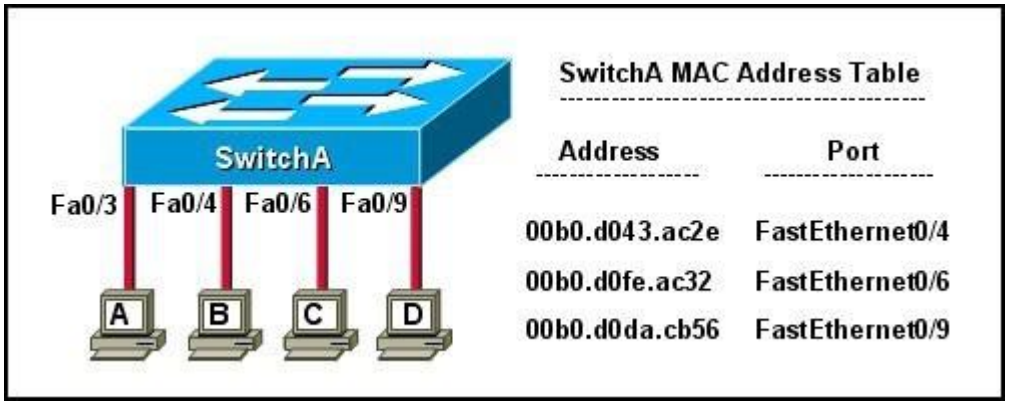
SwitchA receives the frame with the addressing shown in the exhibit. According to the command output also shown in the exhibit, how will SwitchA handle this frame?

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: E
Section: Operation of IP Data Networks
Explanation

Explanation/Reference:

QUESTION 157
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: Operation of IP Data Networks
Explanation

Explanation/Reference:

QUESTION 158
Which two statements describe the operation of the CSMA/CD access method? (Choose two.)

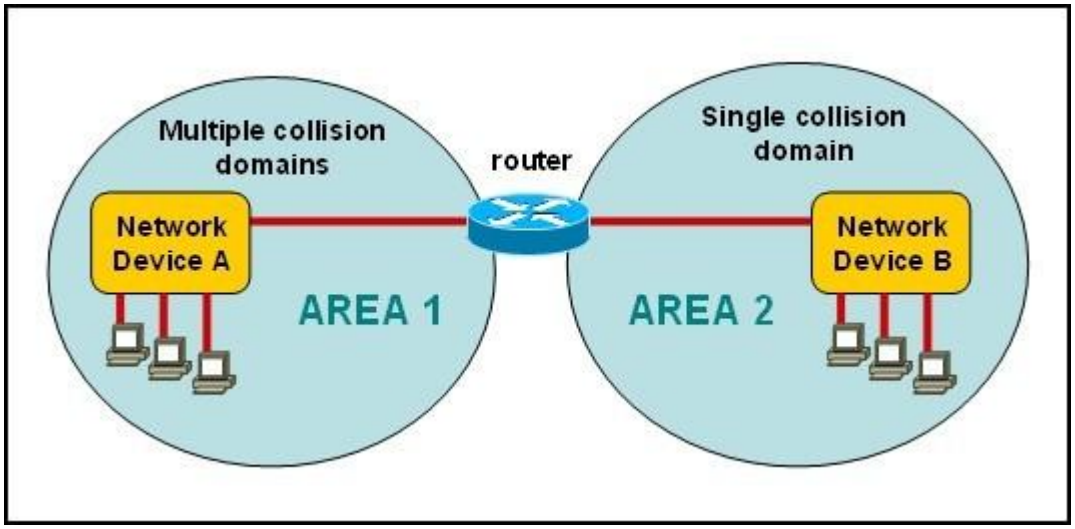
A. In a CSMA/CD collision domain, multiple stations can successfully transmit data simultaneously.
B. In a CSMA/CD collision domain, stations must wait until the media is not in use before transmitting.

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: Operation of IP Data Networks
Explanation

Explanation/Reference:

QUESTION 159
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: Operation of IP Data Networks
Explanation

Explanation/Reference:

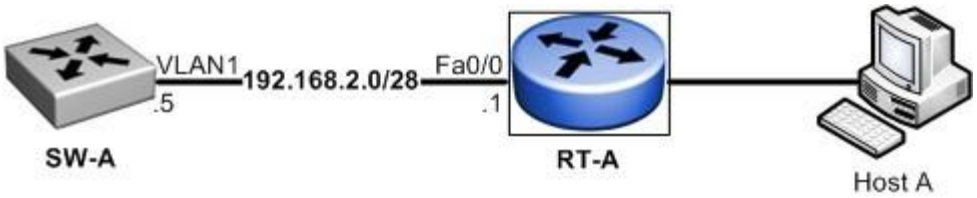
QUESTION 160
On a Cisco switch, which protocol determines if an attached VoIP phone is from Cisco or from another vendor?

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

Correct Answer: C
Section: Operation of IP Data Networks
Explanation

Explanation/Reference:

QUESTION 161
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: Operation of IP Data Networks
Explanation

Explanation/Reference:

QUESTION 162
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: Operation of IP Data Networks
Explanation

Explanation/Reference:

QUESTION 163
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: Operation of IP Data Networks
Explanation

Explanation/Reference: