

300-101

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File Version: 1.0

Cisco

Exam 300-101

Implementing Cisco IP Routing

Cisco 300-101 : Practice Test

Topic break down

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Topic 1, Network Principles

**Exam A****QUESTION 1**

Which three problems result from application mixing of UDP and TCP streams within a network with no QoS? (Choose three.)

- A. starvation
- B. jitter
- C. latency
- D. windowing
- E. lower throughput

**Correct Answer:** ACE

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 2**

Which statement about the use of tunneling to migrate to IPv6 is true?

- A. Tunneling is less secure than dual stack or translation.
- B. Tunneling is more difficult to configure than dual stack or translation.
- C. Tunneling does not enable users of the new protocol to communicate with users of the old protocol without dual-stack hosts.
- D. Tunneling destinations are manually determined by the IPv4 address in the low-order 32 bits of IPv4-compatible IPv6 addresses.

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 3**

Which two actions must you perform to enable and use window scaling on a router? (Choose two.)

- A. Execute the command `ip tcp window-size 65536`.
- B. Set window scaling to be used on the remote host.
- C. Execute the command `ip tcp queuemax`.
- D. Set TCP options to "enabled" on the remote host.

E. Execute the command `ip tcp adjust-mss`.

**Correct Answer:** AB

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 4

A network administrator executes the command `clear ip route`. Which two tables does this command clear and rebuild? (Choose two.)

- A. IP routing
- B. FIB
- C. ARP cache
- D. MAC address table
- E. Cisco Express Forwarding table
- F. topology table

**Correct Answer:** AB

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 5

Under which condition does UDP dominance occur?

- A. when TCP traffic is in the same class as UDP
- B. when UDP flows are assigned a lower priority queue
- C. when WRED is enabled
- D. when ACLs are in place to block TCP traffic

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 6**

Refer to the exhibit.

```
Router#show adjacency
```

Protocol	Interface	Address
IP	Serial0	192.168.209.130(2) (incomplete)
IP	Serial0	192.168.209.131(7)
IP	Ethernet0	192.168.201.1(7)

A network administrator checks this adjacency table on a router. What is a possible cause for the incomplete marking?

- A. incomplete ARP information
- B. incorrect ACL
- C. dynamic routing protocol failure
- D. serial link congestion

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 7**

A network administrator uses IP SLA to measure UDP performance and notices that packets on one router have a higher one-way delay compared to the opposite direction. Which UDP characteristic does this scenario describe?

- A. latency
- B. starvation
- C. connectionless communication
- D. nonsequencing unordered packets
- E. jitter

**Correct Answer:** A

**Section:** (none)

**Explanation****Explanation/Reference:****QUESTION 8**

Which method allows IPv4 and IPv6 to work together without requiring both to be used for a single connection during the migration process?

- A. dual-stack method
- B. 6to4 tunneling
- C. GRE tunneling
- D. NAT-PT

**Correct Answer:** A

**Section:** (none)

**Explanation****Explanation/Reference:****QUESTION 9**

Which switching method is used when entries are present in the output of the command show ip cache?

- A. fast switching
- B. process switching
- C. Cisco Express Forwarding switching
- D. cut-through packet switching

**Correct Answer:** A

**Section:** (none)

**Explanation****Explanation/Reference:****QUESTION 10**

Refer to the exhibit.

```
R2#show ip cef
```

Prefix	Next Hop	Interface
0.0.0.0/0	192.168.201.1	FastEthernet0/0
0.0.0.0/32	receive	
192.168.201.0/27	attached	FastEthernet0/0
192.168.201.0/32	receive	
192.168.201.1/32	192.168.201.1	FastEthernet0/0
192.168.201.2/32	receive	
192.168.201.31/32	receive	
224.0.0.0/4	drop	
224.0.0.0/24	receive	
255.255.255.255/32	receive	

Based on this FIB table, which statement is correct?

- A. There is no default gateway.
- B. The IP address of the router on FastEthernet is 209.168.201.1.
- C. The gateway of last resort is 192.168.201.1.
- D. The router will listen for all multicast traffic.

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 11

Which three TCP enhancements can be used with TCP selective acknowledgments? (Choose three.)

- A. header compression
- B. explicit congestion notification
- C. keepalive
- D. time stamps
- E. TCP path discovery

F. MTU window

**Correct Answer:** BCD

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 12

A network engineer notices that transmission rates of senders of TCP traffic sharply increase and decrease simultaneously during periods of congestion. Which condition causes this?

- A. global synchronization
- B. tail drop
- C. random early detection
- D. queue management algorithm

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 13

A corporate policy requires PPPoE to be enabled and to maintain a connection with the ISP, even if no interesting traffic exists. Which feature can be used to accomplish this task?

- A. TCP Adjust
- B. Dialer Persistent
- C. PPPoE Groups
- D. half-bridging
- E. Peer Neighbor Route

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 14**

Prior to enabling PPPoE in a virtual private dialup network group, which task must be completed?

- A. Disable CDP on the interface.
- B. Execute the vpdn enable command.
- C. Execute the no switchport command.
- D. Enable QoS FIFO for PPPoE support.

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 15**

Which protocol uses dynamic address mapping to request the next-hop protocol address for a specific connection?

- A. Frame Relay inverse ARP
- B. static DLCI mapping
- C. Frame Relay broadcast queue
- D. dynamic DLCI mapping

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 16**

A network engineer has been asked to ensure that the PPPoE connection is established and authenticated using an encrypted password. Which technology, in combination with PPPoE, can be used for authentication in this manner?

- A. PAP
- B. dot1x
- C. IPsec
- D. CHAP



E. ESP

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 17**

Which PPP authentication method sends authentication information in clear text?

- A. MS CHAP
- B. CDPCP
- C. CHAP
- D. PAP

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 18**

Which statement is true about the PPP Session Phase of PPPoE?

- A. PPP options are negotiated and authentication is not performed. Once the link setup is completed, PPPoE functions as a Layer 3 encapsulation method that allows data to be transferred over the PPP link within PPPoE headers.
- B. PPP options are not negotiated and authentication is performed. Once the link setup is completed, PPPoE functions as a Layer 4 encapsulation method that allows data to be transferred over the PPP link within PPPoE headers.
- C. PPP options are automatically enabled and authorization is performed. Once the link setup is completed, PPPoE functions as a Layer 2 encapsulation method that allows data to be encrypted over the PPP link within PPPoE headers.
- D. PPP options are negotiated and authentication is performed. Once the link setup is completed, PPPoE functions as a Layer 2 encapsulation method that allows data to be transferred over the PPP link within PPPoE headers.

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 19**

PPPoE is composed of which two phases?

- A. Active Authentication Phase and PPP Session Phase
- B. Passive Discovery Phase and PPP Session Phase
- C. Active Authorization Phase and PPP Session Phase
- D. Active Discovery Phase and PPP Session Phase

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 20**

What is the default OSPF hello interval on a Frame Relay point-to-point network?

- A. 10
- B. 20
- C. 30
- D. 40

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 21**

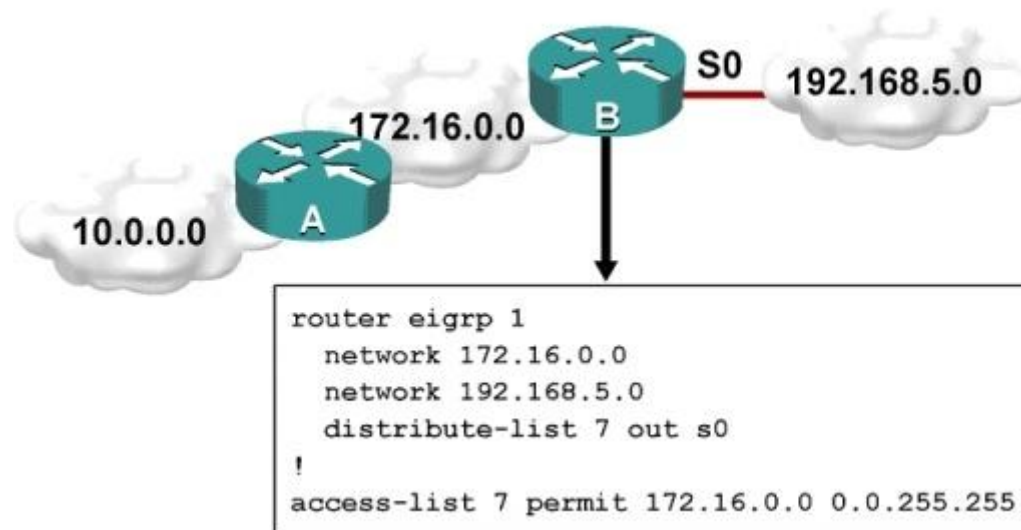
What is the purpose of the autonomous-system {autonomous-system-number} command?

- A. It sets the EIGRP autonomous system number in a VRF.
- B. It sets the BGP autonomous system number in a VRF.
- C. It sets the global EIGRP autonomous system number.
- D. It sets the global BGP autonomous system number.

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

**Explanation/Reference:**

**QUESTION 22**  
Refer to the exhibit.



Which one statement is true?

- A. Traffic from the 172.16.0.0/16 network will be blocked by the ACL.
- B. The 10.0.0.0/8 network will not be advertised by Router B because the network statement for the 10.0.0.0/8 network is missing from Router B.
- C. The 10.0.0.0/8 network will not be in the routing table on Router B.
- D. Users on the 10.0.0.0/8 network can successfully ping users on the 192.168.5.0/24 network, but users on the 192.168.5.0/24 cannot successfully ping users on the 10.0.0.0/8 network.
- E. Router B will not advertise the 10.0.0.0/8 network because it is blocked by the ACL.

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

**Explanation/Reference:****QUESTION 23**

A router with an interface that is configured with ipv6 address autoconfig also has a link- local address assigned. Which message is required to obtain a global unicast address when a router is present?

- A. DHCPv6 request
- B. router-advertisement
- C. neighbor-solicitation
- D. redirect

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:****QUESTION 24**

For security purposes, an IPv6 traffic filter was configured under various interfaces on the local router. However, shortly after implementing the traffic filter, OSPFv3 neighbor adjacencies were lost. What caused this issue?

- A. The traffic filter is blocking all ICMPv6 traffic.
- B. The global anycast address must be added to the traffic filter to allow OSPFv3 to work properly.
- C. The link-local addresses that were used by OSPFv3 were explicitly denied, which caused the neighbor relationships to fail.
- D. IPv6 traffic filtering can be implemented only on SVIs.

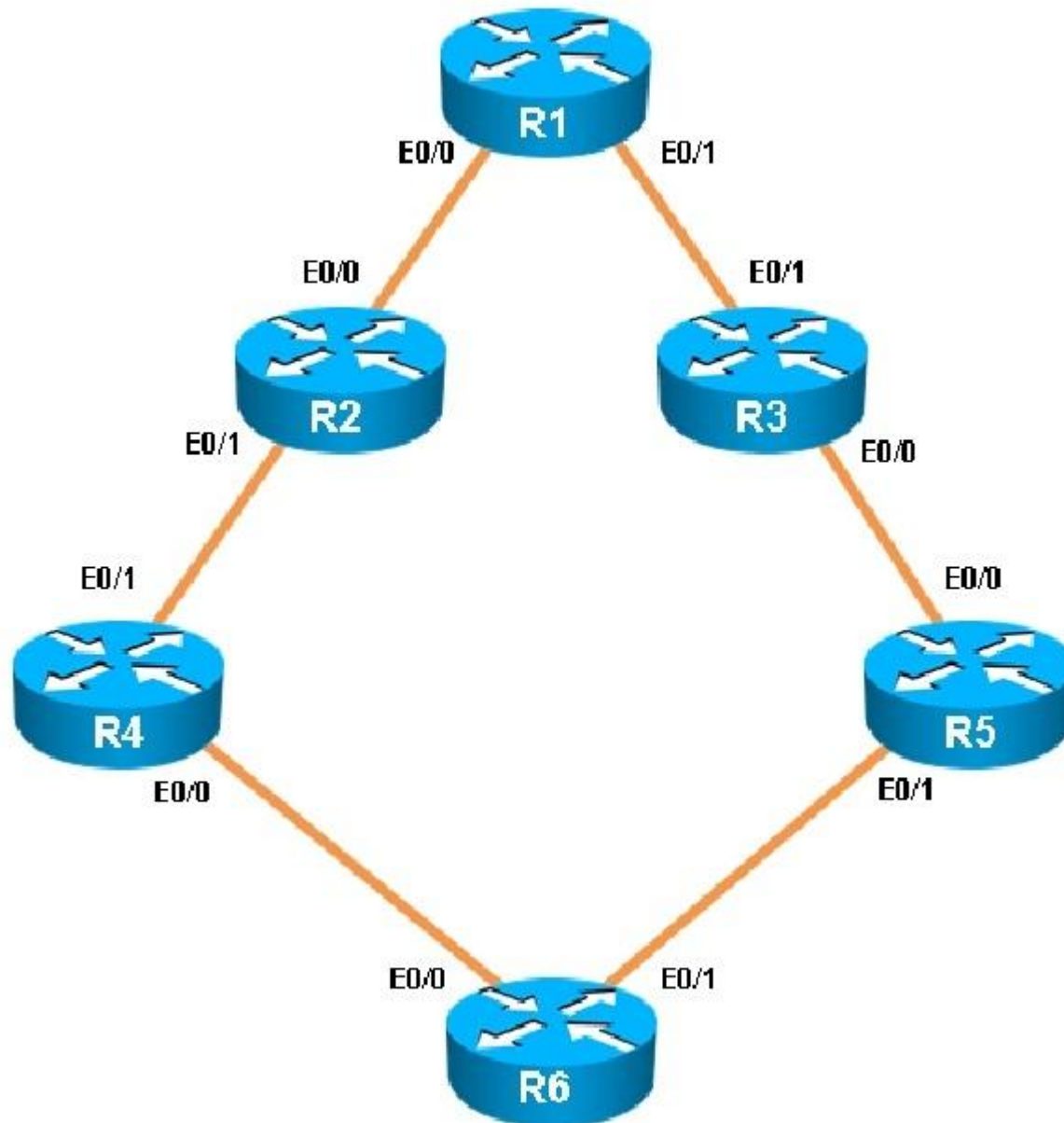
**Correct Answer:** C

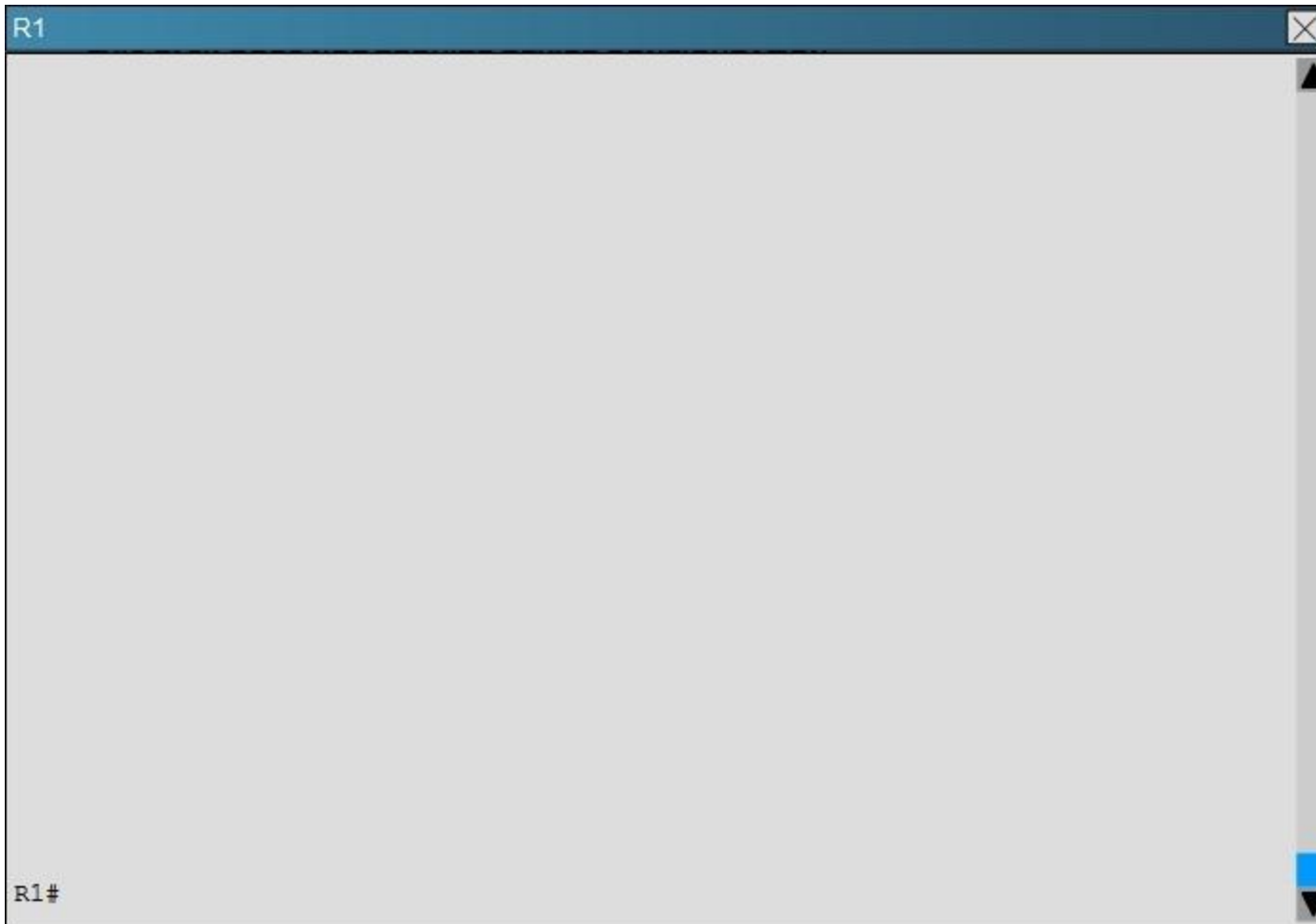
**Section:** (none)

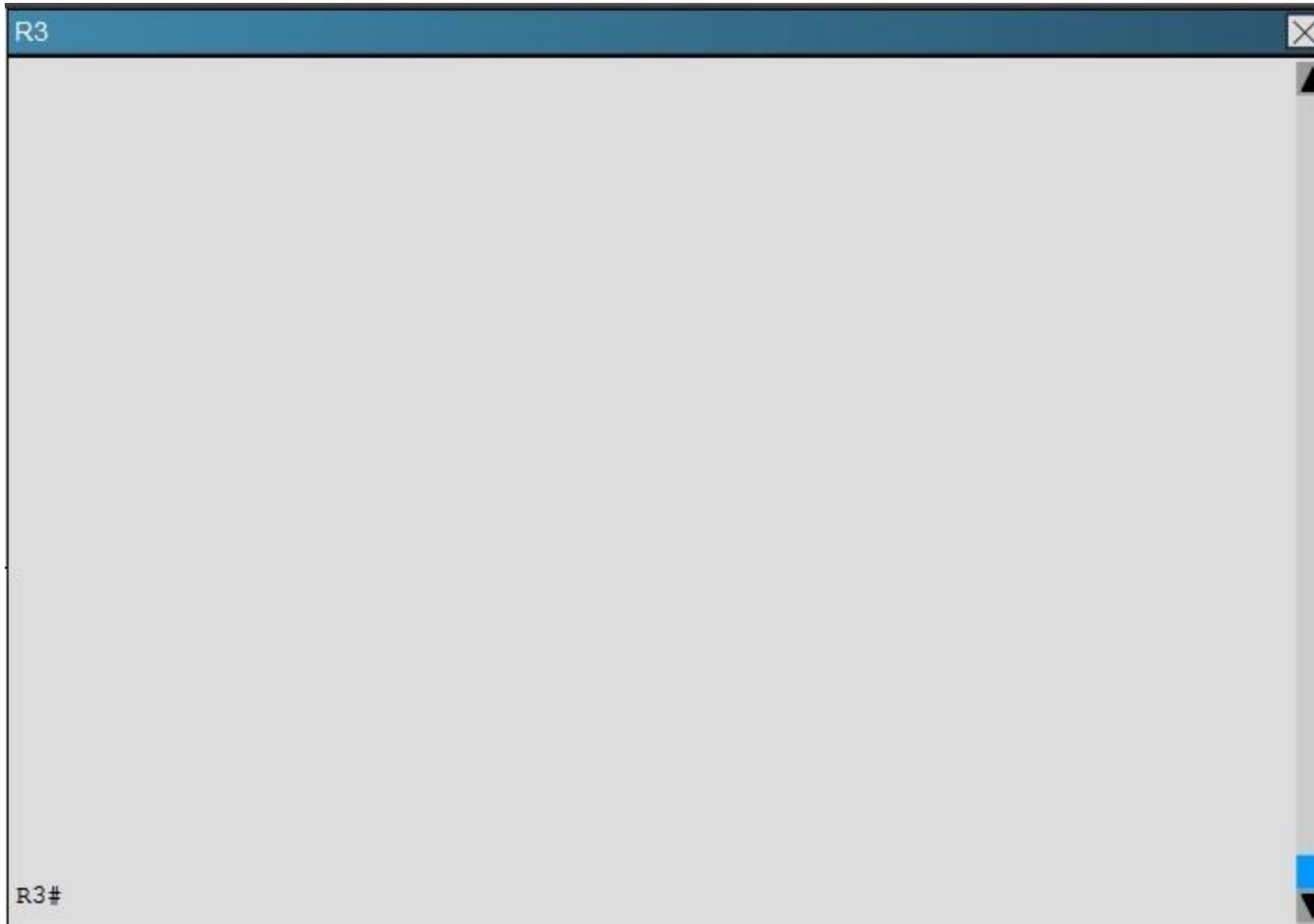
**Explanation**

**Explanation/Reference:****QUESTION 25**

You have been asked to evaluate how EIGRP is functioning in a customer network.









What percent of R1's interfaces bandwidth is EIGRP allowed to use?

- A. 10
- B. 20
- C. 30
- D. 40

**Correct Answer: B**



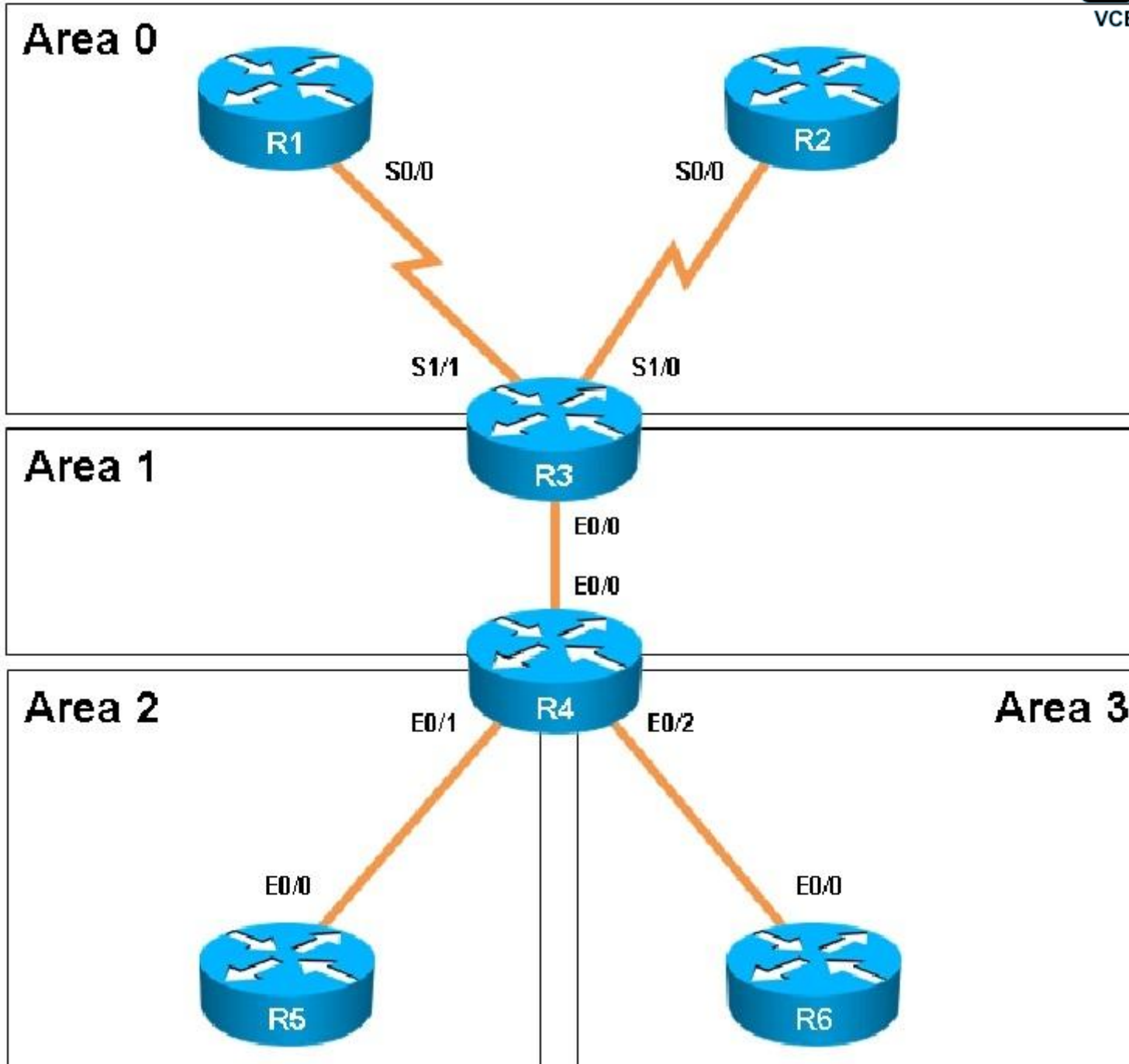
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**Explanation**

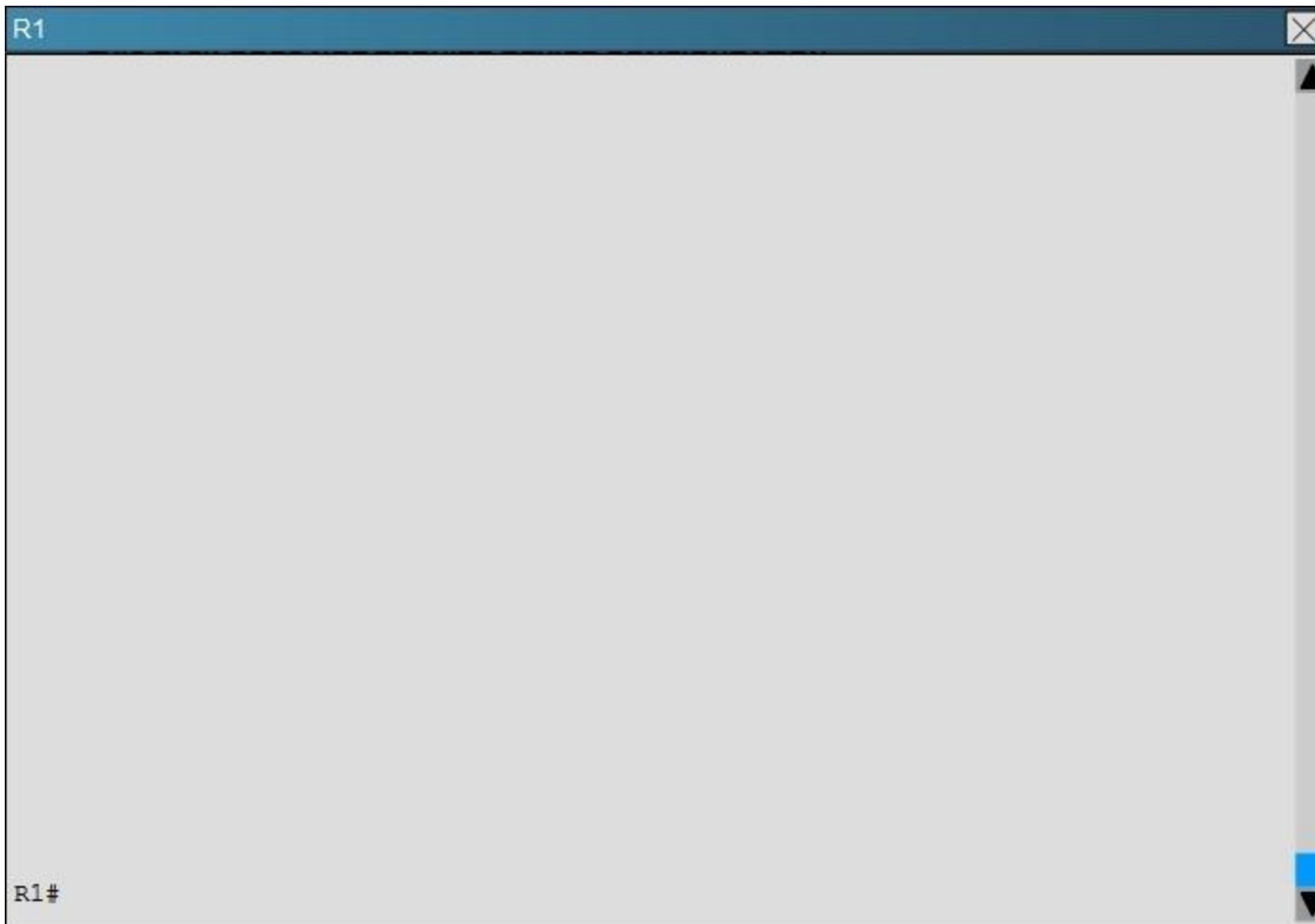
**Explanation/Reference:**

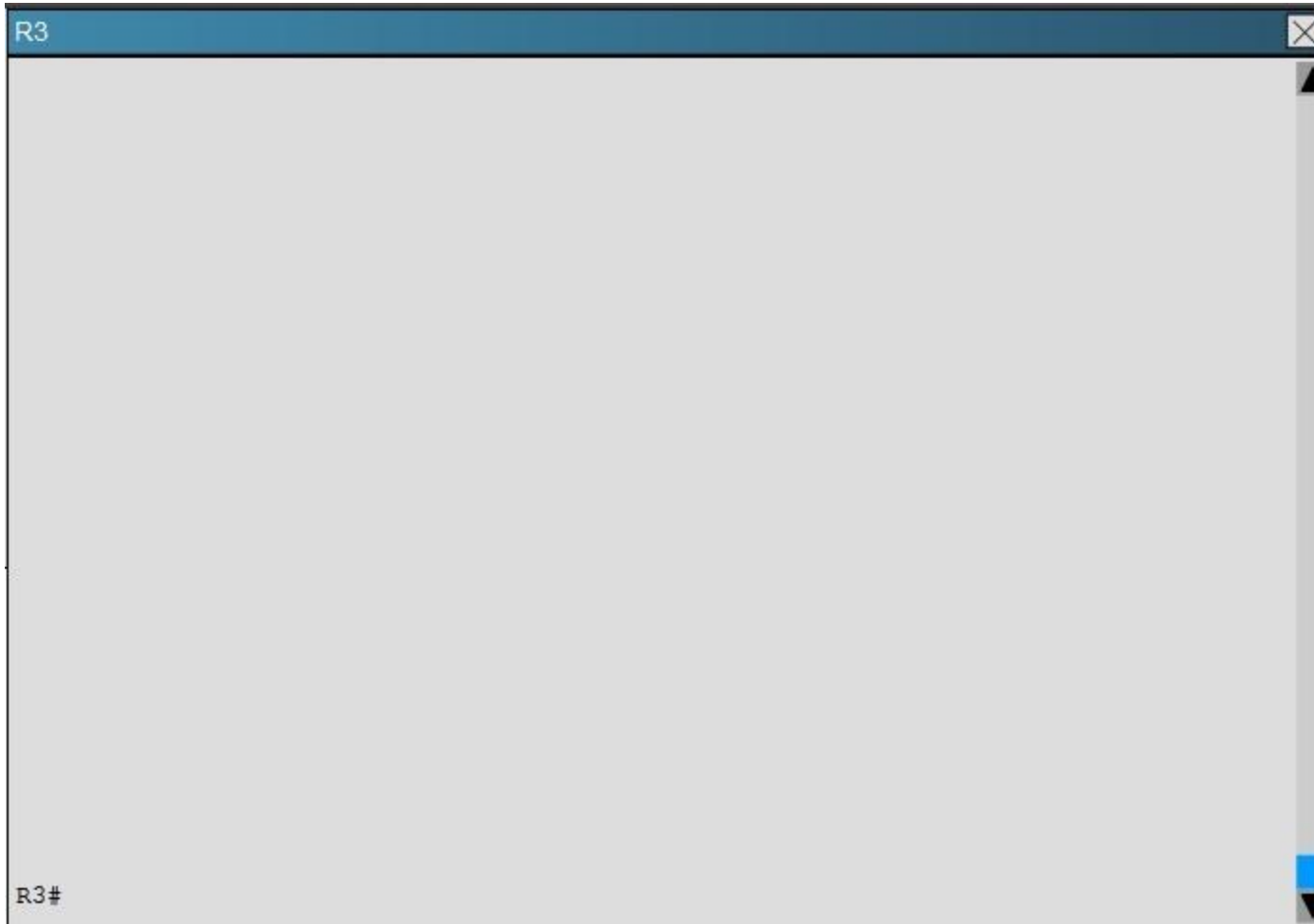
**QUESTION 26**

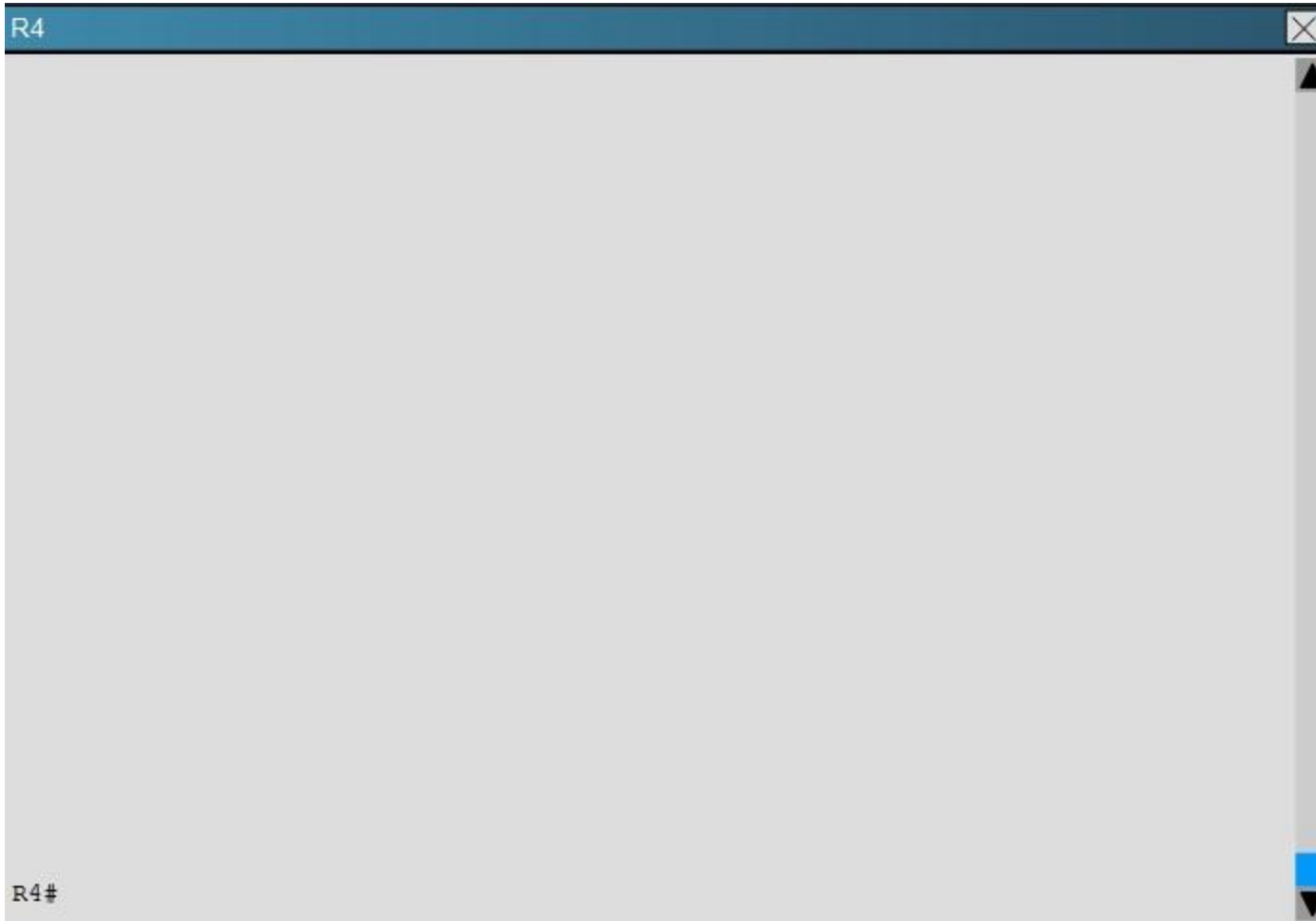
Scenario:

You have been asked to evaluate an OSPF network setup in a test lab and to answer questions a customer has about its operation. The customer has disabled your access to the show running-config command.









R5



R5#



Which of the following statements is true about the serial links that terminate in R3

- A. The R1-R3 link needs the neighbor command for the adjacency to stay up
- B. The R2-R3 link OSPF timer values are 30, 120, 120
- C. The R1-R3 link OSPF timer values should be 10,40,40
- D. R3 is responsible for flooding LSUs to all the routers on the network.

**Correct Answer: B**

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

**Explanation/Reference:**

#### **QUESTION 27**

Router A and Router B are configured with IPv6 addressing and basic routing capabilities using OSPFv3. The networks that are advertised from Router A do not show up in Router B's routing table. After debugging IPv6 packets, the message "not a router" is found in the output. Why is the routing information not being learned by Router B?

- A. OSPFv3 timers were adjusted for fast convergence.
- B. The networks were not advertised properly under the OSPFv3 process.
- C. An IPv6 traffic filter is blocking the networks from being learned via the Router B interface that is connected to Router A.
- D. IPv6 unicast routing is not enabled on Router A or Router B.

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

**Explanation/Reference:**

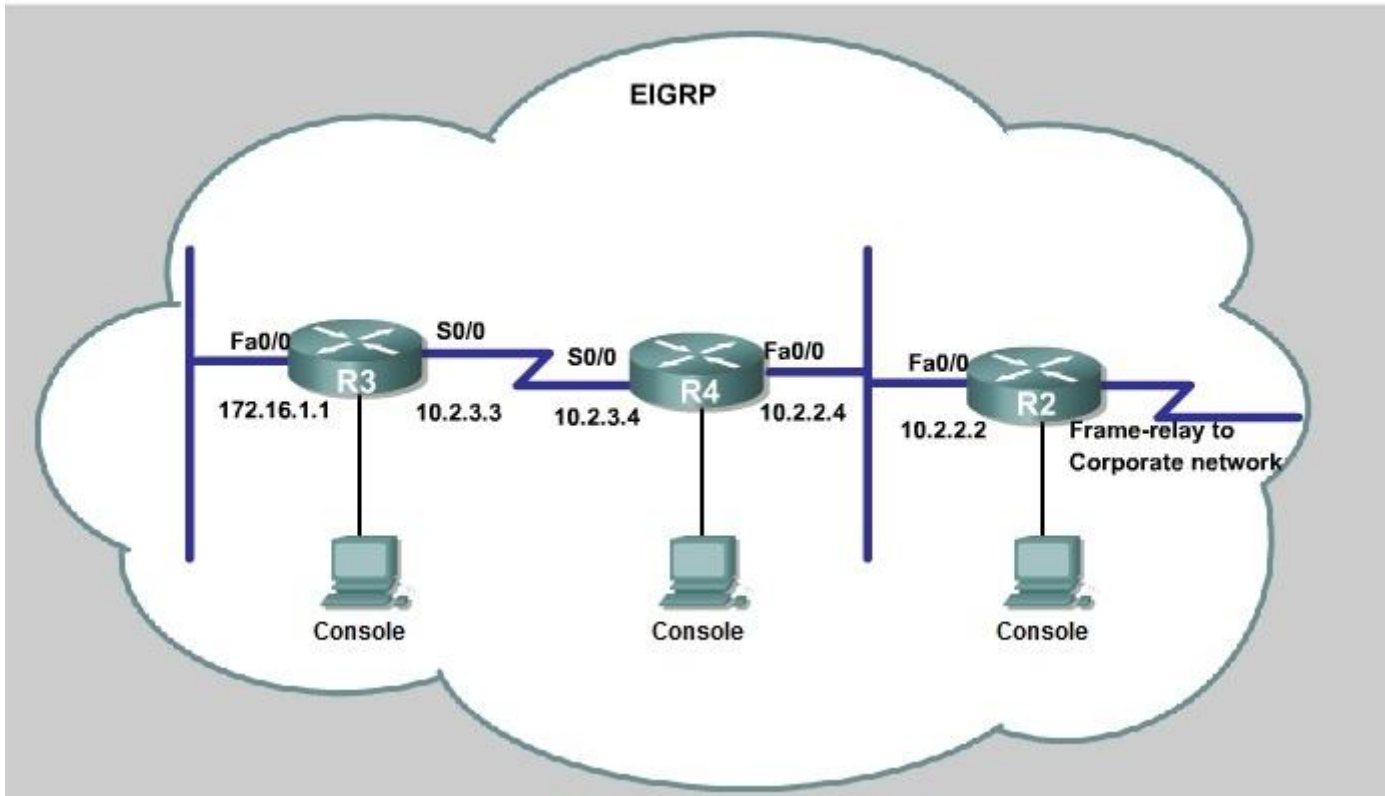
#### **QUESTION 28**

JS Industries has expanded their business with the addition of their first remote office. The remote office router (R3) was previously configured and all corporate subnets were reachable from R3. JS Industries is interested in using route summarization along with the EIGRP Stub Routing feature to increase network stability while reducing the memory usage and bandwidth utilization to R3. Another network professional was tasked with implementing this solution. However, in the process of configuring EIGRP stub routing connectivity with the remote network devices off of R3 has been lost.

Currently EIGRP is configured on all routers R2, R3, and R4 in the network. Your task is to identify and resolve the cause of connectivity failure with the remote office router R3. Once the issue has been resolved you should complete the task by configuring route summarization only to the remote office router R3.

You have corrected the fault when pings from R2 to the R3 LAN interface are successful, and the R3 IP routing table only contains 2 10.0.0.0 subnets.





```
R3
% Some configuration options may have changed
%LINK-3-UPDOWN: Interface FastEthernet0/1, changed state to administratively down
%LINK-3-UPDOWN: Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
%LINK-3-UPDOWN: Interface Serial0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0, changed state to up
Press RETURN to get started!
R3>
```

```
R4
% Some configuration options may have changed
%LINK-3-UPDOWN: Interface FastEthernet0/1, changed state to administratively down
%LINK-3-UPDOWN: Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
%LINK-3-UPDOWN: Interface Serial0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0, changed state to up
Press RETURN to get started!
R4>
```

```
R2
% Some configuration options may have changed
%LINK-3-UPDOWN: Interface FastEthernet0/1, changed state to administratively down
%LINK-3-UPDOWN: Interface Serial0/0, changed state to up
%LINK-3-UPDOWN: Interface Serial0/0.1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0.1, changed state to up
%LINK-3-UPDOWN: Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
Press RETURN to get started!
R2>
```

- A.
- B.
- C.
- D.

**Correct Answer:**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 29**

After you review the output of the command show ipv6 interface brief, you see that several IPv6 addresses have the 16-bit hexadecimal value of "FFFE"

inserted into the address. Based on this information, what do you conclude about these IPv6 addresses?

- A. IEEE EUI-64 was implemented when assigning IPv6 addresses on the device.
- B. The addresses were misconfigured and will not function as intended.
- C. IPv6 addresses containing "FFFE" indicate that the address is reserved for multicast.
- D. The IPv6 universal/local flag (bit 7) was flipped. E. IPv6 unicast forwarding was enabled, but IPv6 Cisco Express Forwarding was disabled.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 30

An engineer has configured a router to use EUI-64, and was asked to document the IPv6 address of the router. The router has the following interface parameters:

mac address C601.420F.0007

subnet 2001:DB8:0:1::/64

Which IPv6 addresses should the engineer add to the documentation?

- A. 2001:DB8:0:1:C601:42FF:FE0F:7
- B. 2001:DB8:0:1:FFFF:C601:420F:7
- C. 2001:DB8:0:1:FE80:C601:420F:7
- D. 2001:DB8:0:1:C601:42FE:800F:7

**Correct Answer:** A

**Section:** (none)

**Explanation**

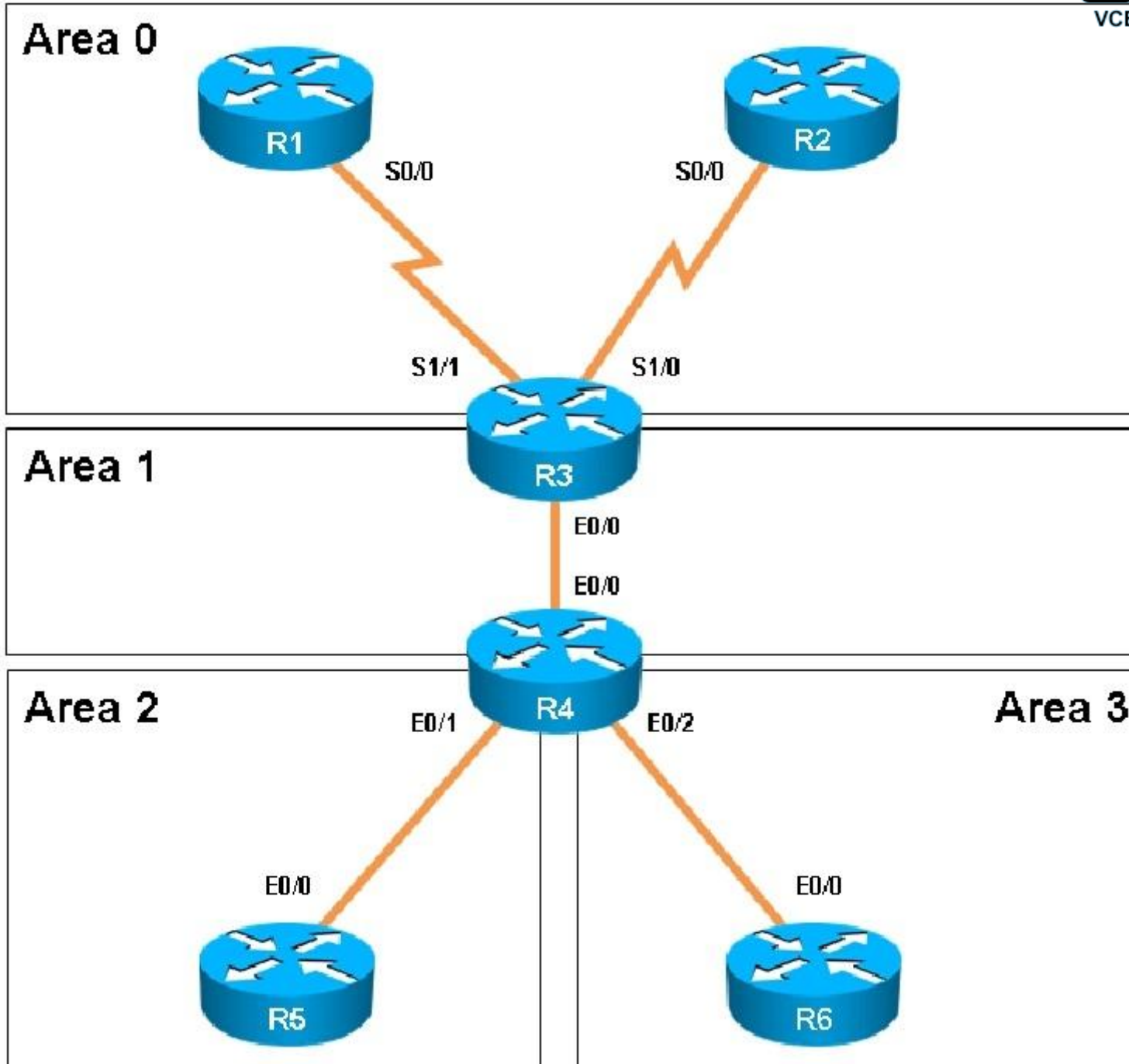
**Explanation/Reference:**

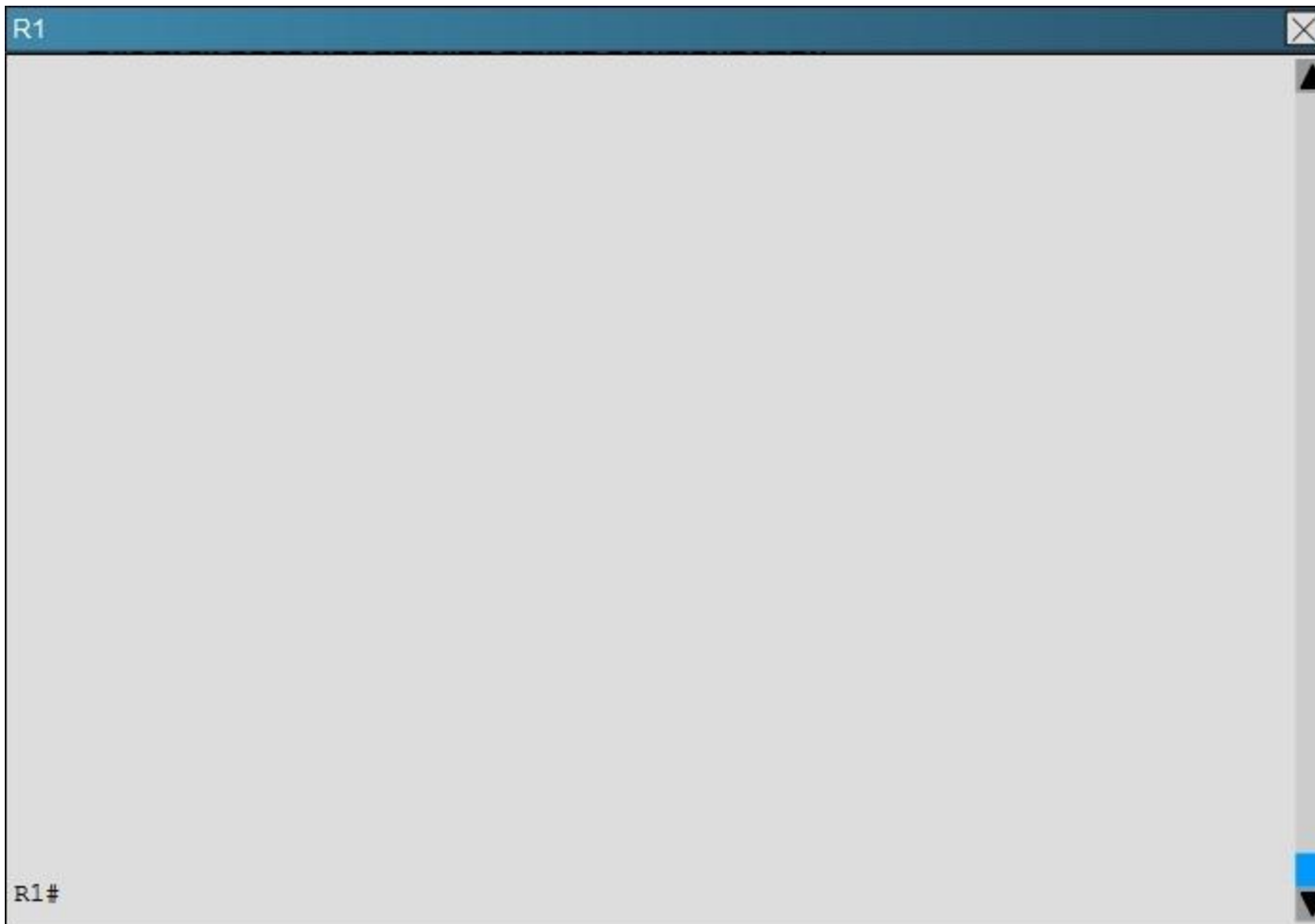
### QUESTION 31

Scenario:

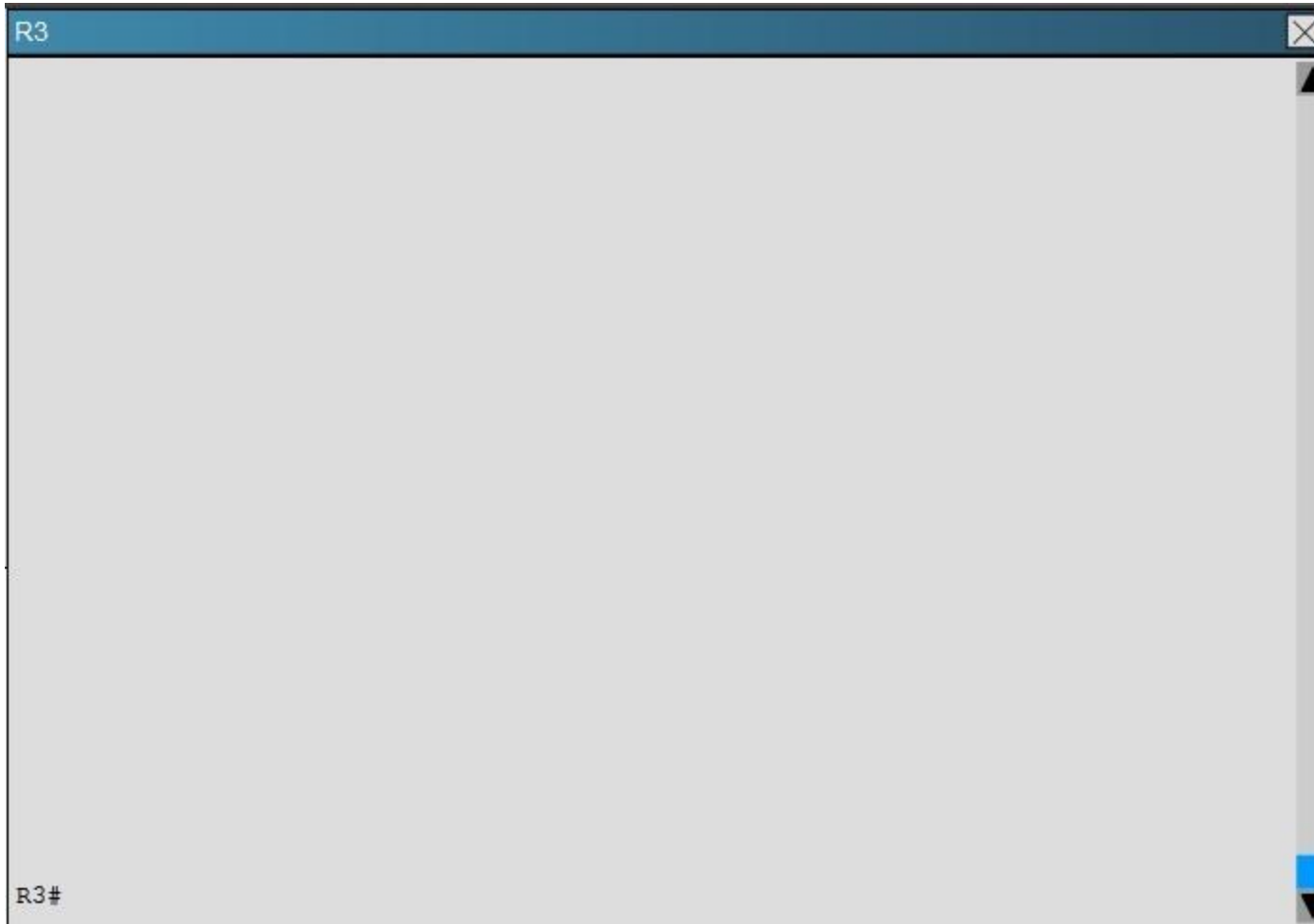
You have been asked to evaluate an OSPF network setup in a test lab and to answer questions a customer has about its operation. The customer has disabled your access to the show running-config command.

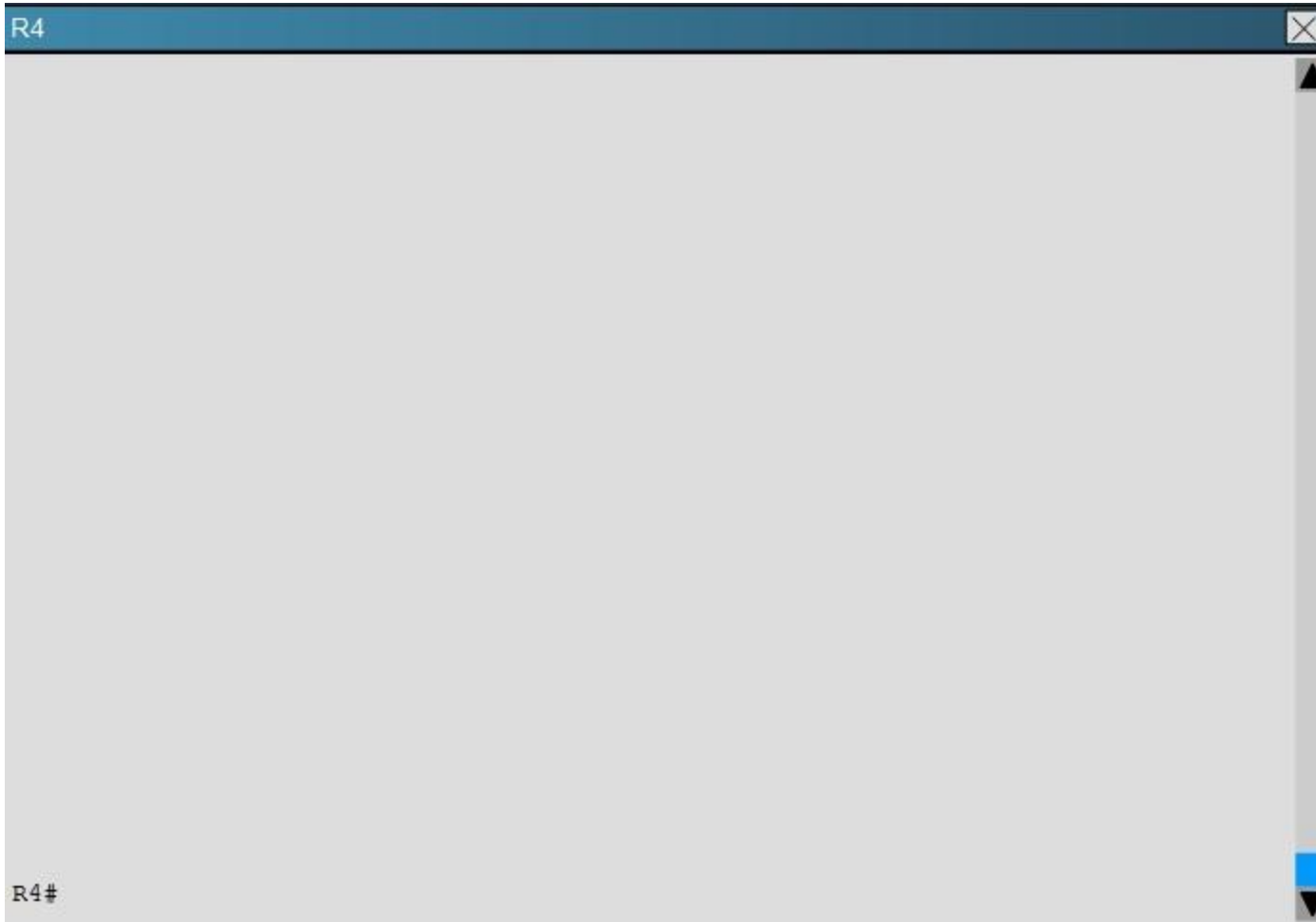








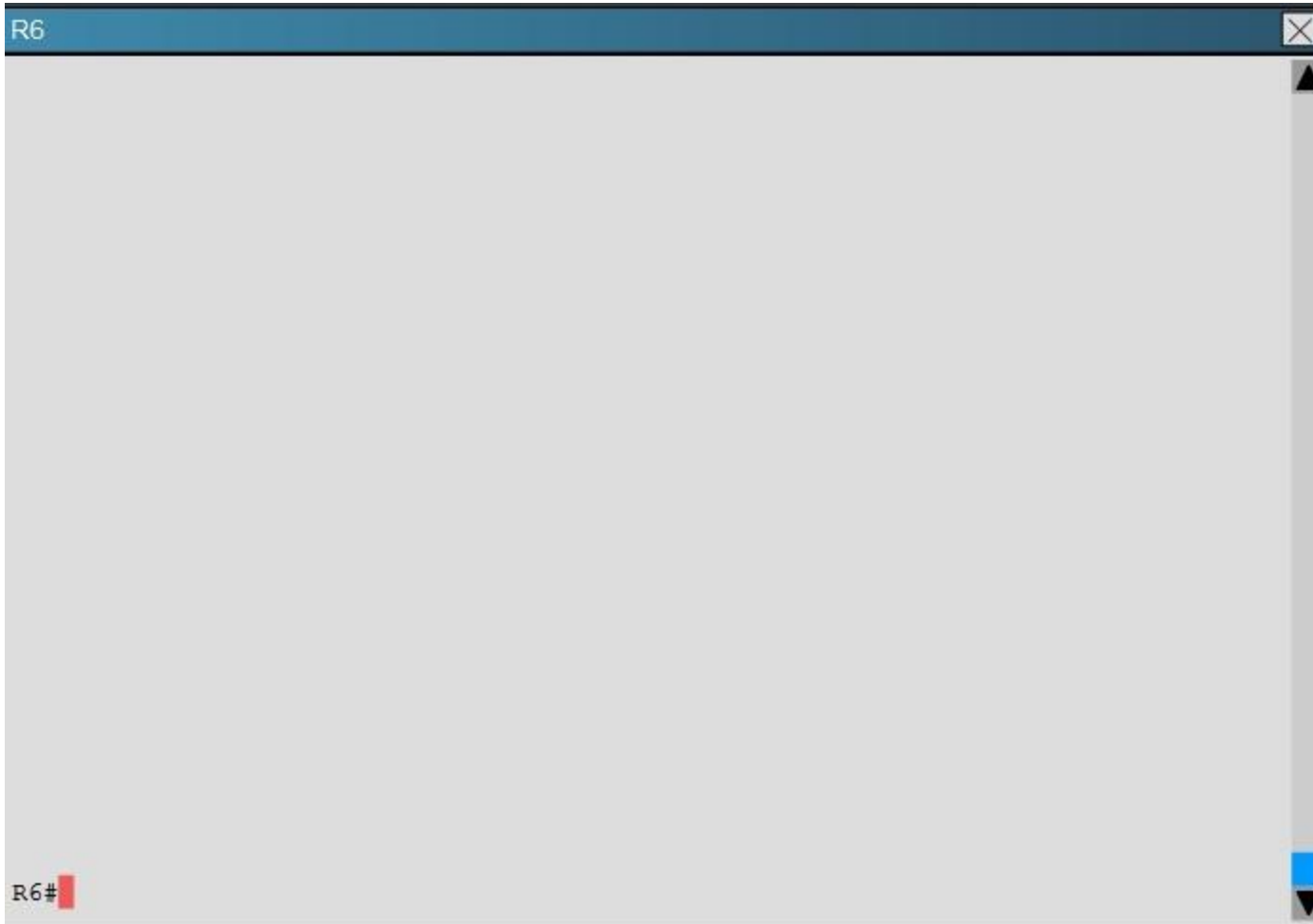




R5



R5#



How many times was SPF algorithm executed on R4 for Area 1?

- A. 1
- B. 5
- C. 9
- D. 20
- E. 54
- F. 224

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### **QUESTION 32**

Which prefix is matched by the command `ip prefix-list name permit 10.8.0.0/16 ge 24 le 24`?

- A. 10.9.1.0/24
- B. 10.8.0.0/24
- C. 10.8.0.0/16
- D. 10.8.0.0/23

**Correct Answer:** B

**Section:** (none)

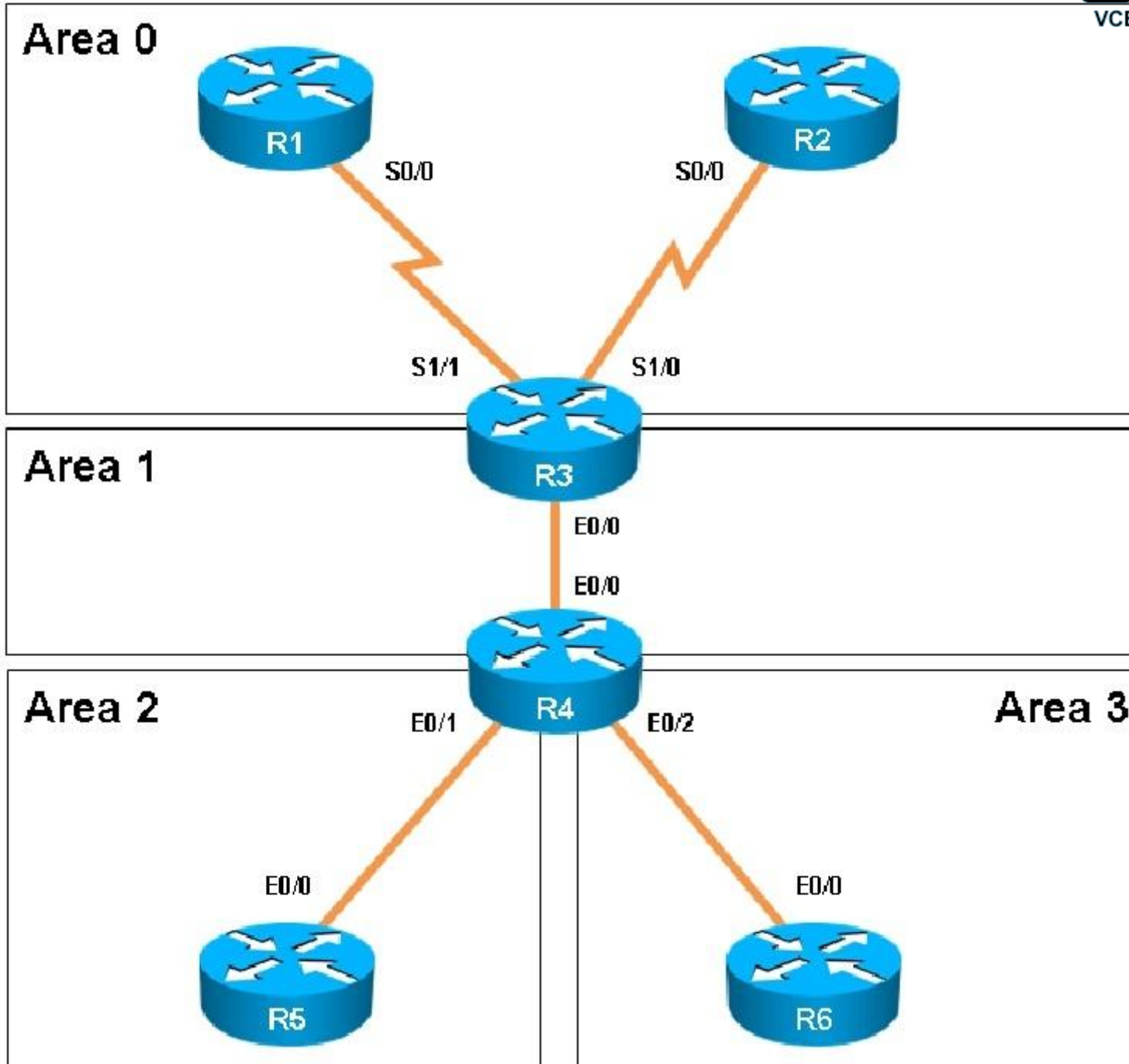
**Explanation**

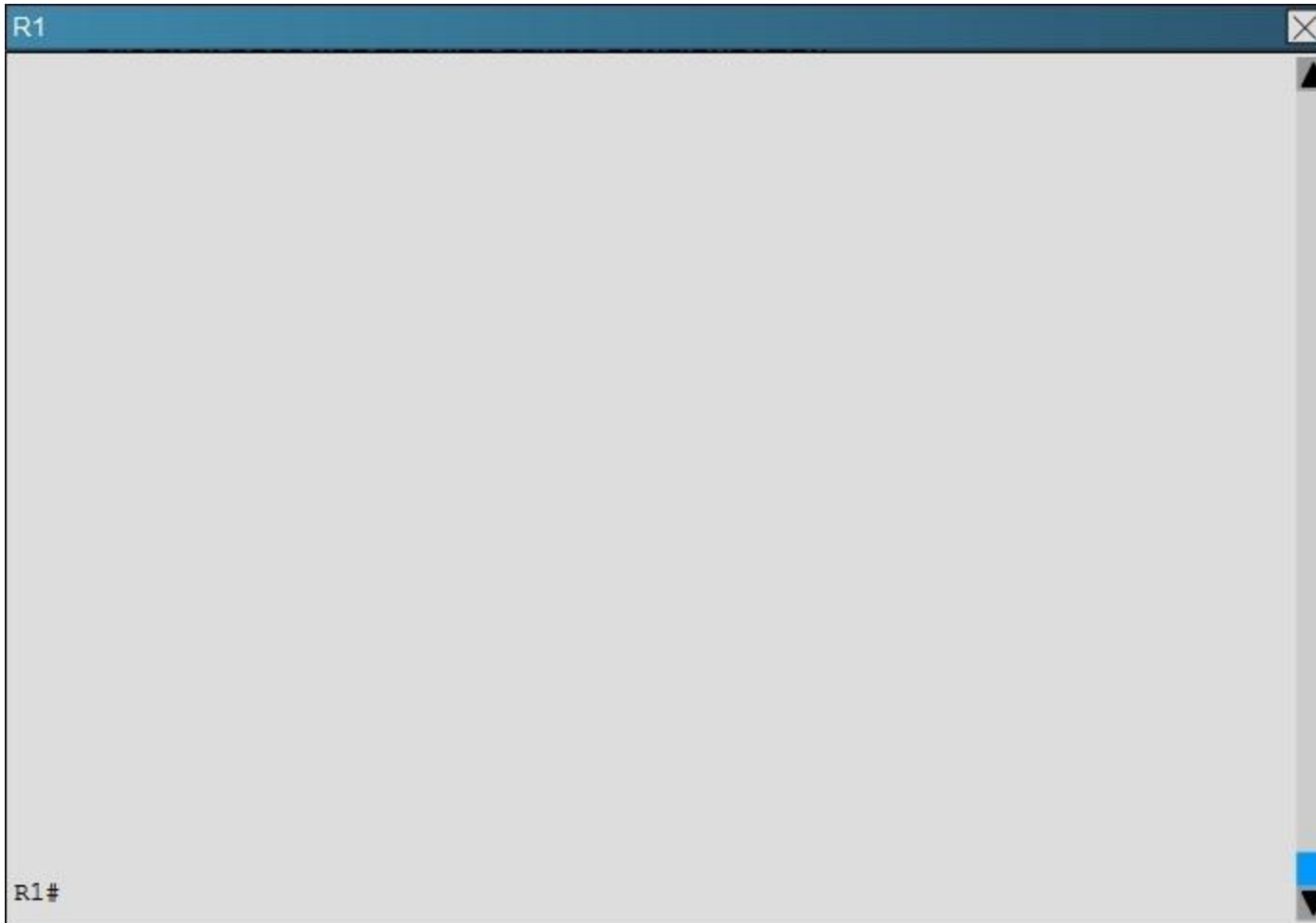
**Explanation/Reference:**

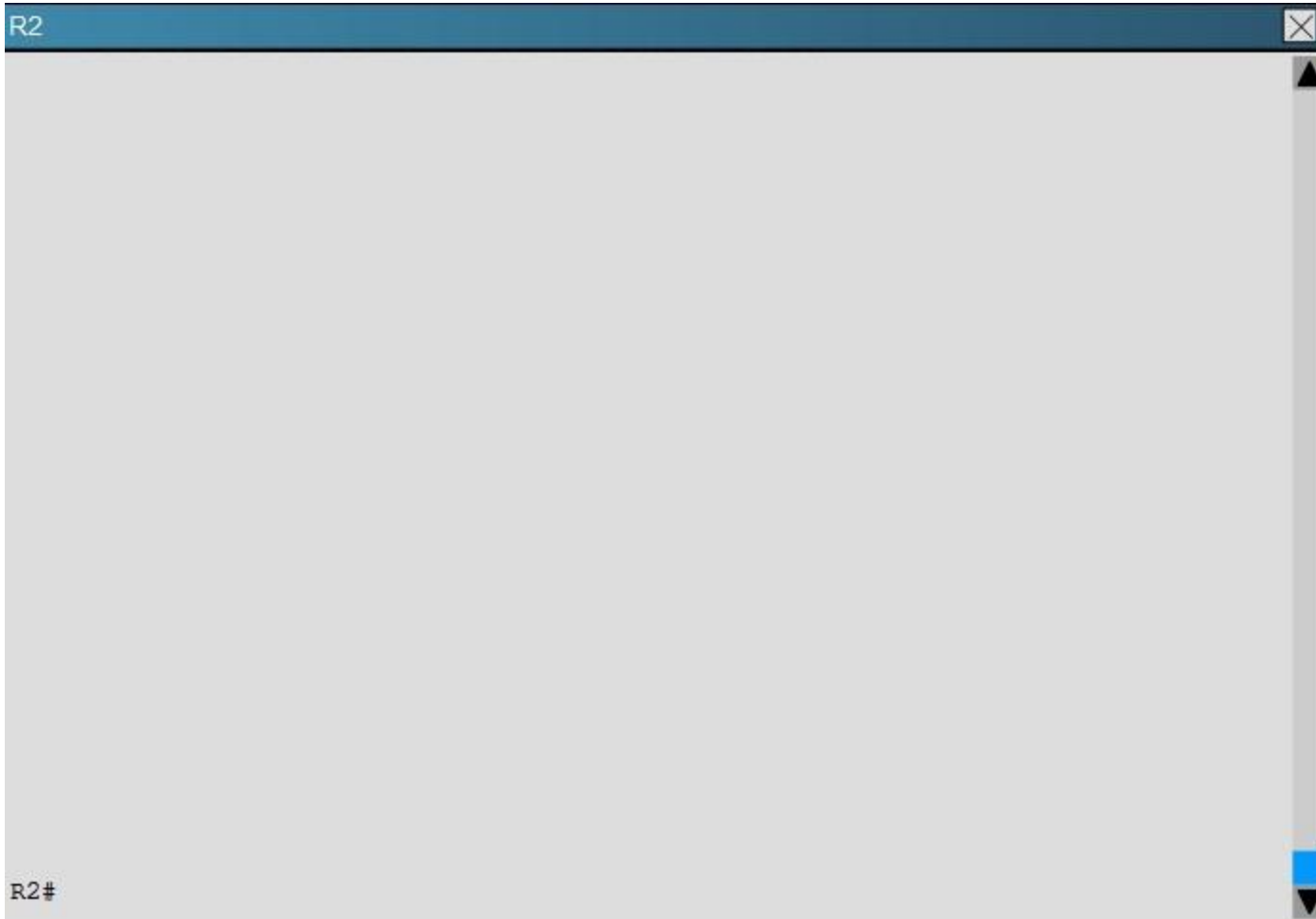
### **QUESTION 33**

Scenario:

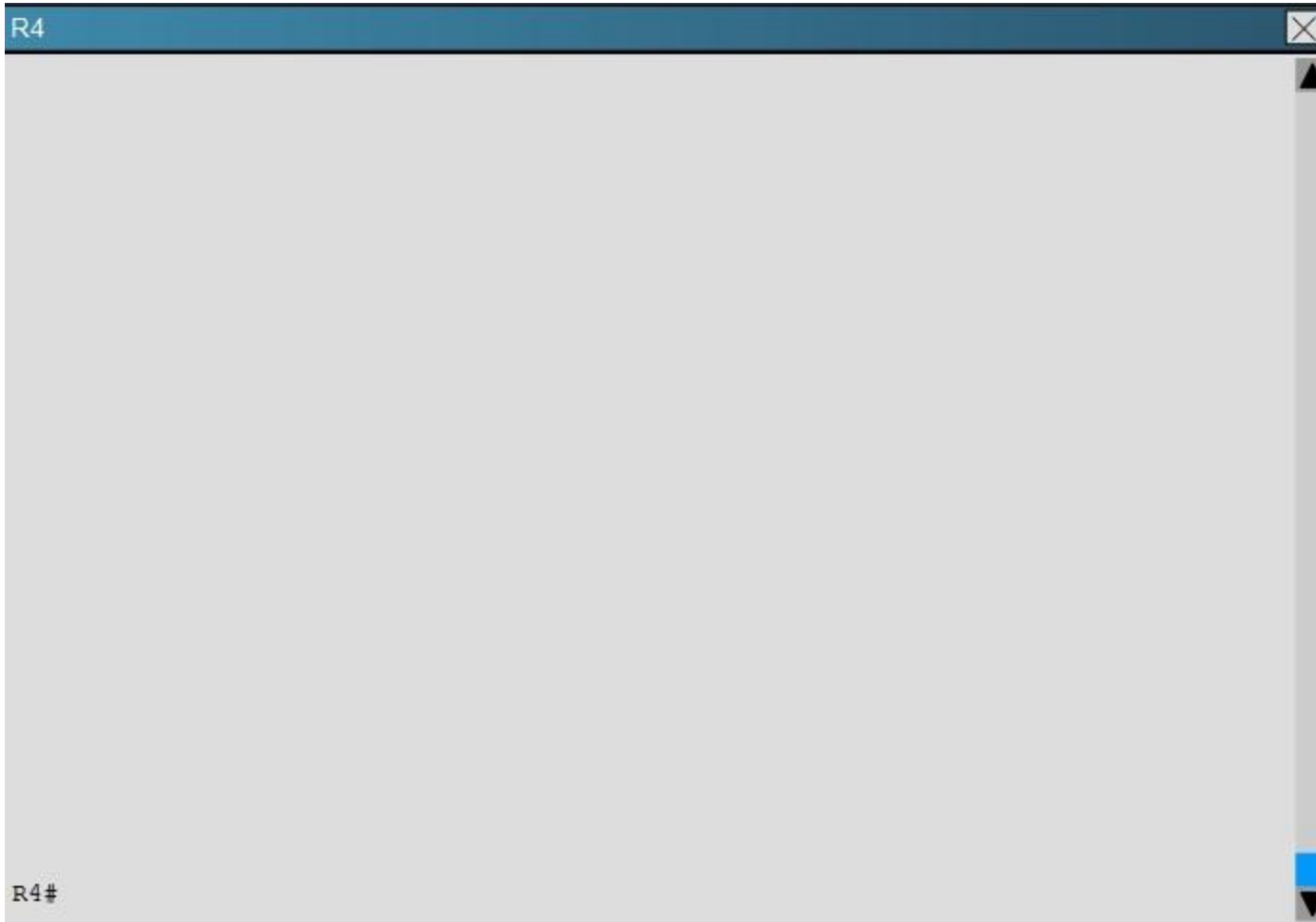
You have been asked to evaluate an OSPF network setup in a test lab and to answer questions a customer has about its operation. The customer has disabled your access to the `show running-config` command.













How old is the Type 4 LSA from Router 3 for area 1 on the router R5 based on the output you have examined?

- A. 1858
- B. 1601
- C. 600
- D. 1569

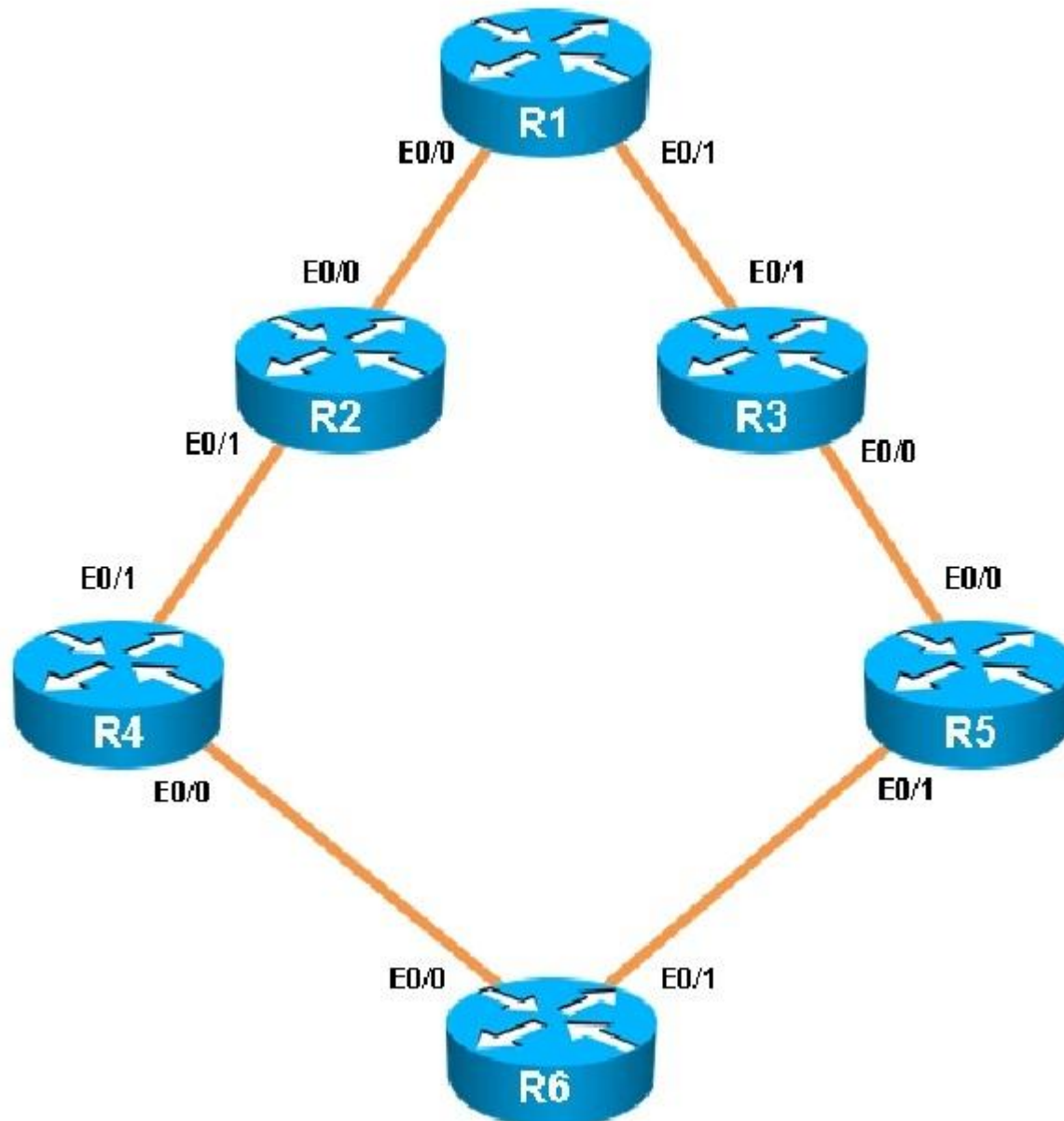
**Correct Answer: A**

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

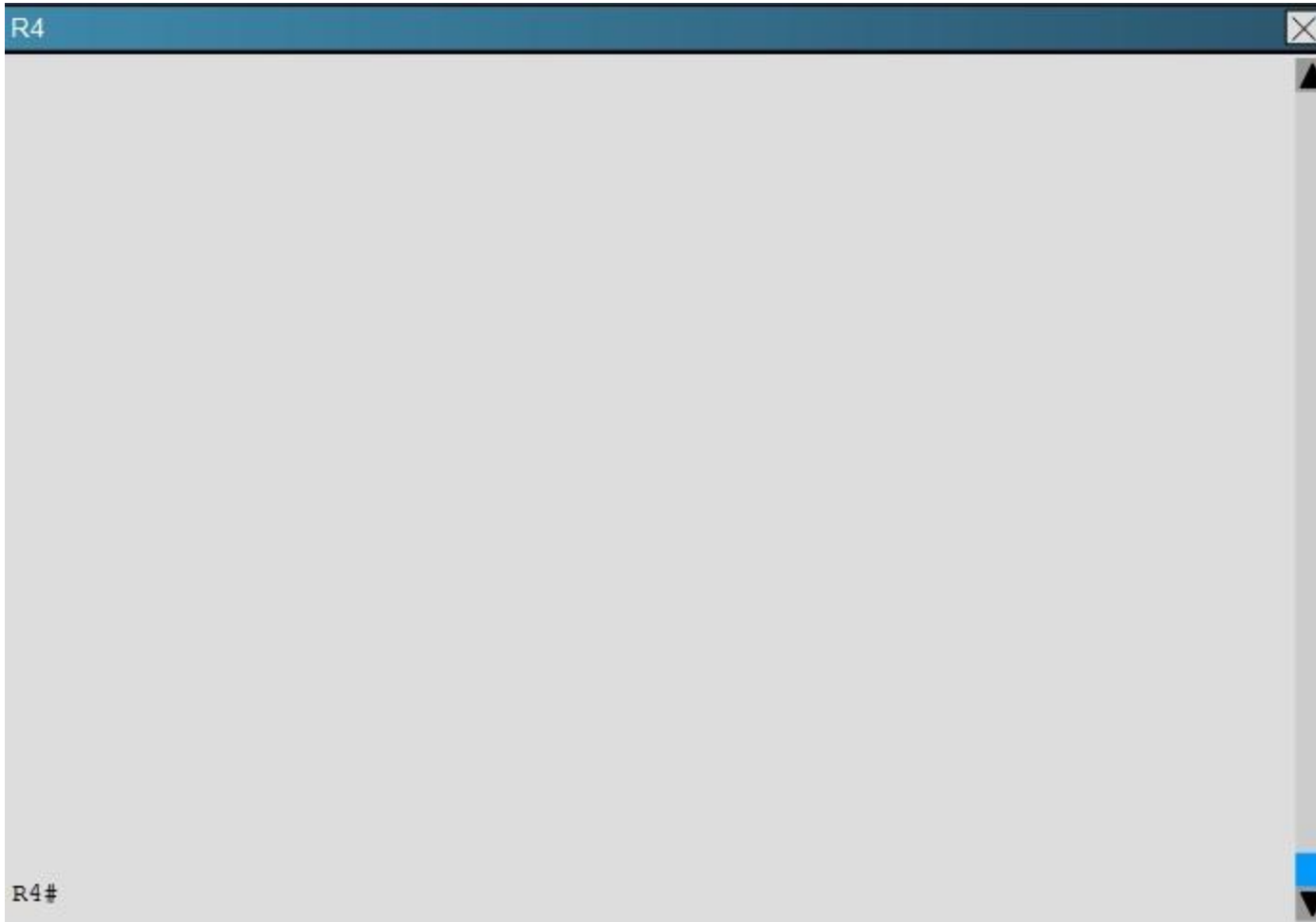
**Explanation/Reference:**

**QUESTION 34**

You have been asked to evaluate how EIGRP is functioning in a customer network.









What is the advertised distance for the 192.168.46.0 network on R1?

- A. 333056
- B. 1938688
- C. 1810944
- D. 307456

**Correct Answer: C**

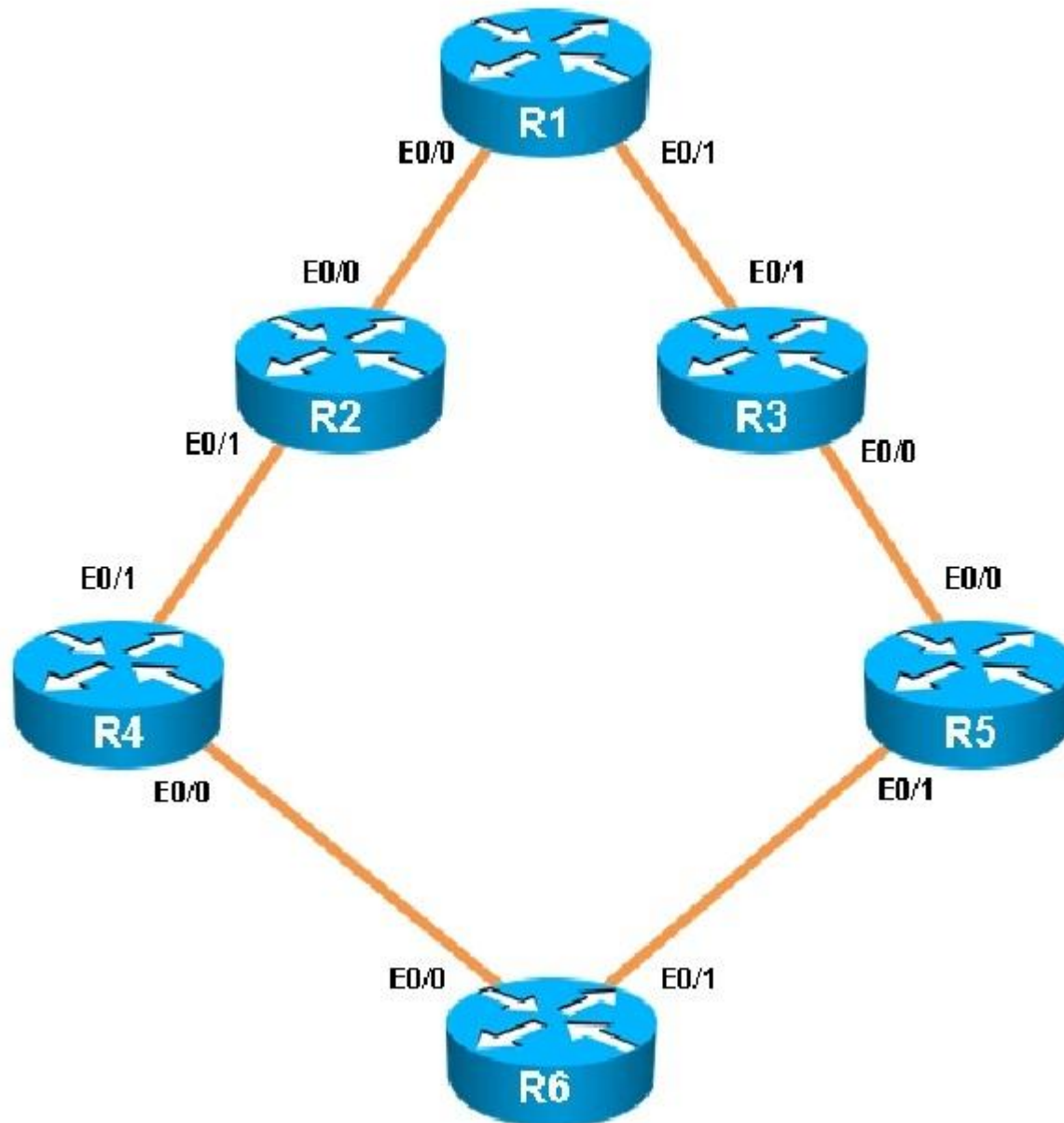
**Section: (none)**  
**Explanation**

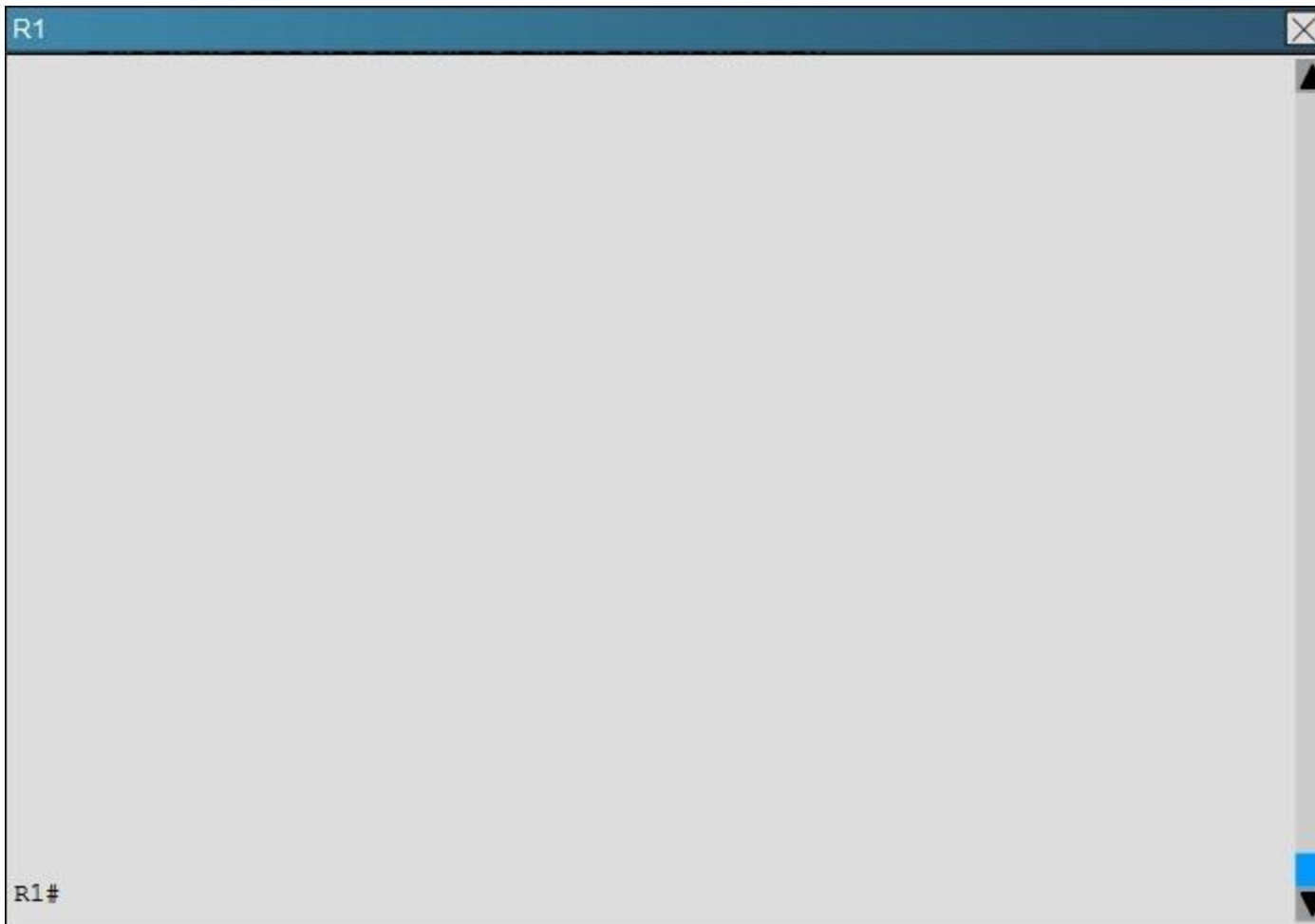
**Explanation/Reference:**

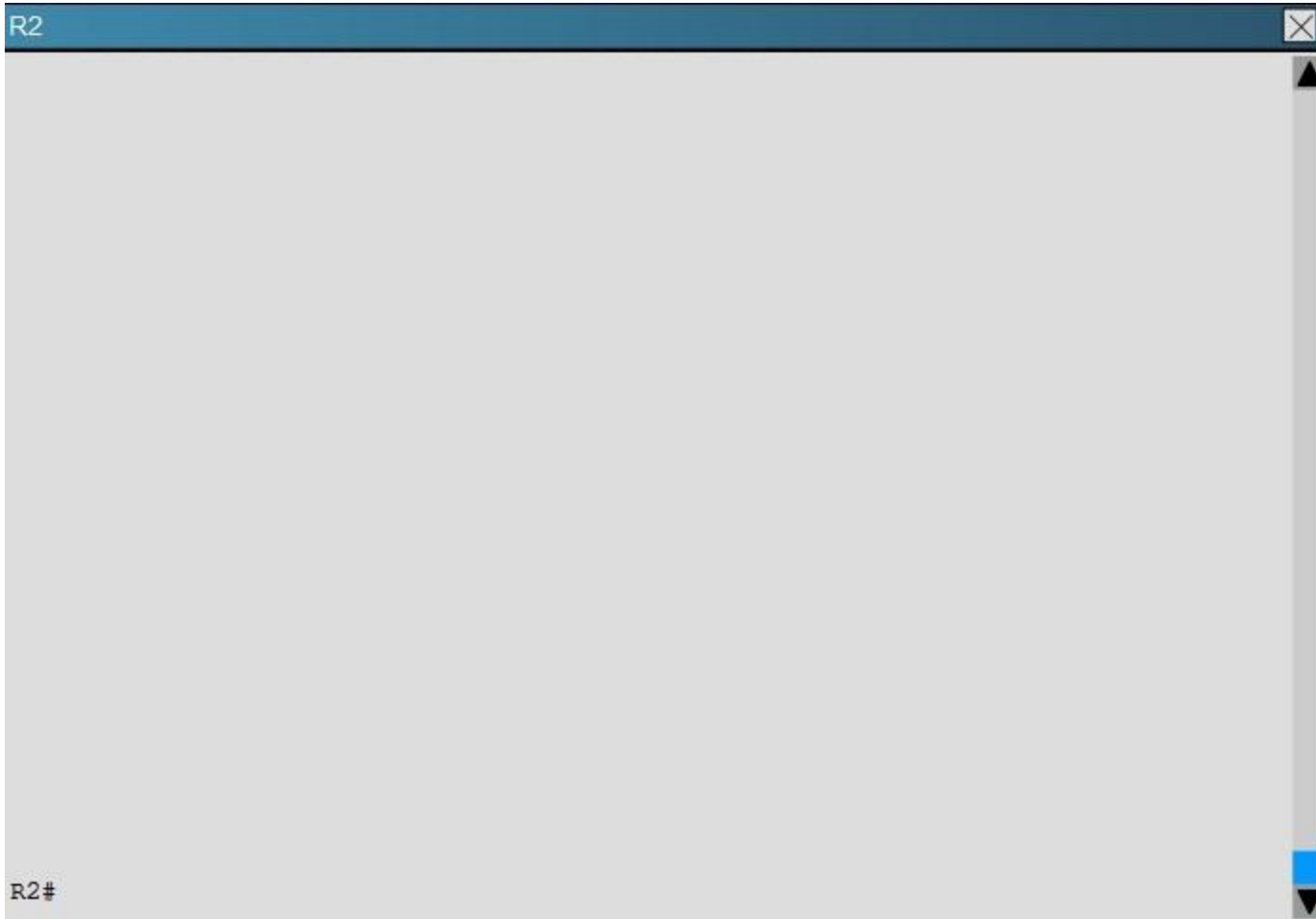
**QUESTION 35**

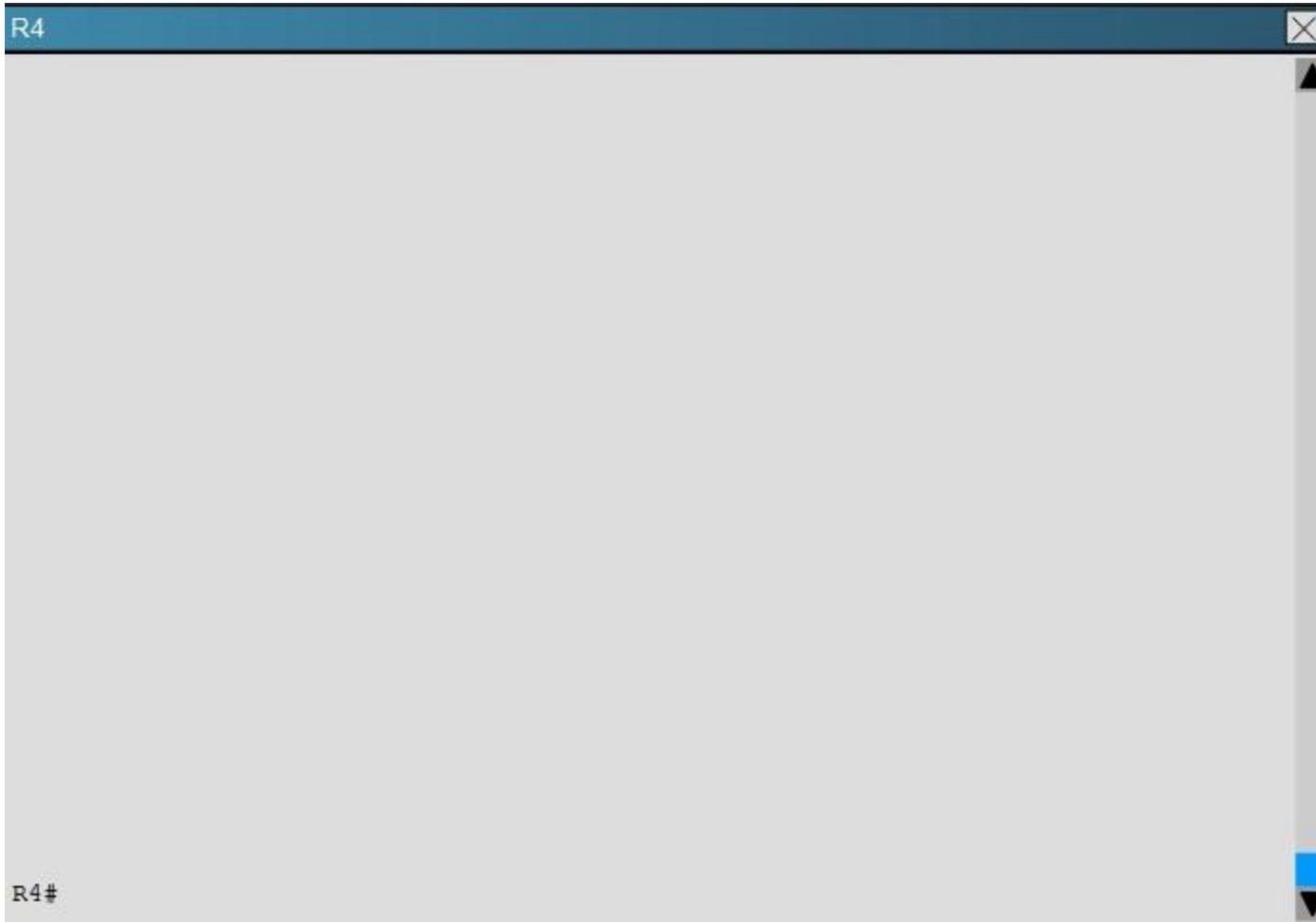
You have been asked to evaluate how EIGRP is functioning in a customer network.

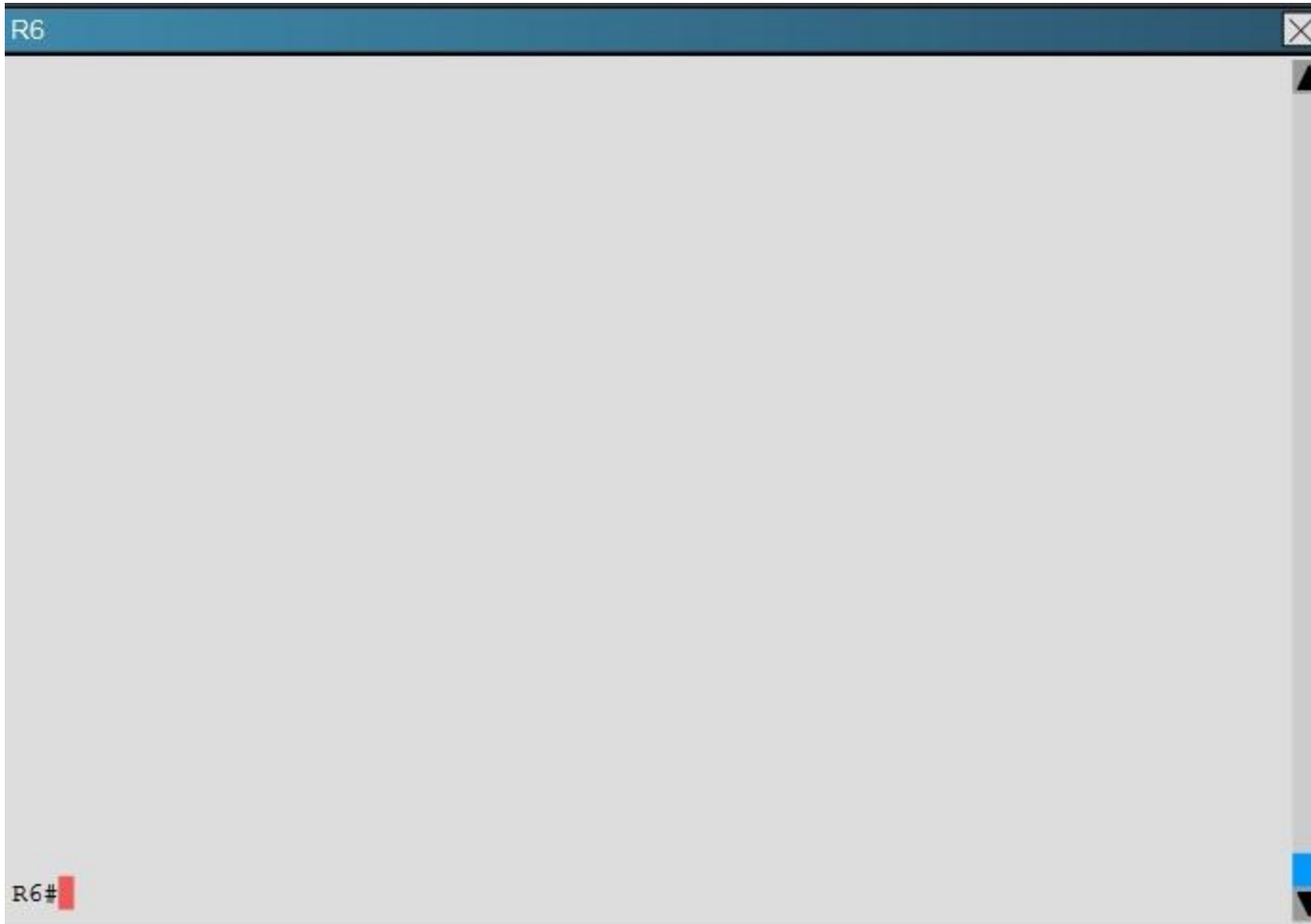












Which key chain is being used for authentication of EIGRP adjacency between R4 and R2?

- A. CISCO
- B. EIGRP
- C. key
- D. MD5

**Correct Answer: A**

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

**Explanation/Reference:**

Explanation: R4 and R2 configs are as shown below:



Clearly we see the actual key chain is named CISCO.

### QUESTION 36

A packet capture log indicates that several router solicitation messages were sent from a local host on the IPv6 segment. What is the expected acknowledgment and its usage?

- A. Router acknowledgment messages will be forwarded upstream, where the DHCP server will allocate addresses to the local host.
- B. Routers on the IPv6 segment will respond with an advertisement that provides an external path from the local subnet, as well as certain data, such as prefix discovery.
- C. Duplicate Address Detection will determine if any other local host is using the same IPv6 address for communication with the IPv6 routers on the segment.
- D. All local host traffic will be redirected to the router with the lowest ICMPv6 signature, which is statically defined by the network administrator.

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 37

Refer to the exhibit.

```
access-list 1 permit 1.0.0.0  
0.255.255.255  
access-list 2 permit 1.2.3.0  
0.0.0.255  
!  
router rip
```

Which command only announces the 1.2.3.0/24 network out of FastEthernet 0/0?

- A. distribute list 1 out
- B. distribute list 1 out FastEthernet0/0
- C. distribute list 2 out
- D. distribute list 2 out FastEthernet0/0



**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 38

Route.com is a small IT corporation that is attempting to implement the network shown in the exhibit. Currently the implementation is partially completed. OSPF has been configured on routers Chicago and NewYork. The SO/O interface on Chicago and the SO/1 interface on NewYork are in Area 0. The loopbackO interface on NewYork is in Area 1. However, they cannot ping from the serial interface of the Seattle router to the loopback interface of the NewYork router. You have been asked to complete the implementation to allow this ping.

ROUTE.com's corporate implementation guidelines require:

- The OSPF process ID for all routers must be 10.

The routing protocol for each interface must be enabled under the routing process.

- The routing protocol must be enabled for each interface using the most specific wildcard mask possible.

- The serial link between Seattle and Chicago must be in OSPF area 21.

- OSPF area 21 must not receive any inter-area or external routes.

Network Information

Seattle

S0/0 192.168.16.5/30 - Link between Seattle and Chicago

Secret Password: cisco

Chicago

S0/0 192.168.54.9/30 - Link between Chicago and NewYork

S0/1 192.168.16.6/30 - Link between Seattle and Chicago Secre

Password: cisco

NewYork

S0/1 192.168.54.10/30 - Link between Chicago and NewYork

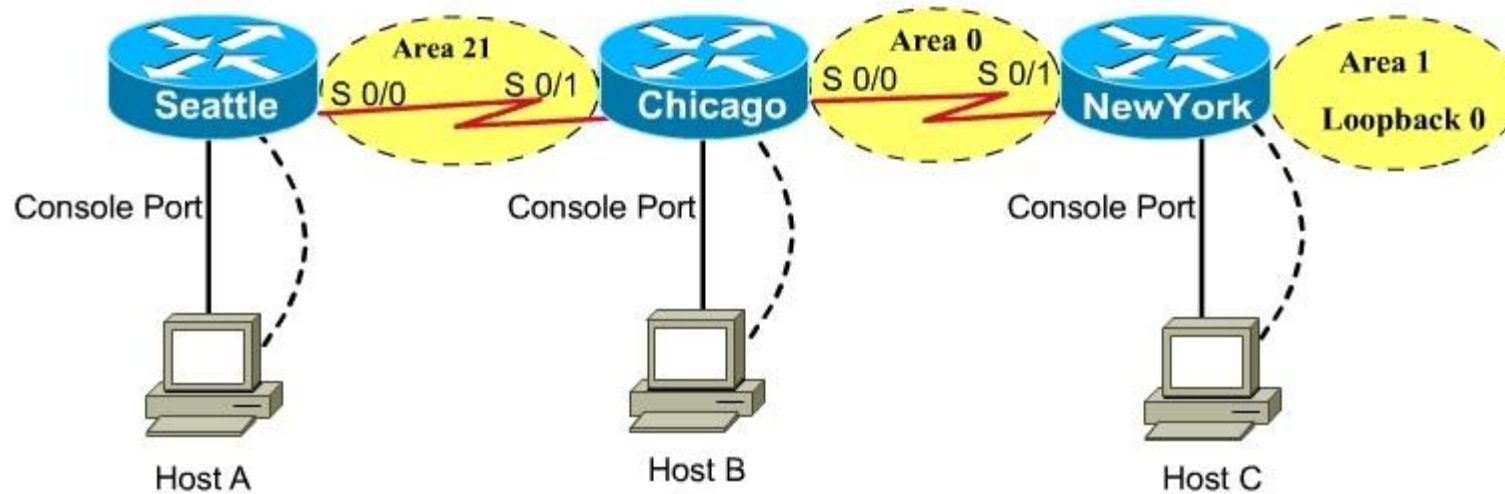
Loopback0 172.16.189.189

Secret Password: cisco

**Name : Seattle**  
**S0/0 : 192.168.16.5/30**  
**Secret Password : cisco**

**Name : Chicago**  
**S0/0 : 192.168.54.9/30**  
**S0/1 : 192.168.16.6/30**  
**Secret Password : cisco**

**Name : NewYork**  
**S0/1 : 192.168.54.10/30**  
**Loopback0 : 172.16.189.189/32**



```
Seattle con0 is now available
```

```
Press RETURN to get started.
```

```
Seattle>
```

**CiscoTerminal**

Chicago con0 is now available

Press RETURN to get started.

Chicago>

**CiscoTerminal**

```
NewYork con0 is now available
```

```
Press RETURN to get started.
```

```
NewYork#
```

- A.
- B.
- C.
- D.

**Correct Answer:**

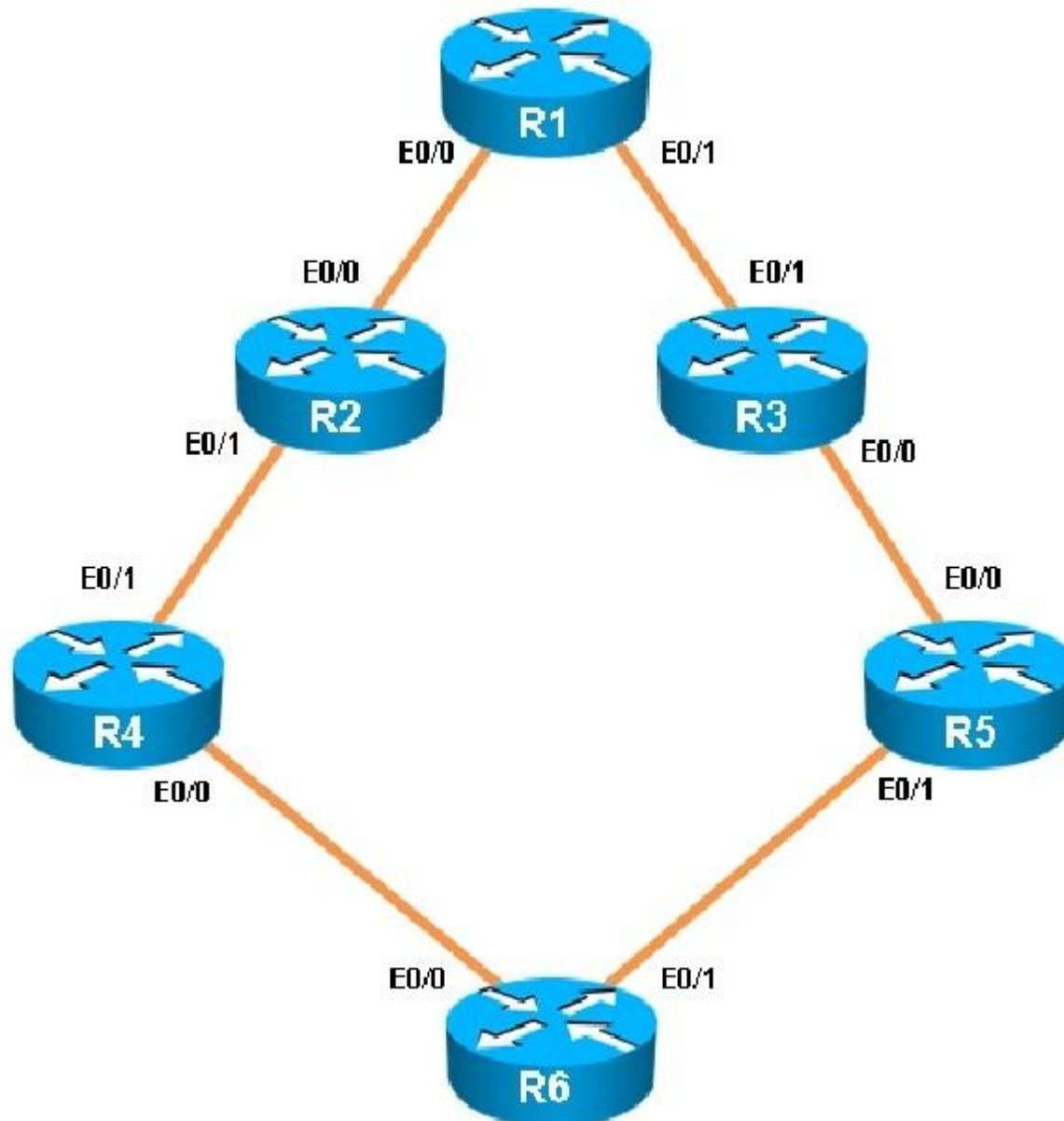
**Section: (none)**

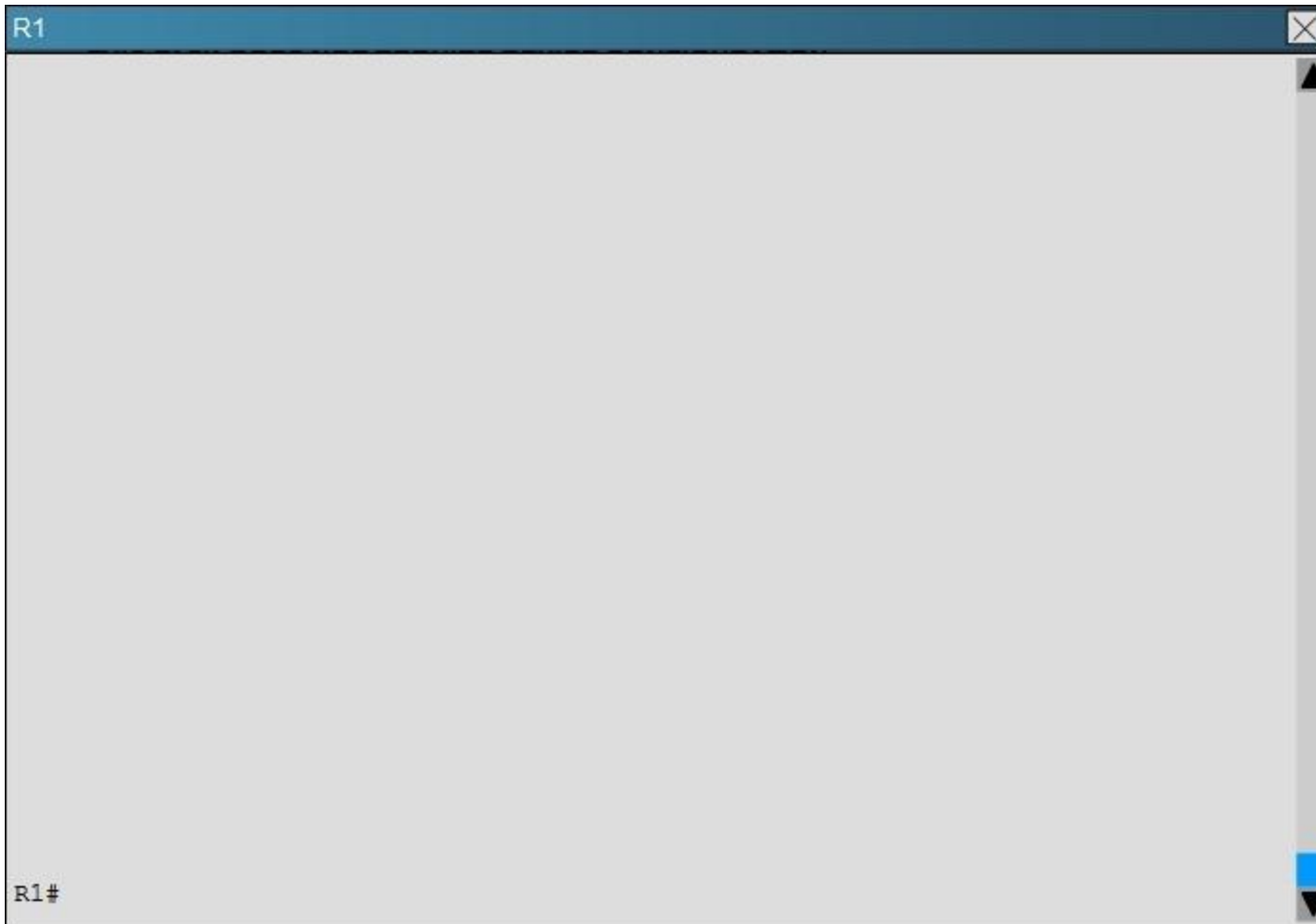
**Explanation**

**Explanation/Reference:**

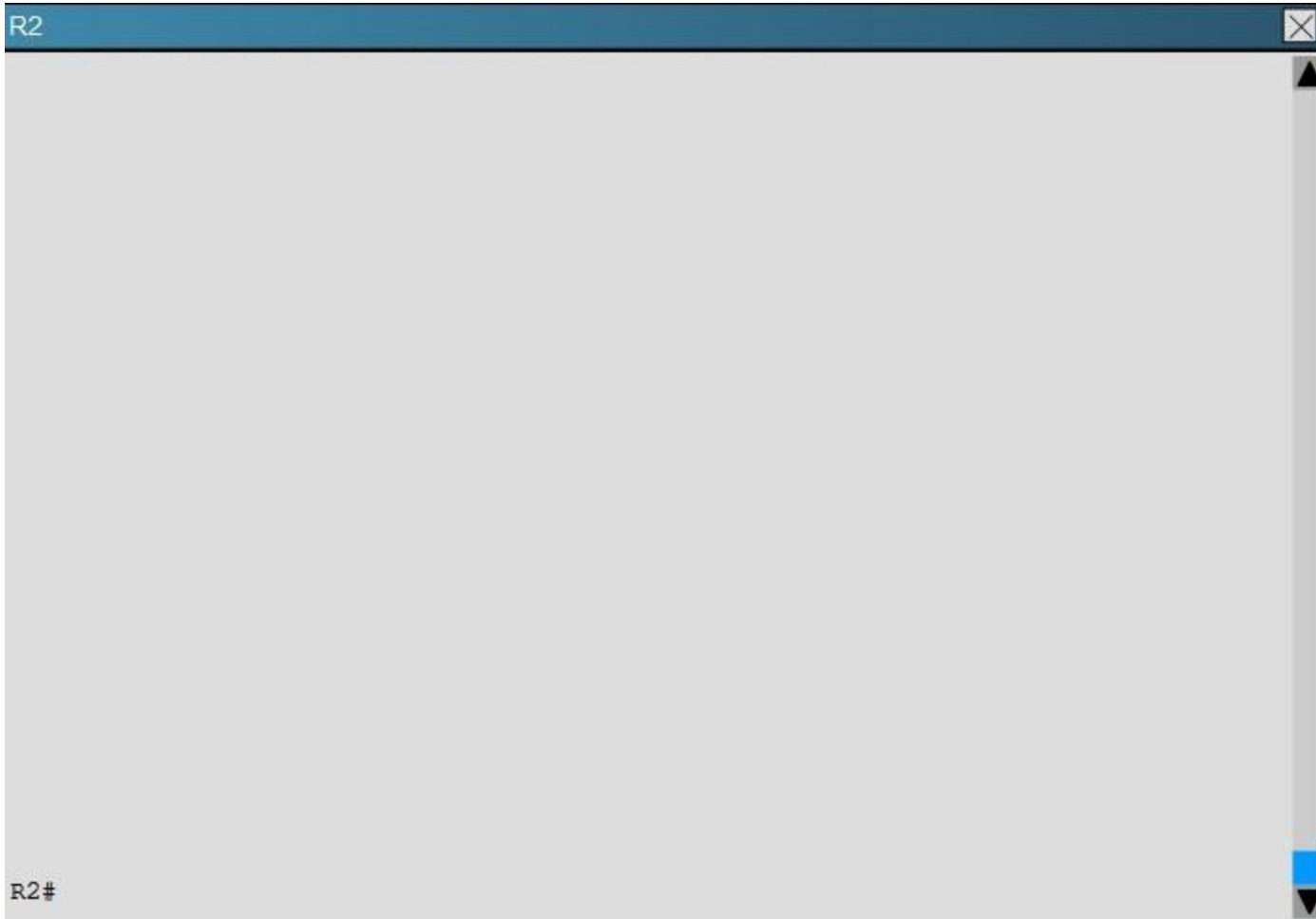
**QUESTION 39**

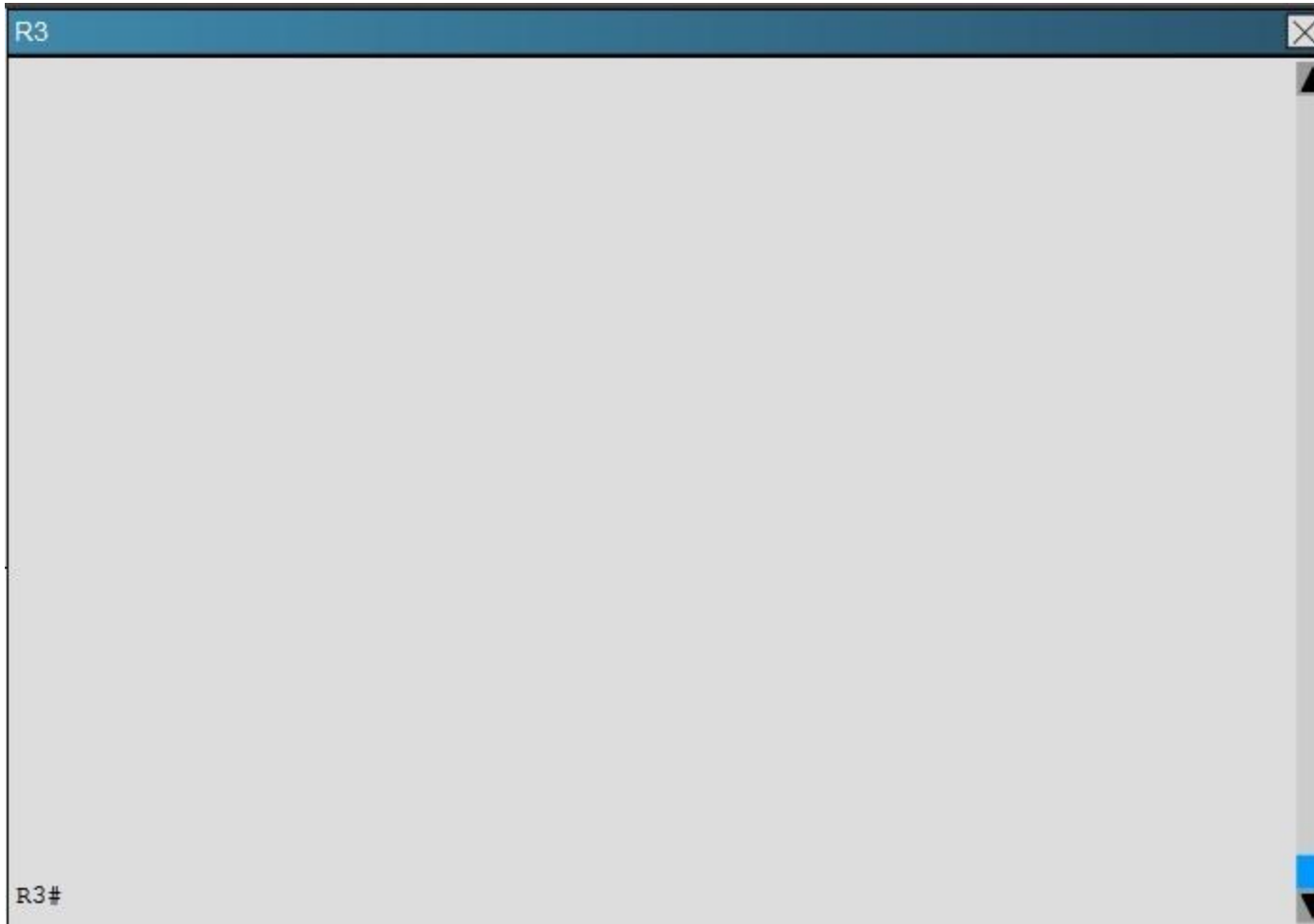
You have been asked to evaluate how EIGRP is functioning in a customer network.











R5



R5#



Traffic from R1 to R6's Loopback address is load shared between R1-R2-R4-R6 and R1-R3-R5-R6 paths. What is the ratio of traffic over each path?

- A. 1:1
- B. 1:5
- C. 6:8
- D. 19:80

**Correct Answer: D**

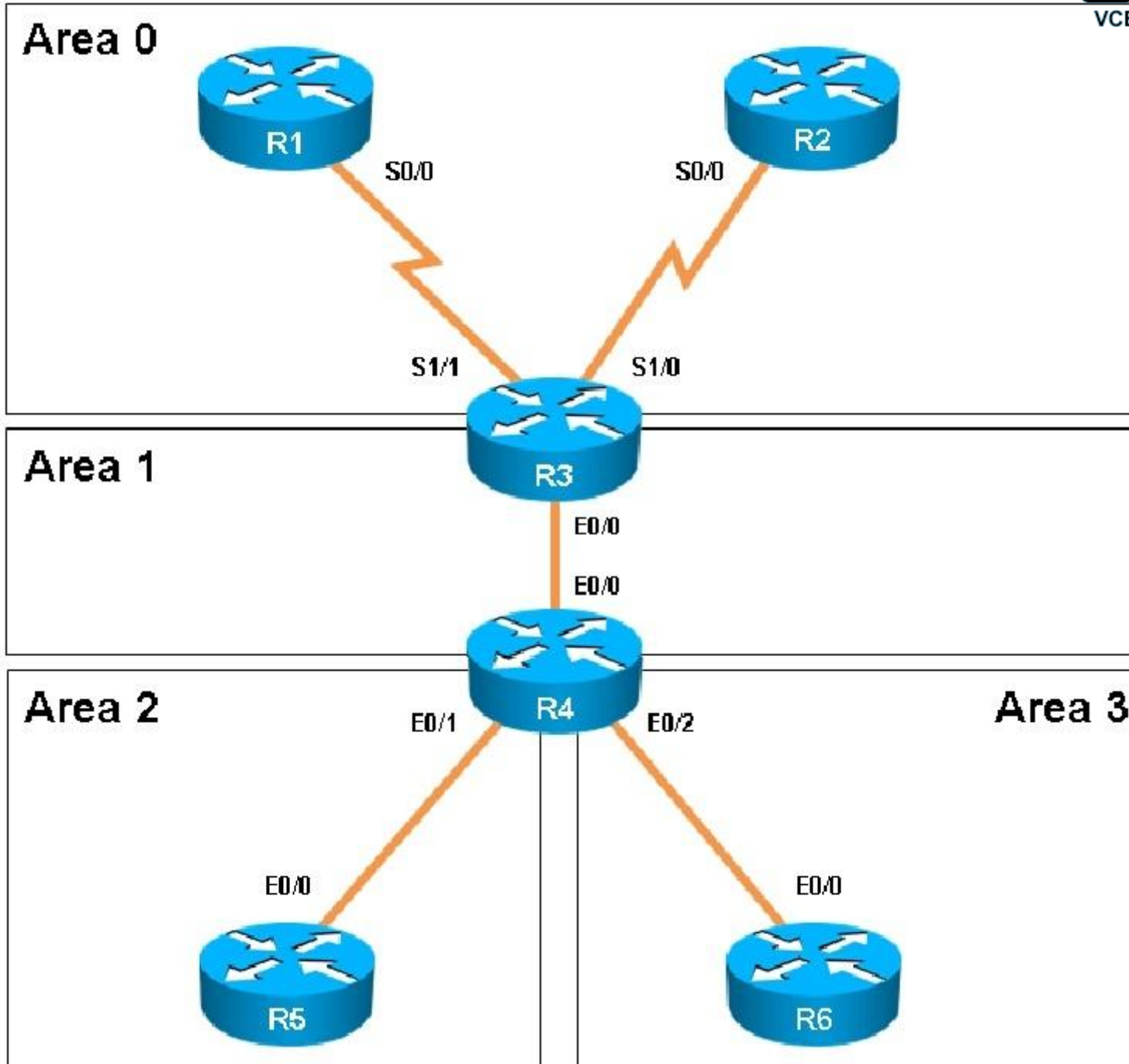
**Section: (none)**  
**Explanation**

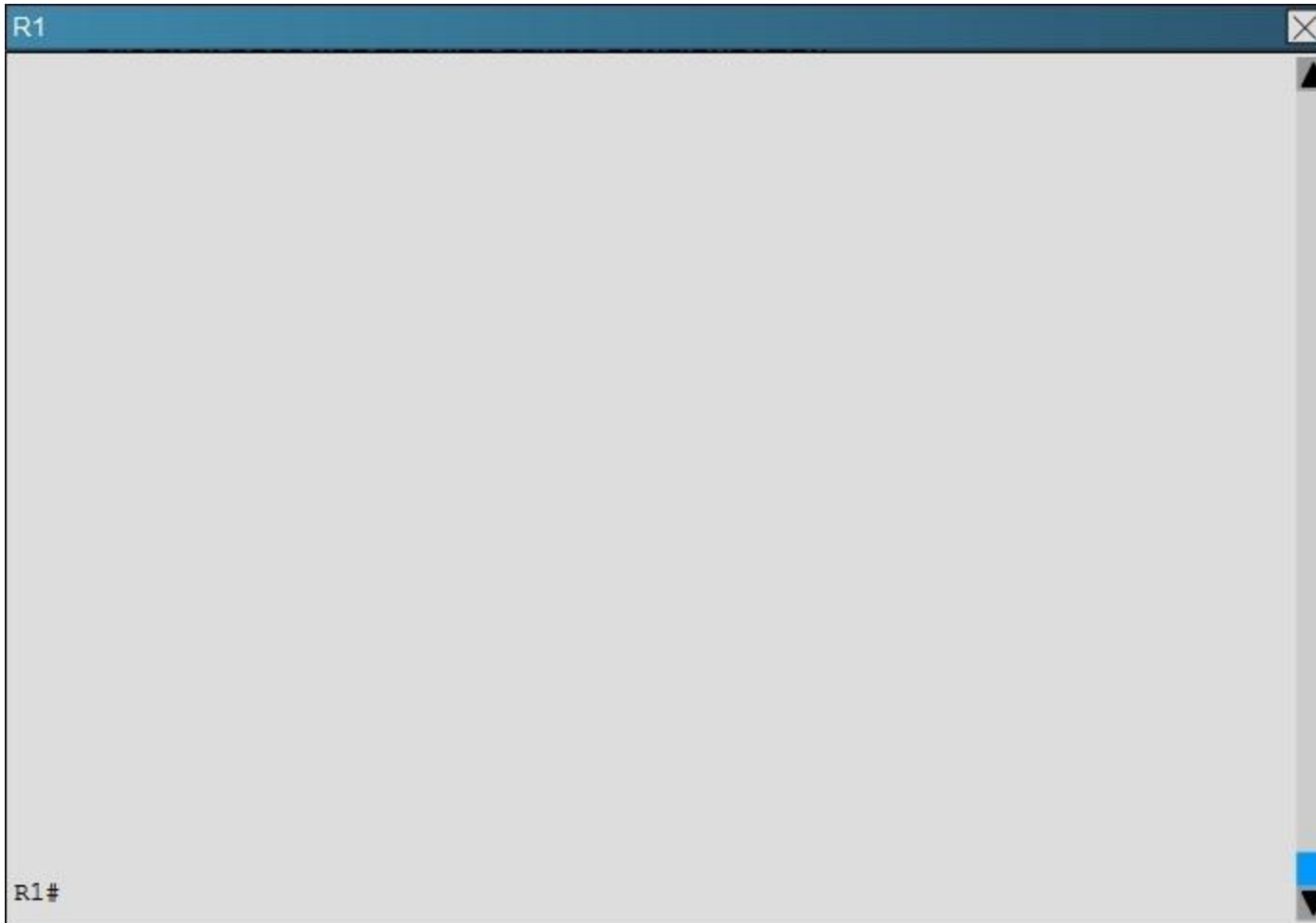
**Explanation/Reference:**

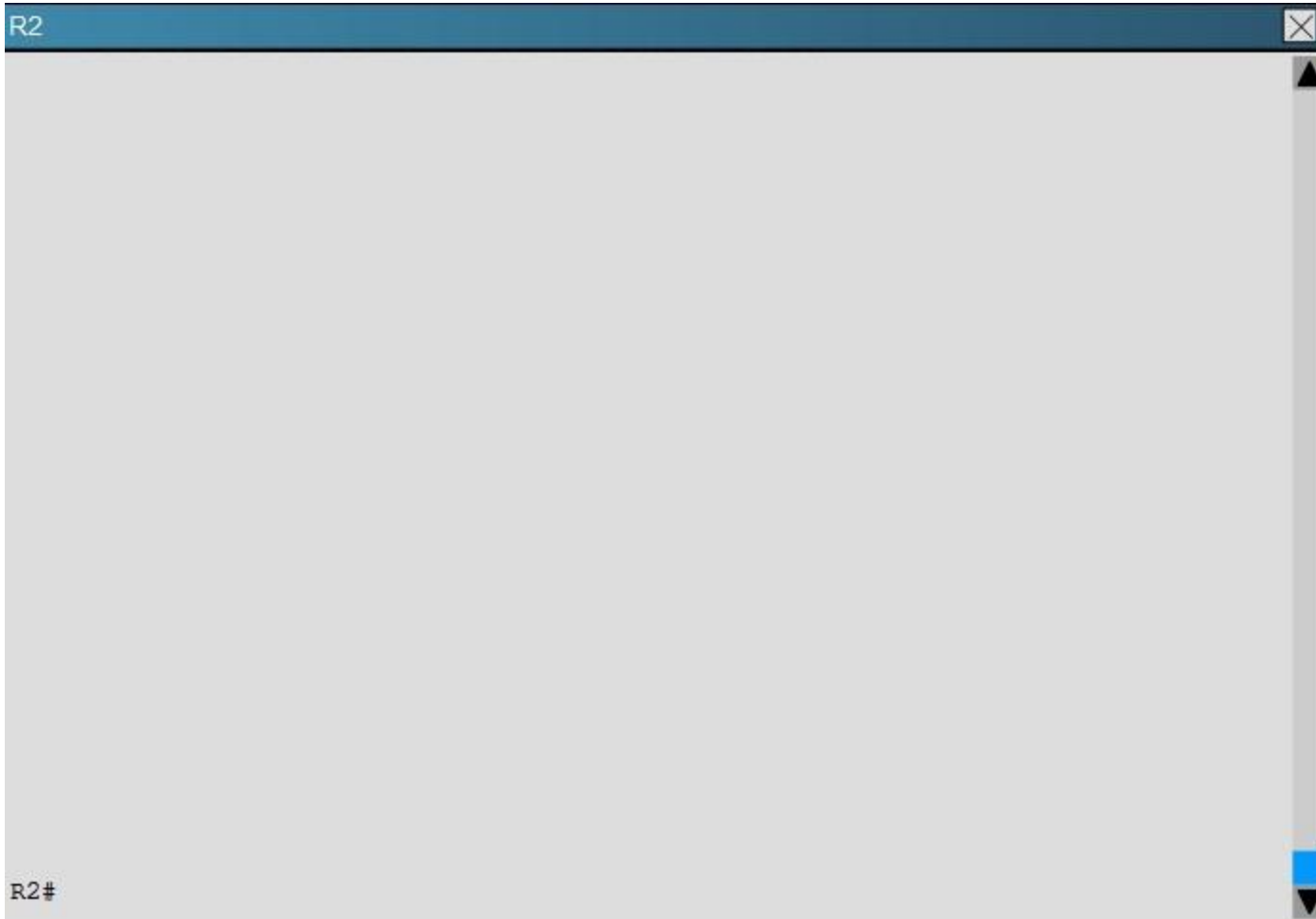
**QUESTION 40**

Scenario:

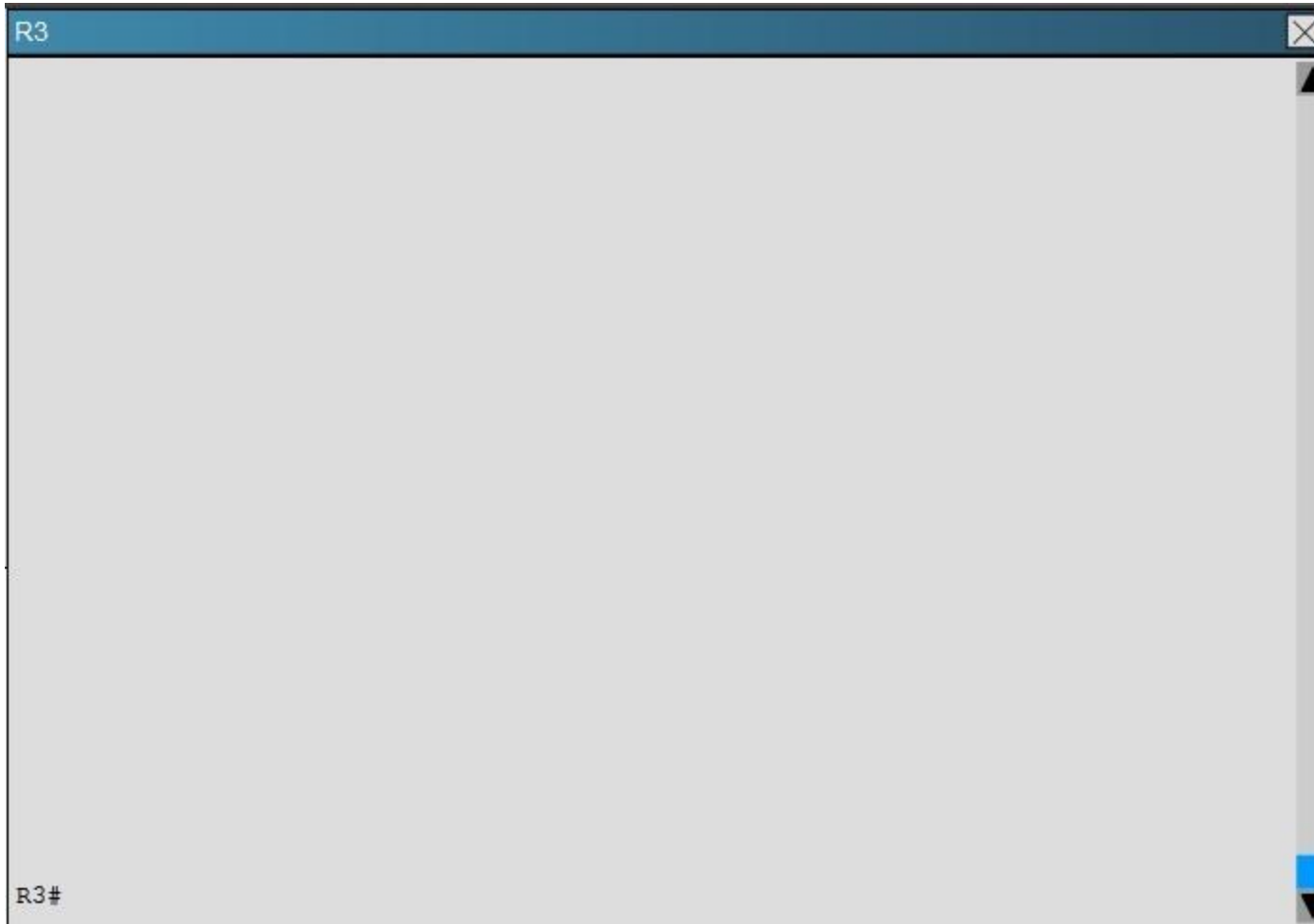
You have been asked to evaluate an OSPF network setup in a test lab and to answer questions a customer has about its operation. The customer has disabled your access to the show running-config command.

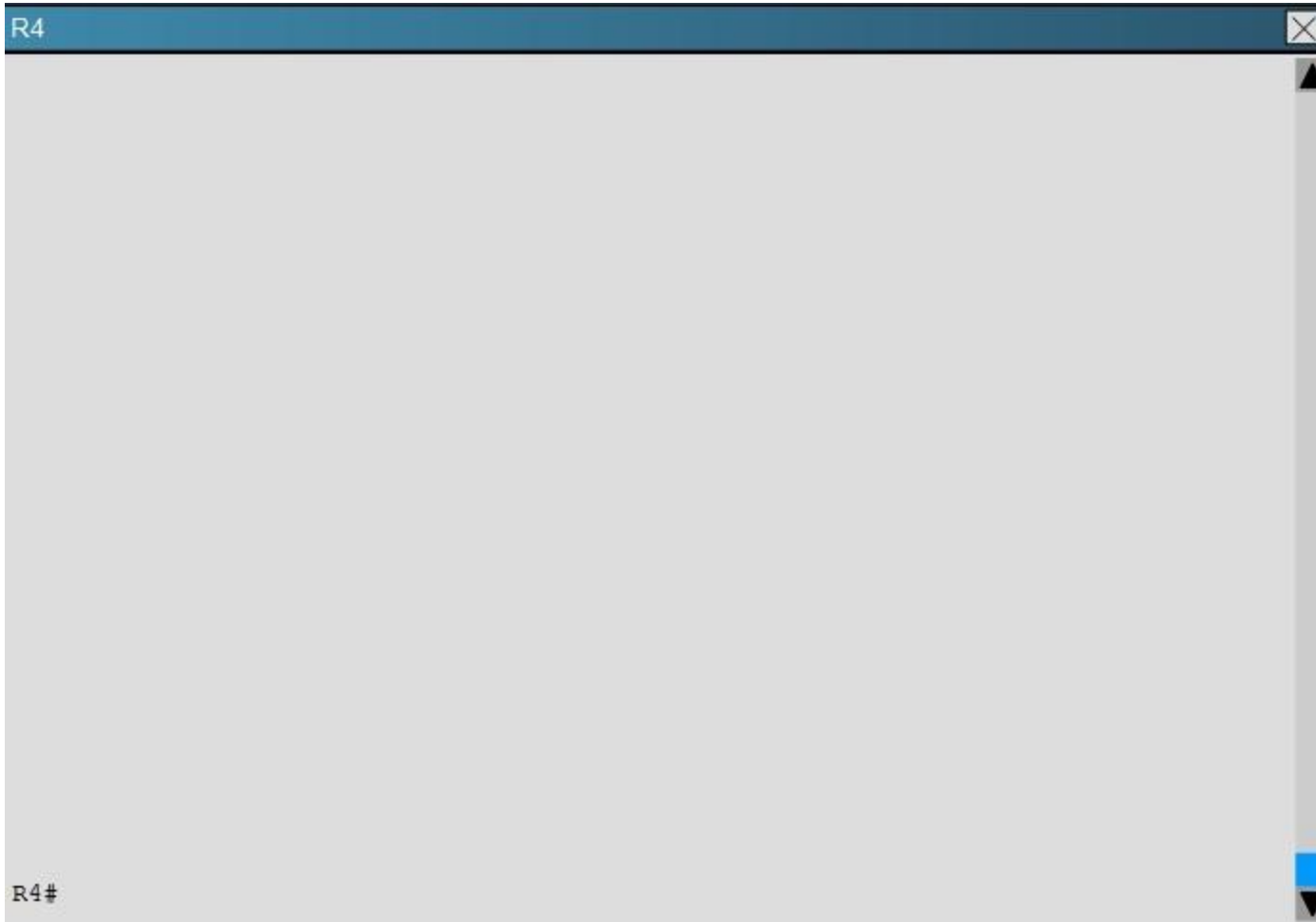














Areas of Router 5 and 6 are not normal areas, inspect their routing tables and determine which statement is true?

- A. R5's Loopback and R6's Loopback are both present in R5's Routing table
- B. R5's Loopback and R6's Loopback are both present in R6's Routing table
- C. Only R5's loopback is present in R5's Routing table
- D. Only R6's loopback is present in R5's Routing table
- E. Only R5's loopback is present in R6's Routing table

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

**Explanation/Reference:**  
Topic 4, VPN Technologies

#### **QUESTION 41**

Which encapsulation supports an interface that is configured for an EVN trunk?

- A. 802.1Q
- B. ISL
- C. PPP
- D. Frame Relay
- E. MPLS
- F. HDLC

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

**Explanation/Reference:**

#### **QUESTION 42**

A company has just opened two remote branch offices that need to be connected to the corporate network. Which interface configuration output can be applied to the corporate router to allow communication to the remote sites?

- A. 

```
interface Tunnel0
bandwidth 1536
ip address 209.165.200.230 255.255.255.224
tunnel source Serial0/0
tunnel mode gre multipoint
```
- B. 

```
interface fa0/0
bandwidth 1536
ip address 209.165.200.230 255.255.255.224
tunnel mode gre multipoint
```
- C. 

```
interface Tunnel0
bandwidth 1536
ip address 209.165.200.231 255.255.255.224
tunnel source 209.165.201.1
```

```
tunnel-mode dynamic
D. interface fa 0/0
   bandwidth 1536
   ip address 209.165.200.231 255.255.255.224
   tunnel source 192.168.161.2
   tunnel destination 209.165.201.1
   tunnel-mode dynamic
```

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 43

Refer to the following output:

```
Router#show ip nhrp detail
```

```
10.1.1.2/8 via 10.2.1.2, Tunnel1 created 00:00:12, expire 01:59:47
```

```
TypE. dynamic, Flags: authoritative unique nat registered used
```

```
NBMA address: 10.12.1.2
```

What does the authoritative flag mean in regards to the NHRP information?

- A. It was obtained directly from the next-hop server.
- B. Data packets are process switches for this mapping entry.
- C. NHRP mapping is for networks that are local to this router.
- D. The mapping entry was created in response to an NHRP registration request.
- E. The NHRP mapping entry cannot be overwritten.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 44

Which Cisco IOS VPN technology leverages IPsec, mGRE, dynamic routing protocol, NHRP, and Cisco Express Forwarding?

- A. FlexVPN
- B. DMVPN
- C. GETVPN
- D. Cisco Easy VPN

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 45**

A network engineer executes the show crypto ipsec sa command. Which three pieces of information are displayed in the output? (Choose three.)

- A. inbound crypto map
- B. remaining key lifetime
- C. path MTU
- D. tagged packets
- E. untagged packets
- F. invalid identity packets

**Correct Answer:** ABC

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 46**

Which three characteristics are shared by subinterfaces and associated EVNs? (Choose three.)

- A. IP address
- B. routing table
- C. forwarding table
- D. access control lists
- E. NetFlow configuration

**Correct Answer:** ABC

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 47**

A user is having issues accessing file shares on a network. The network engineer advises the user to open a web browser, input a prescribed IP address, and follow the instructions. After doing this, the user is able to access company shares. Which type of remote access did the engineer enable?

- A. EZVPN
- B. IPsec VPN client access
- C. VPDN client access
- D. SSL VPN client access

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 48**

What are the three modes of Unicast Reverse Path Forwarding?

- A. strict mode, loose mode, and VRF mode
- B. strict mode, loose mode, and broadcast mode
- C. strict mode, broadcast mode, and VRF mode
- D. broadcast mode, loose mode, and VRF mode

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 49**

What does the following access list, which is applied on the external interface FastEthernet 1/0 of the perimeter router, accomplish?

```
router(config)#access-list 101 deny ip 10.0.0.0 0.255.255.255 any log
router (config)#access-list 101 deny ip 192.168.0.0 0.0.255.255 any log
router (config)#access-list 101 deny ip 172.16.0.0 0.15.255.255 any log
router (config)#access-list 101 permit ip any any
router (config)#interface fastEthernet 1/0
router (config-if)#ip access-group 101 in
```

- A. It prevents incoming traffic from IP address ranges 10.0.0.0-10.0.0.255, 172.16.0.0- 172.31.255.255, 192.168.0.0-192.168.255.255 and logs any intrusion attempts.
- B. It prevents the internal network from being used in spoofed denial of service attacks and logs any exit to the Internet.
- C. It filters incoming traffic from private addresses in order to prevent spoofing and logs any intrusion attempts.
- D. It prevents private internal addresses to be accessed directly from outside.

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 50**

A network engineer is configuring a routed interface to forward broadcasts of UDP 69, 53, and 49 to 172.20.14.225. Which command should be applied to the configuration to allow this?

- A. router(config-if)#ip helper-address 172.20.14.225
- B. router(config-if)#udp helper-address 172.20.14.225
- C. router(config-if)#ip udp helper-address 172.20.14.225
- D. router(config-if)#ip helper-address 172.20.14.225 69 53 49

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**



**QUESTION 51**

Which address is used by the Unicast Reverse Path Forwarding protocol to validate a packet against the routing table?

- A. source address
- B. destination address
- C. router interface
- D. default gateway

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 52**

Refer to the following access list.

```
access-list 100 permit ip any any log
```

After applying the access list on a Cisco router, the network engineer notices that the router CPU utilization has risen to 99 percent. What is the reason for this?

- A. A packet that matches access-list with the "log" keyword is Cisco Express Forwarding switched.
- B. A packet that matches access-list with the "log" keyword is fast switched.
- C. A packet that matches access-list with the "log" keyword is process switched.
- D. A large amount of IP traffic is being permitted on the router.

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 53**

For troubleshooting purposes, which method can you use in combination with the "debug ip packet" command to limit the amount of output data?

- A. You can disable the IP route cache globally.
- B. You can use the KRON scheduler.

- C. You can use an extended access list.
- D. You can use an IOS parser.
- E. You can use the RITE traffic exporter.

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 54**

Which traffic does the following configuration allow?

```
ipv6 access-list cisco
```

```
permit ipv6 host 2001:DB8:0:4::32 any eq ssh
```

```
line vty 0 4
```

```
ipv6 access-class cisco in
```

- A. all traffic to vty 0 4 from source 2001:DB8:0:4::32
- B. only ssh traffic to vty 0 4 from source all
- C. only ssh traffic to vty 0 4 from source 2001:DB8:0:4::32
- D. all traffic to vty 0 4 from source all

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Topic 6, Infrastructure Services

#### **QUESTION 55**

IPv6 has just been deployed to all of the hosts within a network, but not to the servers. Which feature allows IPv6 devices to communicate with IPv4 servers?

- A. NAT
- B. NATng
- C. NAT64

- D. dual-stack NAT
- E. DNS64

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 56**

What is a function of NPTv6?

- A. It interferes with encryption of the full IP payload.
- B. It maintains a per-node state.
- C. It is checksum-neutral.
- D. It rewrites transport layer headers.

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 57**

Which NetFlow component is applied to an interface and collects information about flows?

- A. flow monitor
- B. flow exporter
- C. flow sampler
- D. flow collector

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 58**

A network engineer is configuring a solution to allow failover of HSRP nodes during maintenance windows, as an alternative to powering down the active router and letting the network respond accordingly. Which action will allow for manual switching of HSRP nodes?

- A. Track the up/down state of a loopback interface and shut down this interface during maintenance.
- B. Adjust the HSRP priority without the use of preemption.
- C. Disable and enable all active interfaces on the active HSRP node.
- D. Enable HSRPv2 under global configuration, which allows for maintenance mode.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 59**

An organization decides to implement NetFlow on its network to monitor the fluctuation of traffic that is disrupting core services. After reviewing the output of NetFlow, the network engineer is unable to see OUT traffic on the interfaces. What can you determine based on this information?

- A. Cisco Express Forwarding has not been configured globally.
- B. NetFlow output has been filtered by default.
- C. Flow Export version 9 is in use.
- D. The command ip flow-capture fragment-offset has been enabled.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 60**

When using SNMPv3 with NoAuthNoPriv, which string is matched for authentication?

- A. username
- B. password
- C. community-string
- D. encryption-key

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

**Explanation/Reference:**

#### **QUESTION 61**

A network engineer finds that a core router has crashed without warning. In this situation, which feature can the engineer use to create a crash collection?

- A. secure copy protocol
- B. core dumps
- C. warm reloads
- D. SNMP
- E. NetFlow

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

**Explanation/Reference:**

#### **QUESTION 62**

A network engineer executes the show ip flow export command. Which line in the output indicates that the send queue is full and export packets are not being sent?

- A. output drops
- B. enqueueing for the RP
- C. fragmentation failures
- D. adjacency issues

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

**Explanation/Reference:**

#### **QUESTION 63**

A network engineer is notified that several employees are experiencing network performance related issues, and bandwidth-intensive applications are identified as the root cause. In order to identify which specific type of traffic is causing this slowness, information such as the source/destination IP and Layer 4 port numbers is required. Which feature should the engineer use to gather the required information?

- A. SNMP
- B. Cisco IOS EEM
- C. NetFlow
- D. Syslog
- E. WCCP

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 64

A network engineer is asked to configure a "site-to-site" IPsec VPN tunnel. One of the last things that the engineer does is to configure an access list (access-list 1 permit any) along with the command ip nat inside source list 1 int s0/0 overload. Which functions do the two commands serve in this scenario?

- A. The command access-list 1 defines interesting traffic that is allowed through the tunnel.
- B. The command ip nat inside source list 1 int s0/0 overload disables "many-to-one" access for all devices on a defined segment to share a single IP address upon exiting the external interface.
- C. The command access-list 1 permit any defines only one machine that is allowed through the tunnel.
- D. The command ip nat inside source list 1 int s0/0 overload provides "many-to-one" access for all devices on a defined segment to share a single IP address upon exiting the external interface.

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 65

A network engineer initiates the ip sla responder tcp-connect command in order to gather statistics for performance gauging. Which type of statistics does the engineer see?

- A. connectionless-oriented

- B. service-oriented
- C. connection-oriented
- D. application-oriented

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 66**

After a recent DoS attack on a network, senior management asks you to implement better logging functionality on all IOS-based devices. Which two actions can you take to provide enhanced logging results? (Choose two.)

- A. Use the msec option to enable service time stamps.
- B. Increase the logging history
- C. Set the logging severity level to 1.
- D. Specify a logging rate limit.
- E. Disable event logging on all noncritical items.

**Correct Answer:** AB

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 67**

Which two functions are completely independent when implementing NAT64 over NAT-PT? (Choose two.)

- A. DNS
- B. NAT
- C. port redirection
- D. stateless translation
- E. session handling

**Correct Answer:** AB

**Section:** (none)

**Explanation**

**Explanation/Reference:****QUESTION 68**

What is the result of the command `ip flow-export destination 10.10.10.1 5858`?

- A. It configures the router to export cache flow information to IP 10.10.10.1 on port UDP/5858.
- B. It configures the router to export cache flow information about flows with destination IP 10.10.10.1 and port UDP/5858.
- C. It configures the router to receive cache flow information from IP 10.10.10.1 on port UDP/5858.
- D. It configures the router to receive cache flow information about flows with destination IP 10.10.10.1 and port UDP/5858.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:****QUESTION 69**

A network engineer is trying to implement broadcast-based NTP in a network and executes the `ntp broadcast client` command. Assuming that an NTP server is already set up, what is the result of the command?

- A. It enables receiving NTP broadcasts on the interface where the command was executed.
- B. It enables receiving NTP broadcasts on all interfaces globally.
- C. It enables a device to be an NTP peer to another device.
- D. It enables a device to receive NTP broadcast and unicast packets.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:****QUESTION 70**

Refer to the exhibit.



```
Sampler : mysampler, id : 1, packets matched : 10, mode :  
random sampling mode
```

Which statement about the output of the show flow-sampler command is true?

- A. The sampler matched 10 packets, each packet randomly chosen from every group of 100 packets.
- B. The sampler matched 10 packets, one packet every 100 packets.
- C. The sampler matched 10 packets, each one randomly chosen from every 100-second interval.
- D. The sampler matched 10 packets, one packet every 100 seconds.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 71

A company's corporate policy has been updated to require that stateless, 1-to-1, and IPv6 to IPv6 translations at the Internet edge are performed. What is the best solution to ensure compliance with this new policy?

- A. NAT64
- B. NAT44
- C. NATv6
- D. NPTv4
- E. NPTv6

**Correct Answer:** E

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 72

A network engineer executes the "ipv6 flowset" command. What is the result?

- A. Flow-label marking in 1280-byte or larger packets is enabled.

- B. Flow-set marking in 1280-byte or larger packets is enabled.
- C. IPv6 PMTU is enabled on the router.
- D. IPv6 flow control is enabled on the router.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 73

A network engineer is configuring SNMP on network devices to utilize one-way SNMP notifications. However, the engineer is not concerned with authentication or encryption. Which command satisfies the requirements of this scenario?

- A. router(config)#snmp-server host 172.16.201.28 traps version 2c CISCORO
- B. router(config)#snmp-server host 172.16.201.28 informs version 2c CISCORO
- C. router(config)#snmp-server host 172.16.201.28 traps version 3 auth CISCORO
- D. router(config)#snmp-server host 172.16.201.28 informs version 3 auth CISCORO

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 74

A network engineer has left a NetFlow capture enabled over the weekend to gather information regarding excessive bandwidth utilization. The following command is entered:

```
switch#show flow exporter Flow_Exporter-1
```

What is the expected output?

- A. configuration of the specified flow exporter
- B. current status of the specified flow exporter
- C. status and statistics of the specified flow monitor
- D. configuration of the specified flow monitor

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

**Explanation/Reference:**

**QUESTION 75**

Which type of traffic does DHCP snooping drop?

- A. discover messages
- B. DHCP messages where the source MAC and client MAC do not match
- C. traffic from a trusted DHCP server to client
- D. DHCP messages where the destination MAC and client MAC do not match

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

**Explanation/Reference:**

**QUESTION 76**

Which two methods of deployment can you use when implementing NAT64? (Choose two.)

- A. stateless
- B. stateful
- C. manual
- D. automatic
- E. static
- F. functional
- G. dynamic

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

**Explanation/Reference:**

**QUESTION 77**

Which type of handshake does CHAP authentication use to establish a PPP link?

- A. one-way
- B. two-way
- C. three-way
- D. four-way

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 78**

The following configuration is applied to a router at a branch site:

```
ipv6 dhcp pool dhcp-pool  
  
dns-server 2001:DB8:1:B::1  
  
dns-server 2001:DB8:3:307C::42  
  
domain-name example.com  
  
!
```

If IPv6 is configured with default settings on all interfaces on the router, which two dynamic IPv6 addressing mechanisms could you use on end hosts to provide end-to-end connectivity? (Choose two.)

- A. EUI-64
- B. SLAAC
- C. DHCPv6
- D. BOOTP

**Correct Answer:** AB

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 79**

Which two statements about AAA implementation in a Cisco router are true? (Choose two.)

- A. RADIUS is more flexible than TACACS+ in router management.
- B. RADIUS and TACACS+ allow accounting of commands.
- C. RADIUS and TACACS+ encrypt the entire body of the packet.
- D. RADIUS and TACACS+ are client/server AAA protocols. E. Neither RADIUS nor TACACS+ allow for accounting of commands.

**Correct Answer:** BD

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 80**

A router receives a routing advertisement for the same prefix and subnet from four different routing protocols. Which advertisement is installed in the routing table?

- A. RIP
- B. OSPF
- C. iBGP
- D. EIGRP

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 81**

Which two commands would be used to troubleshoot high memory usage for a process? (Choose two.)

- A. router#show memory allocating-process table
- B. router#show memory summary
- C. router#show memory dead
- D. router#show memory events

E. router#show memory processor statistics

**Correct Answer:** AB

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 82

Refer to the following configuration command.

```
router (config-line)# ntp master 10
```

Which statement about this command is true?

- A. The router acts as an authoritative NTP clock and allows only 10 NTP client connections.
- B. The router acts as an authoritative NTP clock at stratum 10.
- C. The router acts as an authoritative NTP clock with a priority number of 10.
- D. The router acts as an authoritative NTP clock for 10 minutes only.

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 83

Which three benefits does the Cisco Easy Virtual Network provide to an enterprise network? (Choose three.)

- A. simplified Layer 3 network virtualization
- B. improved shared services support
- C. enhanced management, troubleshooting, and usability
- D. reduced configuration and deployment time for dot1q trunking
- E. increased network performance and throughput
- F. decreased BGP neighbor configurations

**Correct Answer:** ABC

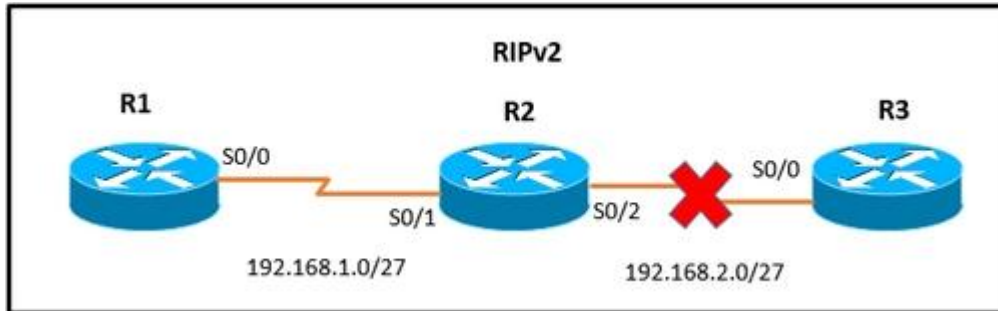
**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 84**

Refer to the exhibit. The network setup is running the RIP routing protocol. Which two events will occur following link failure between R2 and R3? (Choose two.)



- A. R2 will advertise network 192.168.2.0/27 with a hop count of 16 to R1.
- B. R2 will not send any advertisements and will remove route 192.168.2.0/27 from its routing table.
- C. R1 will reply to R2 with the advertisement for network 192.168.2.0/27 with a hop count of 16.
- D. After communication fails and after the hold-down timer expires, R1 will remove the 192.168.2.0/27 route from its routing table.
- E. R3 will not accept any further updates from R2, due to the split-horizon loop prevention mechanism.

**Correct Answer:** AC

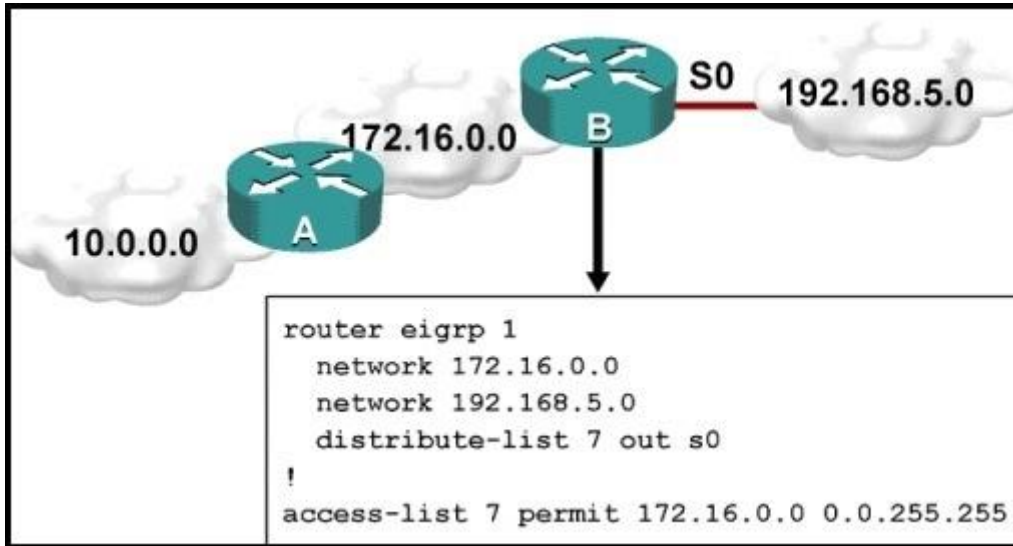
**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 85**

Refer to the exhibit. Which statement is true?



- A. Traffic from the 172.16.0.0/16 network will be blocked by the ACL.
- B. The 10.0.0.0/8 network will not be advertised by Router B because the network statement for the 10.0.0.0/8 network is missing from Router B.
- C. The 10.0.0.0/8 network will not be in the routing table on Router B.
- D. Users on the 10.0.0.0/8 network can successfully ping users on the 192.168.5.0/24 network, but users on the 192.168.5.0/24 cannot successfully ping users on the 10.0.0.0/8 network.
- E. Router B will not advertise the 10.0.0.0/8 network because it is blocked by the ACL.

**Correct Answer:** E

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 86

Which outbound access list, applied to the WAN interface of a router, permits all traffic except for http traffic sourced from the workstation with IP address 10.10.10.1?

- A. ip access-list extended 200  
deny tcp host 10.10.10.1 eq 80 any  
permit ip any any
- B. ip access-list extended 10



```
deny tcp host 10.10.10.1 any eq 80  
permit ip any any
```

- C. ip access-list extended NO\_HTTP  
deny tcp host 10.10.10.1 any eq 80
- D. ip access-list extended 100  
deny tcp host 10.10.10.1 any eq 80  
permit ip any any

**Correct Answer:** D

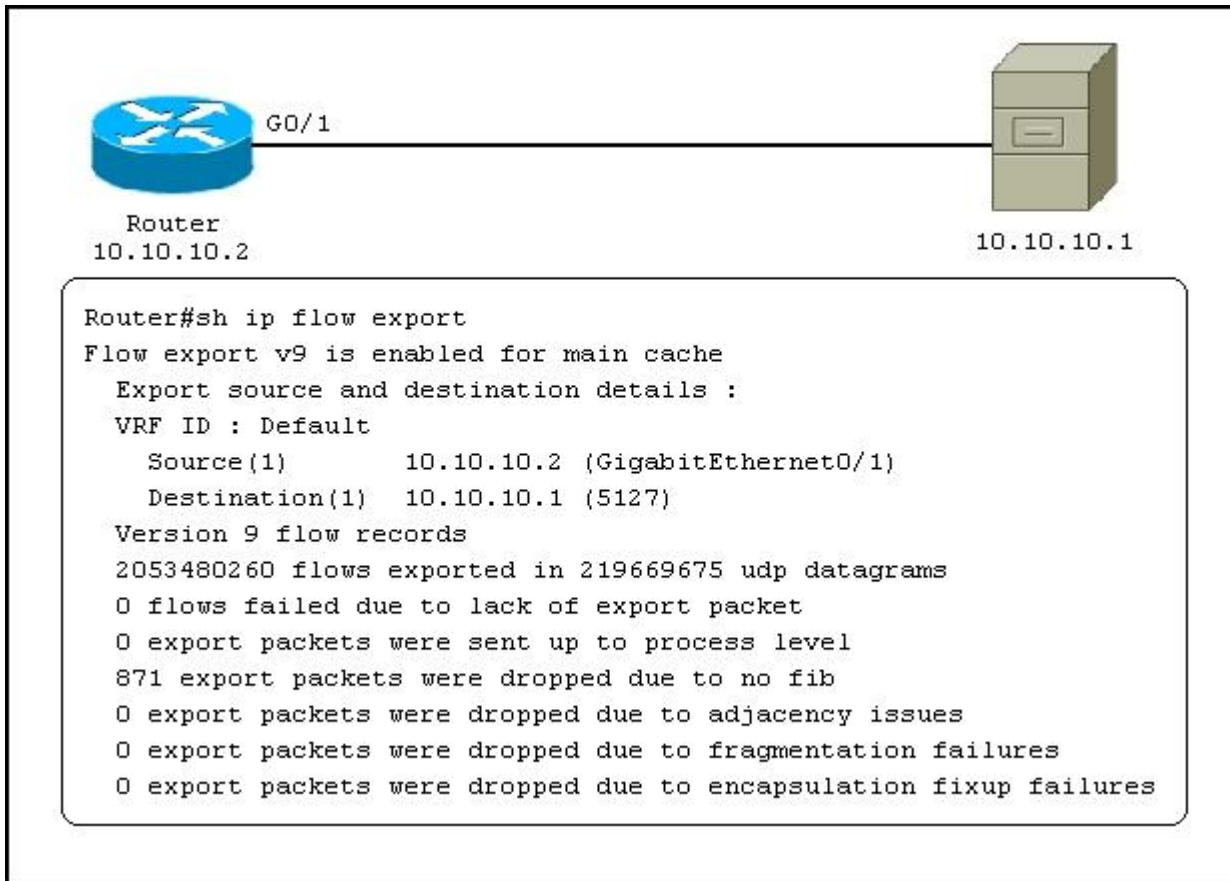
**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 87**

Refer to the exhibit. Which statement about the command output is true?



- A. The router exports flow information to 10.10.10.1 on UDP port 5127.
- B. The router receives flow information from 10.10.10.2 on UDP port 5127.
- C. The router exports flow information to 10.10.10.1 on TCP port 5127.
- D. The router receives flow information from 10.10.10.2 on TCP port 5127.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 88**

A company has their headquarters located in a large city with a T3 frame relay link that connects 30 remote locations that each have T1 frame relay connections. Which technology must be configured to prevent remote sites from getting overwhelmed with traffic and prevent packet drops from the headquarters?

- A. traffic shaping
- B. IPsec VPN
- C. GRE VPN
- D. MPLS

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 89**

Two aspects of an IP SLA operation can be tracked: state and reachability. Which statement about state tracking is true?

- A. When tracking state, an OK return code means that the track's state is up; any other return code means that the track's state is down.
- B. When tracking state, an OK or over threshold return code means that the track's state is up; any other return code means that the track's state is down.
- C. When tracking state, an OK return code means that the track's state is down; any other return code means that the track's state is up.
- D. When tracking state, an OK or over threshold return code means that the track's state is down; any other return code means that the track's state is up.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 90**

A network engineer is trying to modify an existing active NAT configuration on an IOS router by using the following command:

```
(config)# no ip nat pool dynamic-nat-pool 192.1.1.20 192.1.1.254 netmask 255.255.255.0
```

Upon entering the command on the IOS router, the following message is seen on the console:

%Dynamic Mapping in Use, Cannot remove message or the %Pool outpool in use, cannot destroy

What is the least impactful method that the engineer can use to modify the existing IP NAT configuration?

- A. Clear the IP NAT translations using the clear ip nat traffic \* " command, then replace the NAT configuration quickly, before any new NAT entries are populated into the translation table due to active NAT traffic.
- B. Clear the IP NAT translations using the clear ip nat translation \* " command, then replace the NAT configuration quickly, before any new NAT entries are populated into the translation table due to active NAT traffic.
- C. Clear the IP NAT translations using the reload command on the router, then replace the NAT configuration quickly, before any new NAT entries are populated into the translation table due to active NAT traffic.
- D. Clear the IP NAT translations using the clear ip nat table \* " command, then replace the NAT configuration quickly, before any new NAT entries are populated into the translation table due to active NAT traffic.

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 91

Which technology was originally developed for routers to handle fragmentation in the path between end points?

- A. PMTUD
- B. MSS
- C. windowing
- D. TCP
- E. global synchronization

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 92

In which two ways can NetFlow data be viewed? (Choose two.)

- A. CLI

- B. NetFlow
- C. built-in GUI
- D. syslog server interface
- E. web interface

**Correct Answer:** AB

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 93

Refer to the exhibit. Which statement about the configuration is true?

```
ip auth-proxy max-nodata-conns 3
ip admission max-nodata-conns 3
ip sla monitor 1
  type jitter dest-ipaddr 200.0.10.3 dest-port 65051 num-packets 20
  request-data-size 160
  tos 128
  frequency 30
ip sla monitor schedule 1 start-time after 00:05:00
```

- A. 20 packets are being sent every 30 seconds.
- B. The monitor starts at 12:05:00 a.m.
- C. Jitter is being tested with TCP packets to port 65051.
- D. The packets that are being sent use DSCP EF.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 94

Refer to the exhibit. The command is executed while configuring a point-to-multipoint Frame Relay interface. Which type of IPv6 address is portrayed in

the exhibit?

```
frame-relay map ipv6 FE80::1C2 102
```

- A. link-local
- B. site-local
- C. global
- D. multicast

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

**Explanation/Reference:**

#### QUESTION 95

How does an IOS router process a packet that should be switched by Cisco Express Forwarding without an FIB entry?

- A. by forwarding the packet
- B. by dropping the packet
- C. by creating a new FIB entry for the packet
- D. by looking in the routing table for an alternate FIB entry

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

**Explanation/Reference:**

#### QUESTION 96

A network engineer is investigating the cause of a service disruption on a network segment and executes the debug condition interface fastethernet f0/0 command. In which situation is the debugging output generated?

- A. when packets on the interface are received and the interface is operational
- B. when packets on the interface are received and logging buffered is enabled
- C. when packets on the interface are received and forwarded to a configured syslog server
- D. when packets on the interface are received and the interface is shut down

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 97**

A network administrator is troubleshooting a DMVPN setup between the hub and the spoke. Which action should the administrator take before troubleshooting the IPsec configuration?

- A. Verify the GRE tunnels.
- B. Verify ISAKMP.
- C. Verify NHRP.
- D. Verify crypto maps.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 98**

Which statement is a restriction for PPPoE configuration?

- A. Multiple PPPoE clients can use the same dialer interface.
- B. Multiple PPPoE clients can use the same dialer pool.
- C. A PPPoE session can be initiated only by the client.
- D. A PPPoE session can be initiated only by the access concentrator.

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 99**

Which three items can you track when you use two time stamps with IP SLAs? (Choose three.)

- A. delay
- B. jitter
- C. packet loss
- D. load
- E. throughput
- F. path

**Correct Answer:** ABC

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 100**

What are the default timers for RIPng?

- A. Update: 30 seconds Expire: 180 seconds Flush: 240 seconds
- B. Update: 20 seconds Expire: 120 seconds Flush: 160 seconds
- C. Update: 10 seconds Expire: 60 seconds Flush: 80 seconds
- D. Update: 5 seconds Expire: 30 seconds Flush: 40 seconds

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 101**

An engineer is asked to monitor the availability of the next-hop IP address of 172.16.201.25 every 3 seconds using an ICMP echo packet via an ICMP echo probe. Which two commands accomplish this task? (Choose two.)

- A. `router(config-ip-sla)#icmp-echo 172.16.201.25 source-interface FastEthernet 0/0`
- B. `router(config-ip-sla-echo)#timeout 3`
- C. `router(config-ip-sla)#icmp-jitter 172.16.201.25 interval 100`
- D. `router(config-ip-sla-echo)#frequency 3`
- D. `router(config-ip-sla)#udp-echo 172.16.201.25 source-port 23`
- F. `router(config-ip-sla-echo)#threshold 3`

**Correct Answer:** AD



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

**Explanation/Reference:**

**QUESTION 102**

Which IPv6 address type is seen as the next-hop address in the output of the show ipv6 rip RIPng database command?

- A. link-local
- B. global
- C. site-local
- D. anycast
- E. multicast

**Correct Answer: A**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 103**

The OSPF database of a router shows LSA types 1, 2, 3, and 7 only. Which type of area is this router connected to?

- A. stub area
- B. totally stubby area
- C. backbone area
- D. not-so-stubby area

**Correct Answer: D**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 104**

If the total bandwidth is 64 kbps and the RTT is 3 seconds, what is the bandwidth delay product?

- A. 8,000 bytes
- B. 16,000 bytes
- C. 24,000 bytes
- D. 32,000 bytes
- E. 62,000 bytes

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

**Explanation/Reference:**

#### **QUESTION 105**

On which two types of interface is Frame Relay switching supported? (Choose two.)

- A. serial interfaces
- B. Ethernet interfaces
- C. fiber interfaces
- D. ISDN interfaces
- E. auxiliary interfaces

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

**Explanation/Reference:**

#### **QUESTION 106**

A network engineer is considering enabling load balancing with EIGRP. Which consideration should be analyzed?

- A. EIGRP allows a maximum of four paths across for load balancing traffic.
- B. By default, EIGRP uses a default variance of 2 for load balancing.
- C. EIGRP unequal path load balancing can result in routing loops.
- D. By default, EIGRP performs equal cost load balancing at least across four equal cost paths.

**Correct Answer:** D  
**Section:** (none)

**Explanation****Explanation/Reference:****QUESTION 107**

A network engineer has set up VRF-Lite on two routers where all the interfaces are in the same VRF. At a later time, a new loopback is added to Router 1, but it cannot ping any of the existing interfaces. Which two configurations enable the local or remote router to ping the loopback from any existing interface? (Choose two.)

- A. adding a static route for the VRF that points to the global route table
- B. adding the loopback to the VRF
- C. adding dynamic routing between the two routers and advertising the loopback
- D. adding the IP address of the loopback to the export route targets for the VRF
- E. adding a static route for the VRF that points to the loopback interface
- F. adding all interfaces to the global and VRF routing tables

**Correct Answer:** AB

**Section:** (none)

**Explanation****Explanation/Reference:****QUESTION 108**

Which two routing protocols are supported by Easy Virtual Network? (Choose two.)

- A. RIPv2
- B. OSPFv2
- C. BGP
- D. EIGRP
- E. IS-IS

**Correct Answer:** BD

**Section:** (none)

**Explanation****Explanation/Reference:****QUESTION 109**

Which statement is true?

- A. RADIUS uses TCP, and TACACS+ uses UDP.
- B. RADIUS encrypts the entire body of the packet.
- C. TACACS+ encrypts only the password portion of a packet.
- D. TACACS+ separates authentication and authorization.

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 110**

Which type of BGP AS number is 64591?

- A. a private AS number
- B. a public AS number
- C. a private 4-byte AS number
- D. a public 4-byte AS number

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 111**

Refer to the exhibit.

```
!  
interface FastEthernet0/1  
 ip address 209.165.200.225 255.255.255.224  
 ip nat outside  
!  
interface FastEthernet0/2  
 ip address 10.10.10.1 255.255.255.0  
 ip nat inside  
!  
access-list 10 permit 10.10.10.0 0.0.0.255  
!
```

Which command allows hosts that are connected to FastEthernet0/2 to access the Internet?

- A. ip nat inside source list 10 interface FastEthernet0/1 overload
- B. ip nat outside source static 209.165.200.225 10.10.10.0 overload
- C. ip nat inside source list 10 interface FastEthernet0/2 overload
- D. ip nat outside source list 10 interface FastEthernet0/2 overload

**Correct Answer:** A

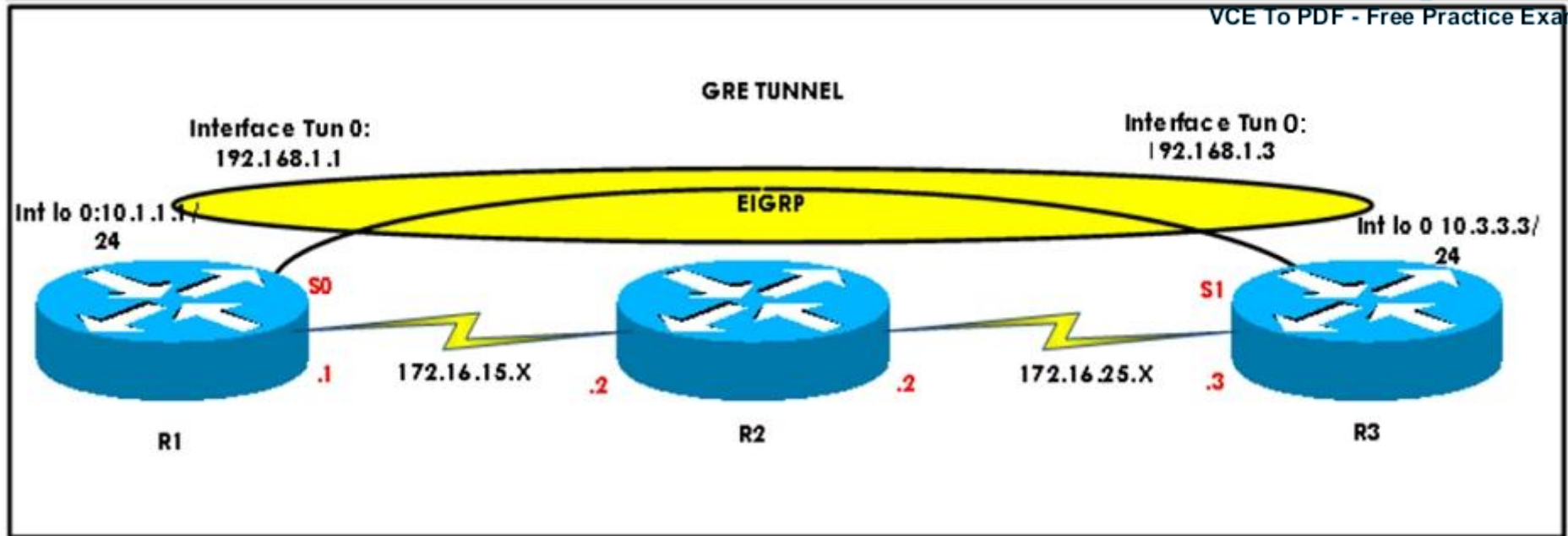
**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 112**

Refer to the exhibit. After configuring GRE between two routers running OSPF that are connected to each other via a WAN link, a network engineer notices that the two routers cannot establish the GRE tunnel to begin the exchange of routing updates. What is the reason for this?



- A. Either a firewall between the two routers or an ACL on the router is blocking IP protocol number 47.
- B. Either a firewall between the two routers or an ACL on the router is blocking UDP 57.
- C. Either a firewall between the two routers or an ACL on the router is blocking TCP 47.
- D. Either a firewall between the two routers or an ACL on the router is blocking IP protocol number 57.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 113**

Which parameter in an SNMPv3 configuration offers authentication and encryption?

- A. auth
- B. noauth
- C. priv

D. secret

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 114**

Which protocol is used in a DMVPN network to map physical IP addresses to logical IP addresses?

- A. BGP
- B. LLDP
- C. EIGRP
- D. NHRP

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 115**

What is the purpose of the route-target command?

- A. It extends the IP address to identify which VRF instance it belongs to.
- B. It enables multicast distribution for VRF-Lite setups to enhance IGP routing protocol capabilities.
- C. It manages the import and export of routes between two or more VRF instances.
- D. It enables multicast distribution for VRF-Lite setups to enhance EGP routing protocol capabilities.

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 116**

A route map uses an ACL, if the required matching is based on which criteria?

- A. addressing information
- B. route types
- C. AS paths
- D. metrics

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 117**

To configure SNMPv3 implementation, a network engineer is using the AuthNoPriv security level. What effect does this action have on the SNMP messages?

- A. They become unauthenticated and unencrypted.
- B. They become authenticated and unencrypted.
- C. They become authenticated and encrypted.
- D. They become unauthenticated and encrypted.

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 118**

The enterprise network WAN link has been receiving several denial of service attacks from both IPv4 and IPv6 sources. Which three elements can you use to identify an IPv6 packet via its header, in order to filter future attacks? (Choose three.)

- A. Traffic Class
- B. Source address
- C. Flow Label
- D. Hop Limit
- E. Destination Address
- F. Fragment Offset



**Correct Answer:** ACD

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 119**

Which two authentication protocols does PPP support? (Choose two.)

- A. WAP
- B. PAP
- C. CHAP
- D. EAP
- E. RADIUS

**Correct Answer:** BC

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 120**

Drag and drop the BGP states from the left to the matching definitions on the right.

OpenSent	refuses connections (the initial state)
OpenConfirm	waits for the connection to be completed
Established	listens for and accepts connections
Idle	waits for an OPEN message
Active	waits for a KEEPALIVE or NOTIFICATION message
Connect	UPDATE, NOTIFICATION, and KEEPALIVE messages are exchanged with peers.

- A.
- B.
- C.
- D.

**Correct Answer:**

**Section: (none)**

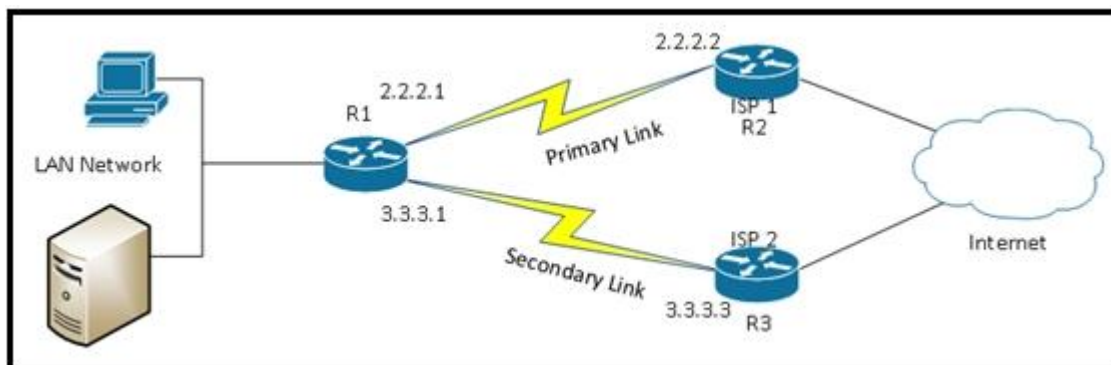
**Explanation**

**Explanation/Reference:**

OpenSent	Idle
OpenConfirm	Connect
Established	Active
Idle	OpenSent
Active	OpenConfirm
Connect	Established

**QUESTION 121**

Refer to the exhibit.



Which technology can be employed to automatically detect a WAN primary link failure and failover to the secondary link?

- A. HSRP
- B. VRRP
- C. IP SLA
- D. multicast

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 122**

What is the primary service that is provided when you implement Cisco Easy Virtual Network?

- A. It requires and enhances the use of VRF-Lite.
- B. It reduces the need for common services separation.
- C. It allows for traffic separation and improved network efficiency.
- D. It introduces multi-VRF and label-prone network segmentation.

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**