

300-101 cisco

Number: 300-101
Passing Score: 800
Time Limit: 120 min



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 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 3

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 4

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 5

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 6

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 7

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 8

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 9

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 10

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 11

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 12

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 13

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:

Section: (none)

Explanation

Explanation/Reference:

QUESTION 14

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:

Section: (none)

Explanation

Explanation/Reference:

QUESTION 15

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

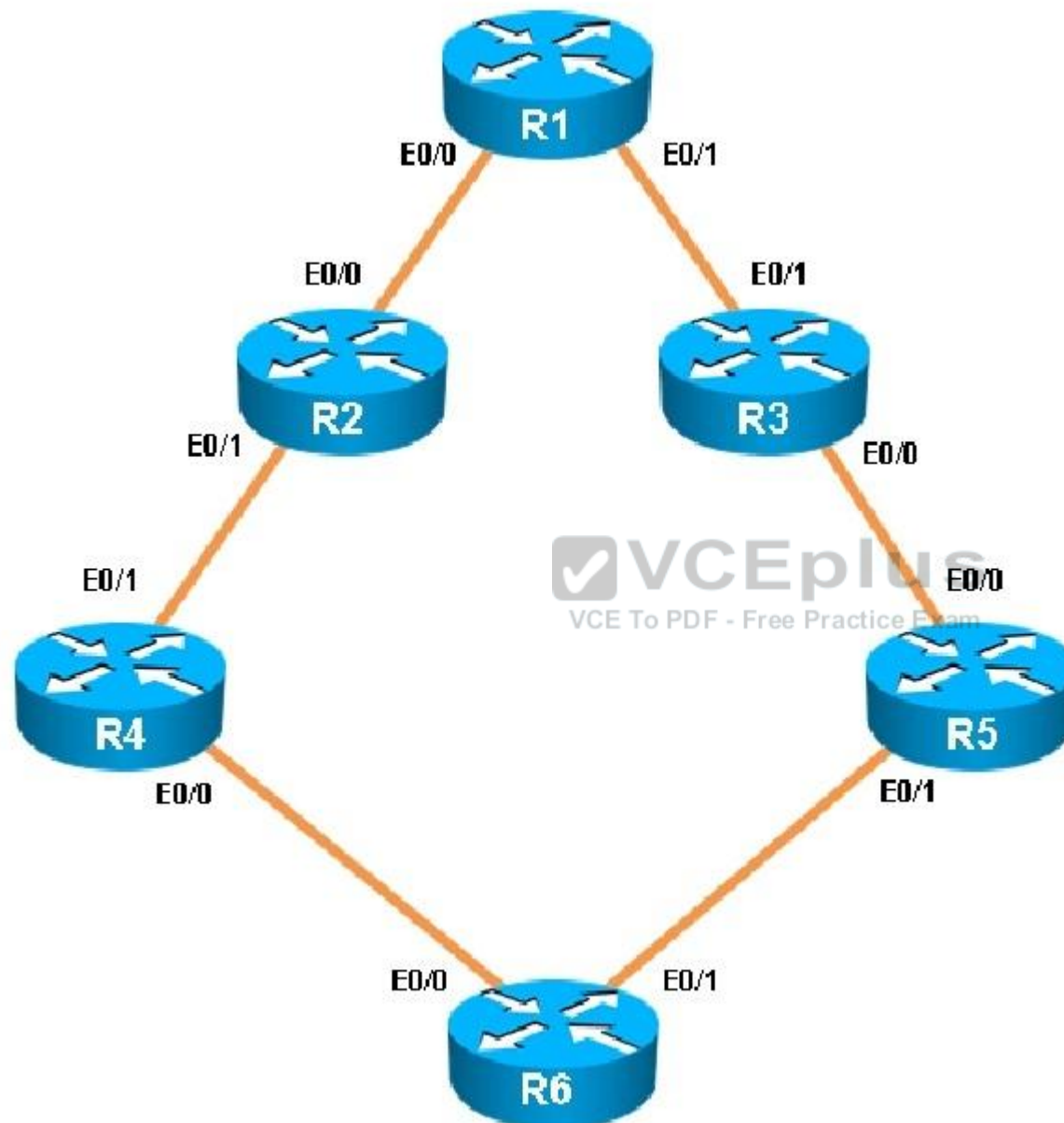
Section: (none)

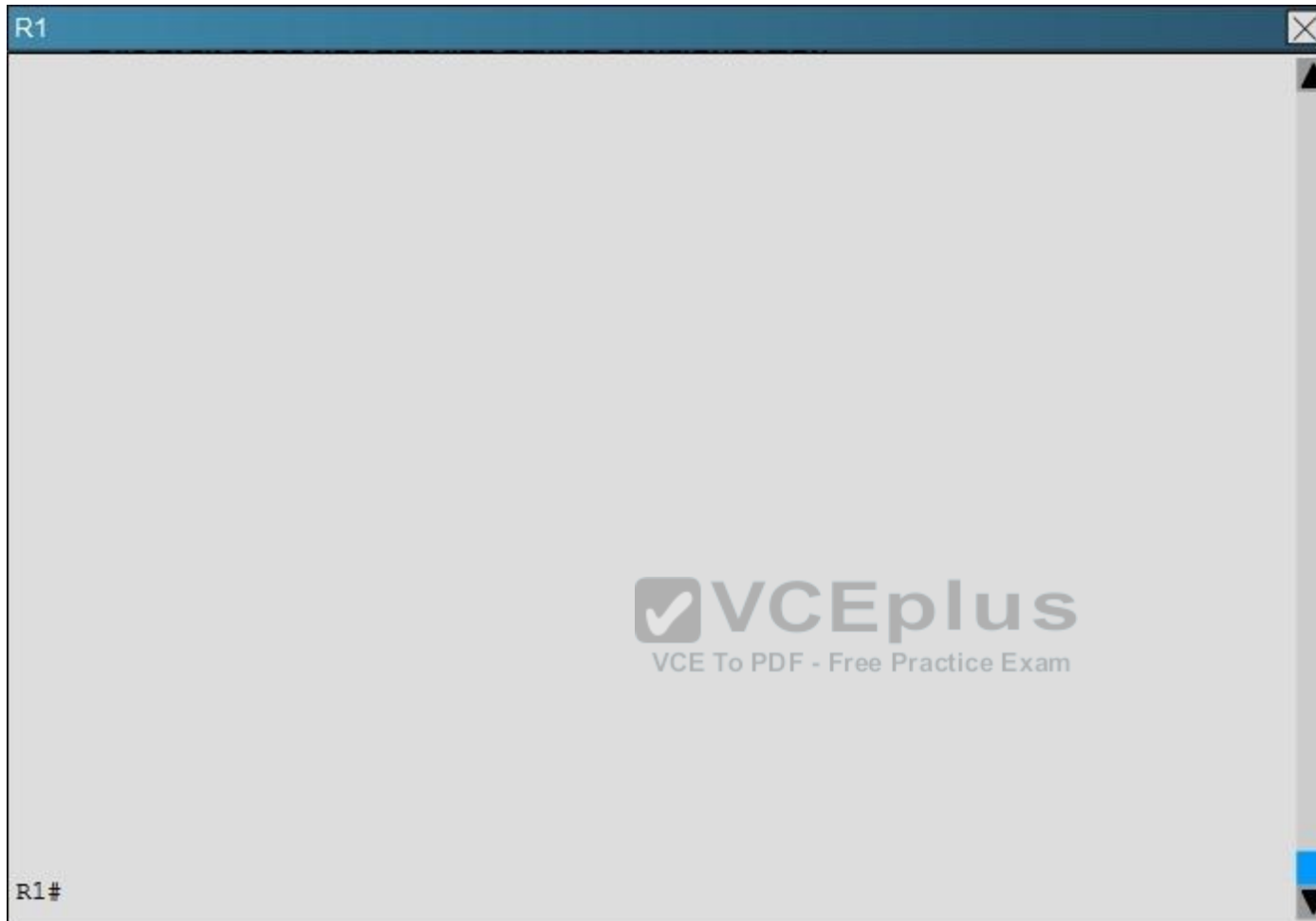
Explanation

Explanation/Reference:

QUESTION 16

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













What type of route filtering is occurring on R6

- A. Distribute-list using an ACL
- B. Distribute-list using a prefix-list
- C. Distribute-list using a route-map
- D. An ACL using a distance of 255

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 17

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)

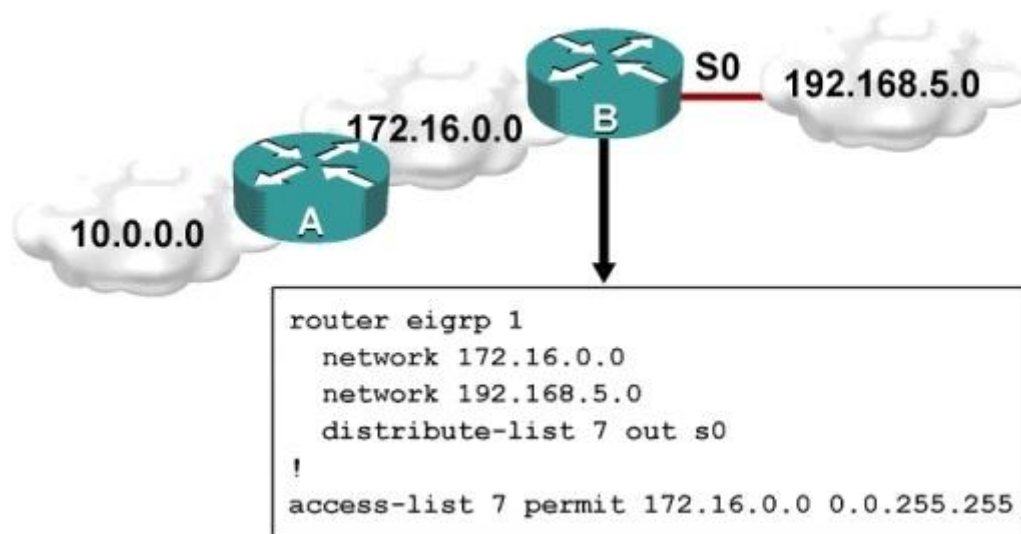
Explanation

Explanation/Reference:



QUESTION 18

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.

Correct Answer:

Section: (none)

Explanation

Explanation/Reference:

Router B will not advertise the 10.0.0.0/8 network because it is blocked by the ACL.

QUESTION 19

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 20

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

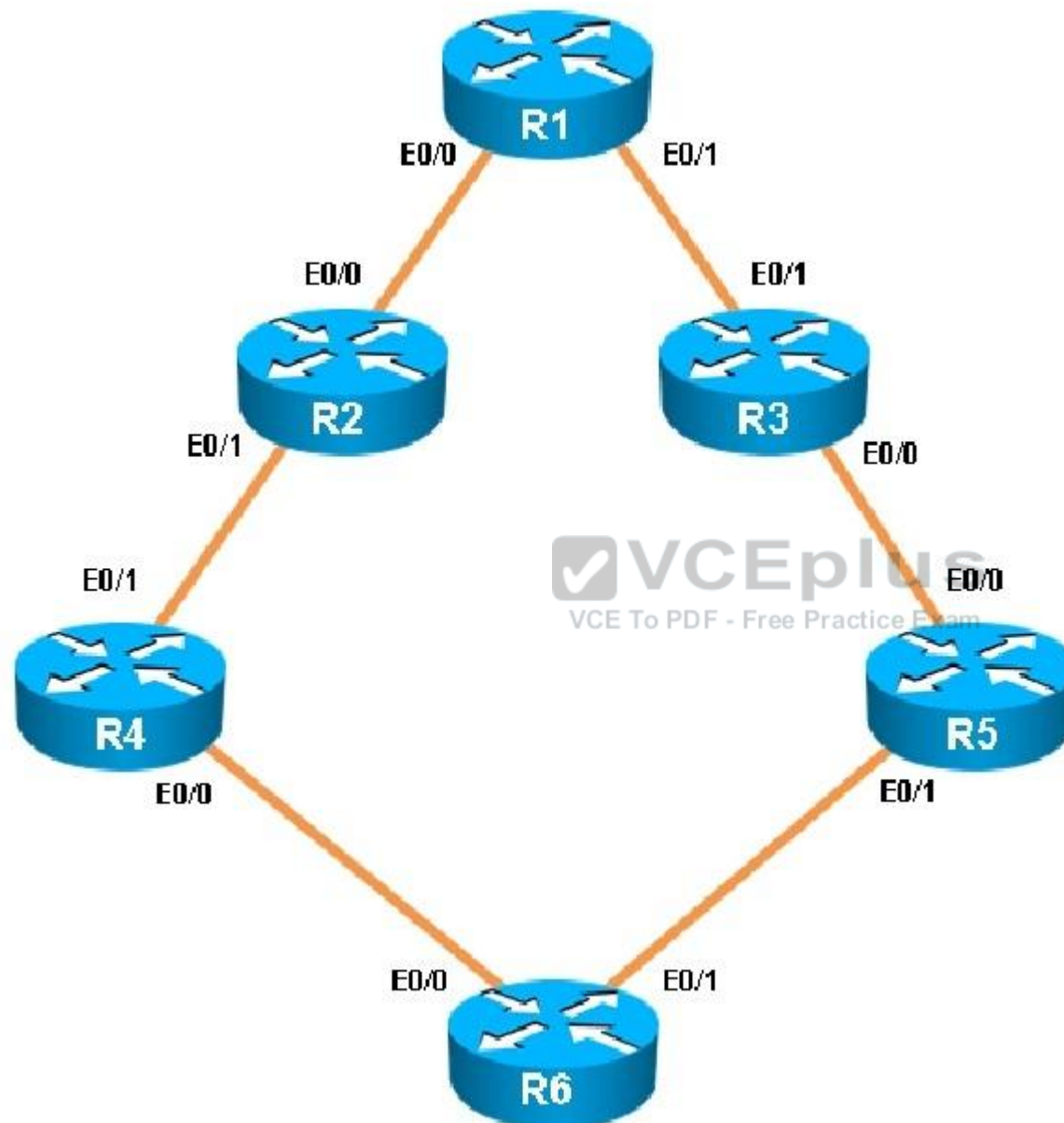
Section: (none)

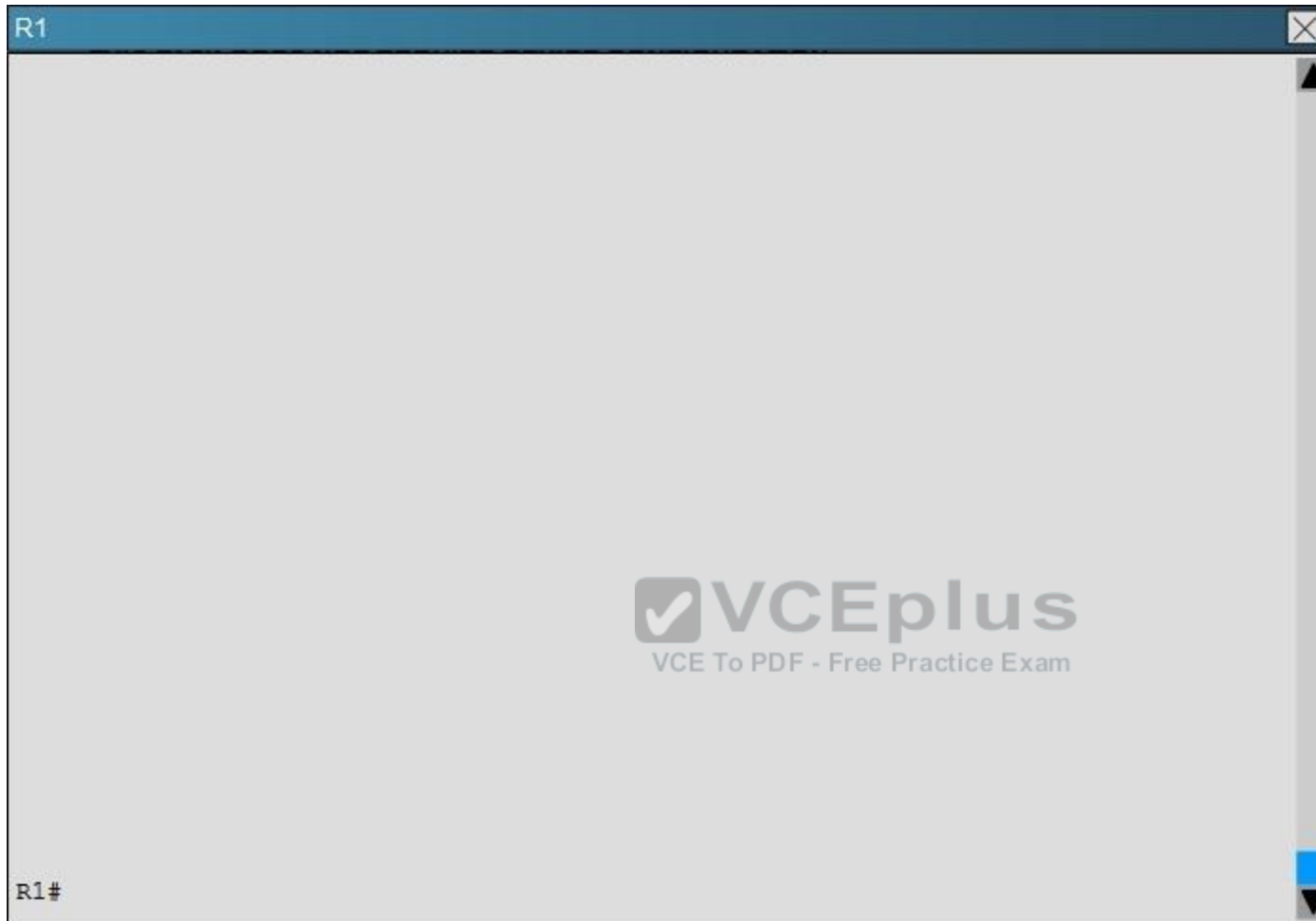
Explanation

Explanation/Reference:



QUESTION 21









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

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

Correct Answer: B

Section: (none)

Explanation

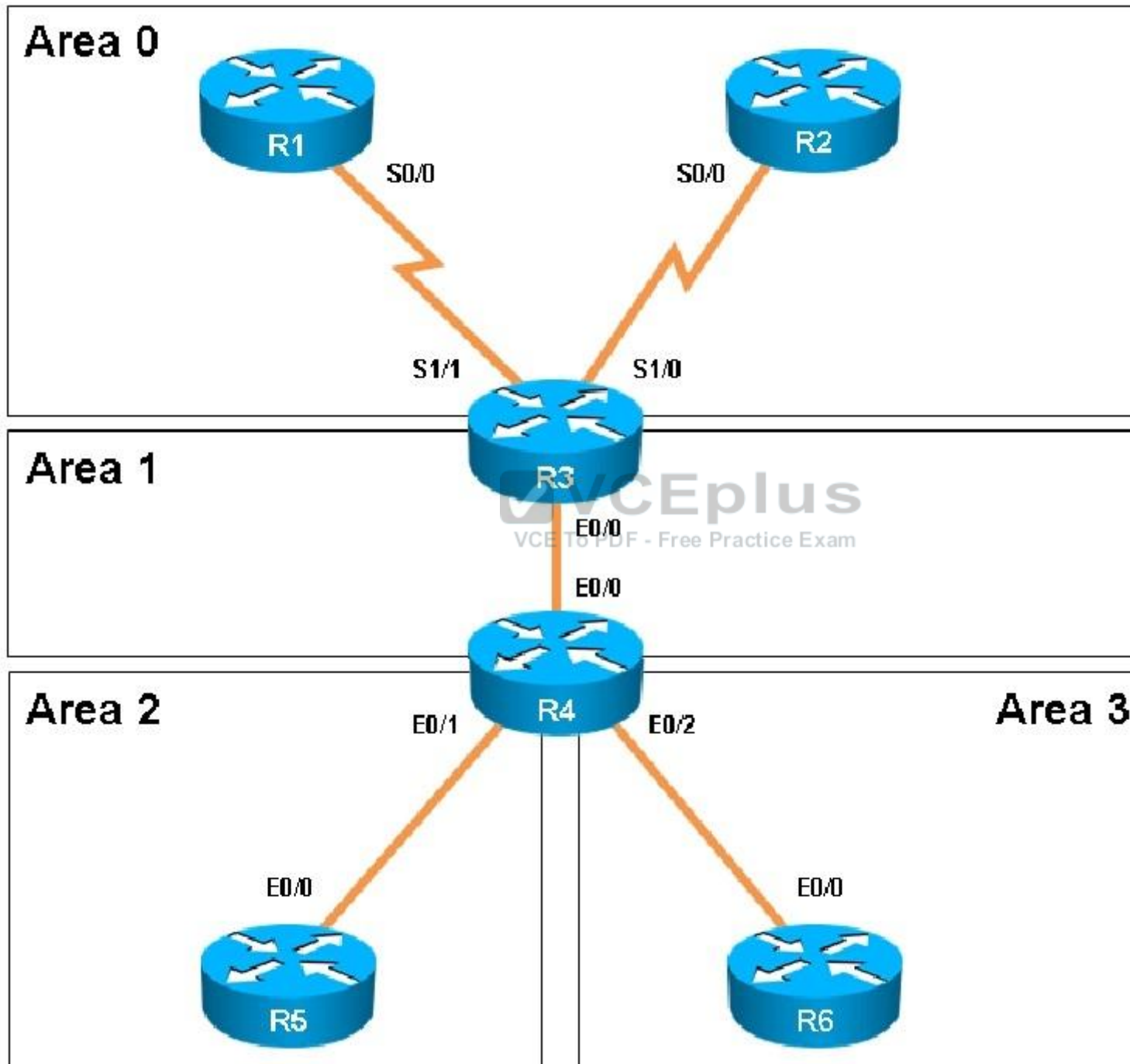
Explanation/Reference:

QUESTION 22

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.













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 23

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

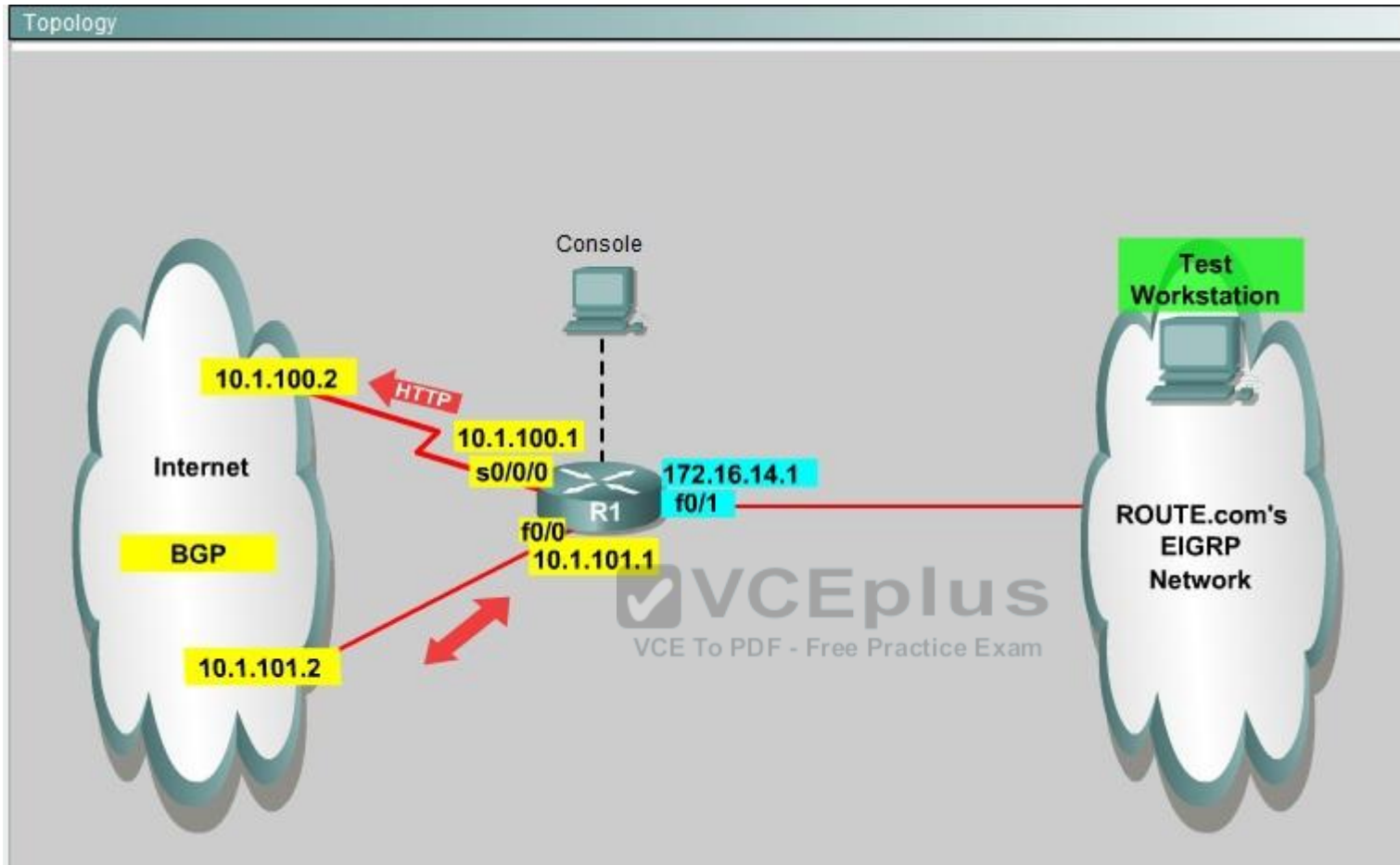
Explanation/Reference:



QUESTION 24

You are a network engineer with ROUTE.com, a small IT company. ROUTE.com has two connections to the Internet; one via a frame relay link and one via an EoMPLS link. IT policy requires that all outbound HTTP traffic use the frame relay link when it is available. All other traffic may use either link. No static or default routing is allowed.

Choose and configure the appropriate path selection feature to accomplish this task. You may use the Test Workstation to generate HTTP traffic to validate your solution.



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

Correct Answer:

Section: (none)

Explanation

Explanation/Reference:

Here are the step by Step Solution for this:

1) First create the access list that catches the HTTP traffic:

```
R1(config)#access-list 101 permit tcp any any eq www
```

2) Configure the route map that sets the next hop address to be ISP1 and permits the rest of the traffic:

```
R1(config)#route-map pbr permit 10
```

```
R1(config-route-map)#match ip address 101
```

```
R1(config-route-map)#set ip next-hop 10.1.100.2
```

```
R1(config-route-map)#exit
```

```
R1(config)#route-map pbr permit 20
```

3) Apply the route-map on the interface to the server in the EIGRP Network:

```
R1(config-route-map)#exit
```

```
R1(config)#int fa0/1
```

```
R1(config-if)#ip policy route-map pbr
```

```
R1(config-if)#exit
```

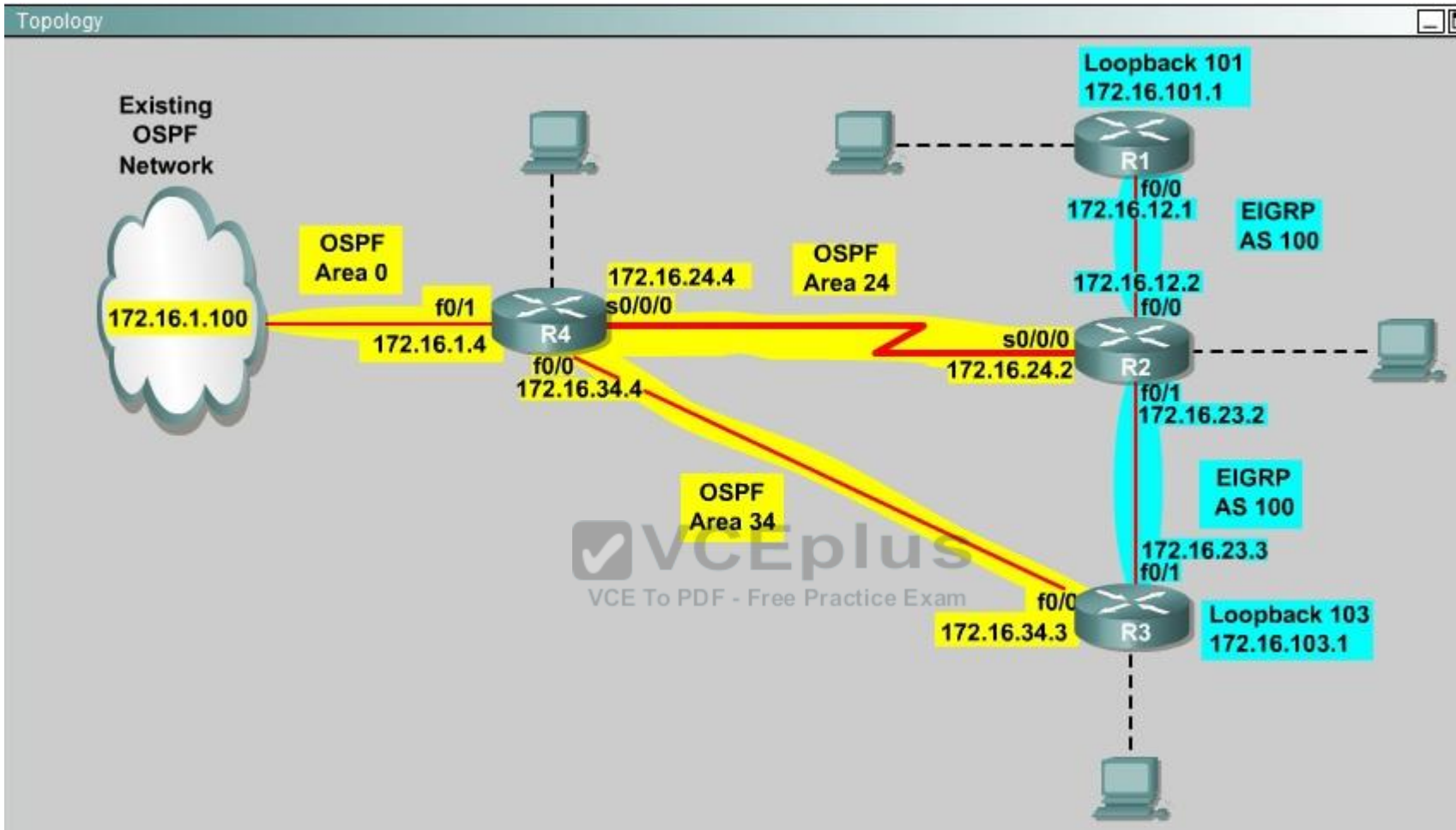
```
R1(config)#exit
```

QUESTION 25

You are a network engineer with ROUTE.com, a small IT company. They have recently merged two organizations and now need to merge their networks as shown in the topology exhibit. One network is using OSPF as its IGP and the other is using EIGRP as its IGP. R4 has been added to the existing OSPF network to provide the interconnect between the OSPF and EIGRP networks. Two links have been added that will provide redundancy.

The network requirements state that you must be able to ping and telnet from loopback 101 on R1 to the OPSF domain test address of 172.16.1.100. All traffic must use the shortest path that provides the greatest bandwidth. The redundant paths from the OSPF network to the EIGRP network must be available in case of a link failure. No static or default routing is allowed in either network.

A previous network engineer has started the merger implementation and has successfully assigned and verified all IP addressing and basic IGP routing. You have been tasked with completing the implementation and ensuring that the network requirements are met. You may not remove or change any of the configuration commands currently on any of the routers. You may add new commands or change default values.



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

Correct Answer:

Section: (none)

Explanation

Explanation/Reference:

```
R2#show interface s0/0/0
```

Write down these 5 parameters, notice that we have to divide the Delay by 10 because the metric unit is in tens of microsecond. For example, we get Bandwidth=1544 Kbit, Delay=20000 us, Reliability=255, Load=1, MTU=1500 bytes then we would redistribute as follows:

```
R2#config terminal
```

```
R2(config)# router ospf 1
```

```
R2(config-router)# redistribute eigrp 100 metric-type 1 subnets R2(config-router)#exit
```

```
R2(config-router)#router eigrp 100
```

```
R2(config-router)#redistribute ospf 1 metric 1544 2000 255 1 1500
```

 Note: In fact, these parameters are just used for reference and we can use other parameters with no problem.

If the delay is 20000us then we need to divide it by 10, that is $20000 / 10 = 2000$) For R3 we use the show interface fa0/0 to get 5 parameters too

```
R3#show interface fa0/0
```

For example we get Bandwidth=10000 Kbit, Delay=1000 us, Reliability=255, Load=1, MTU=1500 bytes

```
R3#config terminal
```

```
R3(config)#router ospf 1
```

```
R3(config-router)#redistribute eigrp 100 metric-type 1 subnets R3(config)#exit
```

```
R3(config-router)#router eigrp 100
```

```
R3(config-router)#redistribute ospf 1 metric 10000 100 255 1 1500
```

 Finally you should try to "show ip route" to see the 172.16.100.1 network (the network behind R4) in the routing table of R1 and make a ping from R1 to this network. Note: If the link between R2 and R3 is FastEthernet link, we must put the command below under EIGRP process to make traffic from R1 to go through R3 (R1 -> R2 -> R3 -> R4), which is better than R1 -> R2 -> R4.

```
R2(config-router)# distance eigrp 90 105
```

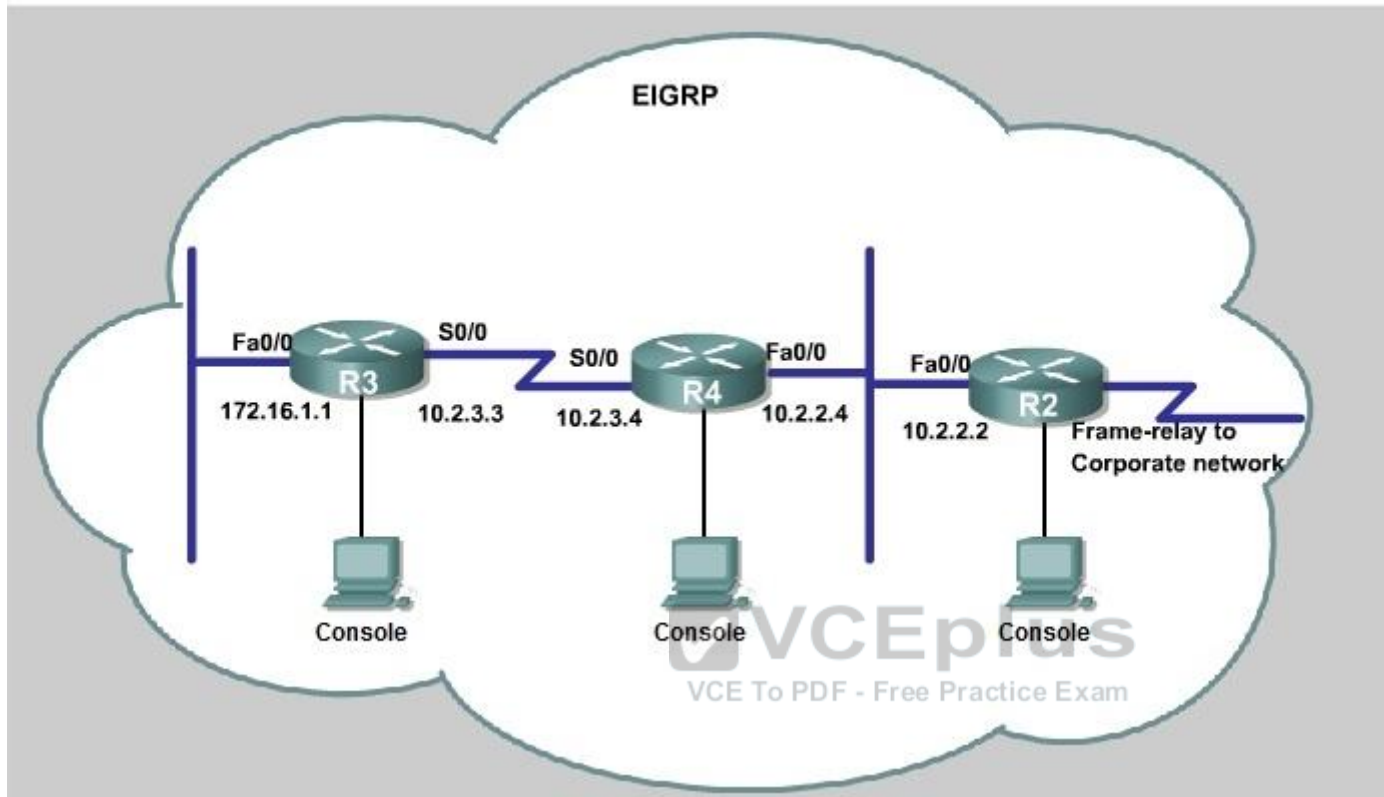
This command sets the Administrative Distance of all EIGRP internal routes to 90 and all EIGRP external routes to 105, which is smaller than the Administrative Distance of OSPF (110) -> the link between R2 & R3 will be preferred to the serial link between R2 & R4. Note: The actual OPSF and EIGRP process numbers may change in the actual exam so be sure to use the actual correct values, but the overall solution is the same.

QUESTION 26

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

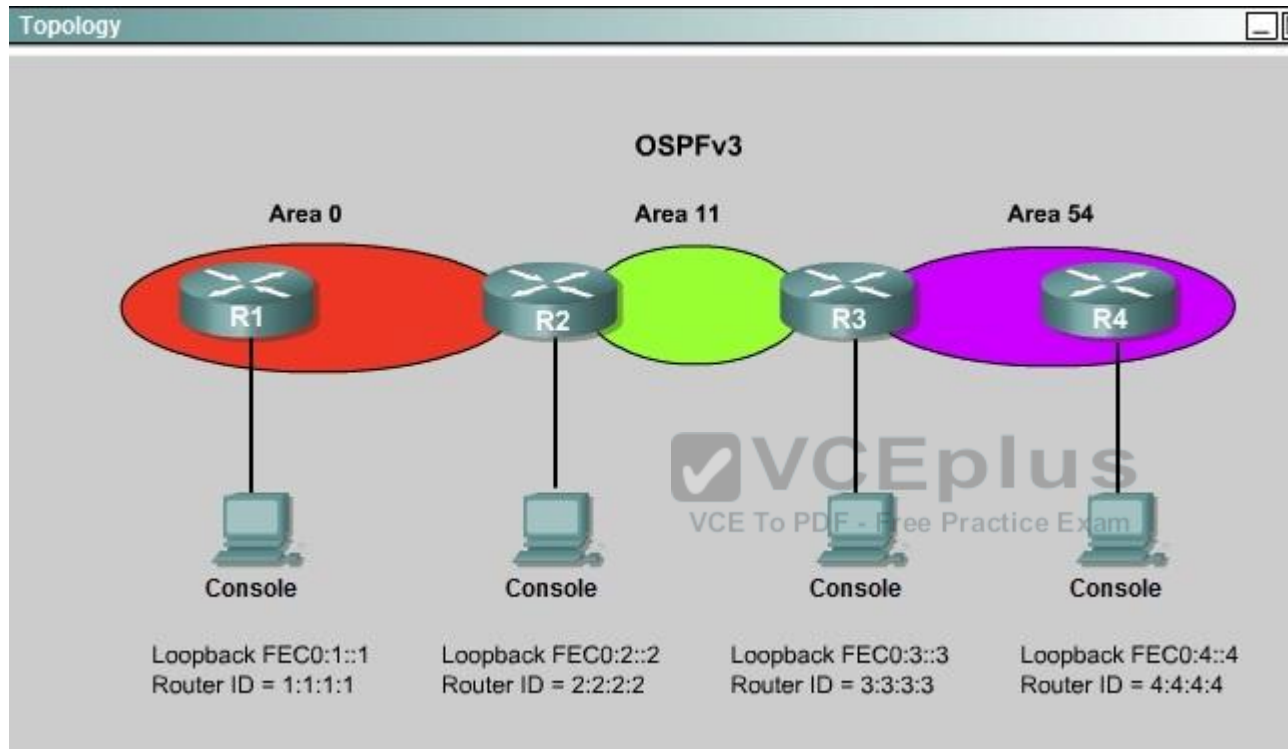
Explanation/Reference:

QUESTION 27

ROUTE.com is a small IT corporation that has an existing enterprise network that is running IPv6 OSPFv3. Currently OSPF is configured on all routers.

However, R4's loopback address (FEC0:4:4) cannot be seen in R1's IPv6 routing table. You are tasked with identifying the cause of this fault and implementing the needed corrective actions that uses OPSF features and does not change the current area assignments. You will know that you have corrected the fault when R4's loopback address (FEC0:4:4) can be seen in RTs IPv6 routing table.

Special Note: To gain the maximum number of points you must remove all incorrect or unneeded configuration statements related to this issue.



```
R1
% Some configuration options may have changed
%LINK-3-UPDOWN: Interface FastEthernet0/1, changed state to administratively down
*Wed Oct 15 15:22:47.273: %OSPFv3-5-ADJCHG: Process 1, Nbr 2.2.2.2 on FastEthernet0/1 from FULL to DOWN, Neighbor Down: Interface down or detached
%LINK-3-UPDOWN: Interface FastEthernet0/0, changed state to up
*Wed Oct 15 15:22:57.273: %OSPFv3-5-ADJCHG: Process 1, Nbr 2.2.2.2 on FastEthernet0/0 from LOADING to FULL, Loading Done
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
*Wed Oct 15 15:22:57.273: %OSPFv3-5-ADJCHG: Process 1, Nbr 2.2.2.2 on FastEthernet0/0 from LOADING to FULL, Loading Done
Press RETURN to get started!
R1>
```

```
R3
% Some configuration options may have changed
*Wed Oct 15 15:22:47.367: %OSPFv3-5-ADJCHG: Process 1, Nbr 4.4.4.4 on OSPFv3_VL0
  from LOADING to FULL, Loading Done
%LINK-3-UPDOWN: Interface FastEthernet0/1, changed state to administratively down
*Wed Oct 15 15:22:47.273: %OSPFv3-5-ADJCHG: Process 1, Nbr 2.2.2.2 on FastEthernet0/1
  from FULL to DOWN, Neighbor Down: Interface down or detached
%LINK-3-UPDOWN: Interface FastEthernet0/0, changed state to up
*Wed Oct 15 15:22:57.273: %OSPFv3-5-ADJCHG: Process 1, Nbr 2.2.2.2 on FastEthernet0/0
  from LOADING to FULL, Loading Done
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
*Wed Oct 15 15:22:57.273: %OSPFv3-5-ADJCHG: Process 1, Nbr 2.2.2.2 on FastEthernet0/0
  from LOADING to FULL, Loading Done
Press RETURN to get started!
R3>
```

```
R4

% Some configuration options may have changed
%LINK-3-UPDOWN: Interface FastEthernet0/1, changed state to administratively down
*Wed Oct 15 15:22:47.273: %OSPFv3-5-ADJCHG: Process 1, Nbr 2.2.2.2 on FastEthernet0/1 from FULL to DOWN, Neighbor Down: Interface down or detached
*Wed Oct 15 15:22:47.367: %OSPFv3-5-ADJCHG: Process 1, Nbr 3.3.3.3 on OSPFv3_VL0 from LOADING to FULL, Loading Done
%LINK-3-UPDOWN: Interface FastEthernet0/0, changed state to up
*Wed Oct 15 15:22:57.273: %OSPFv3-5-ADJCHG: Process 1, Nbr 2.2.2.2 on FastEthernet0/0 from LOADING to FULL, Loading Done
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
*Wed Oct 15 15:22:57.273: %OSPFv3-5-ADJCHG: Process 1, Nbr 2.2.2.2 on FastEthernet0/0 from LOADING to FULL, Loading Done
Press RETURN to get started!
R4>
```

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

Correct Answer:

Section: (none)

Explanation

Explanation/Reference:

QUESTION 28

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 29

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

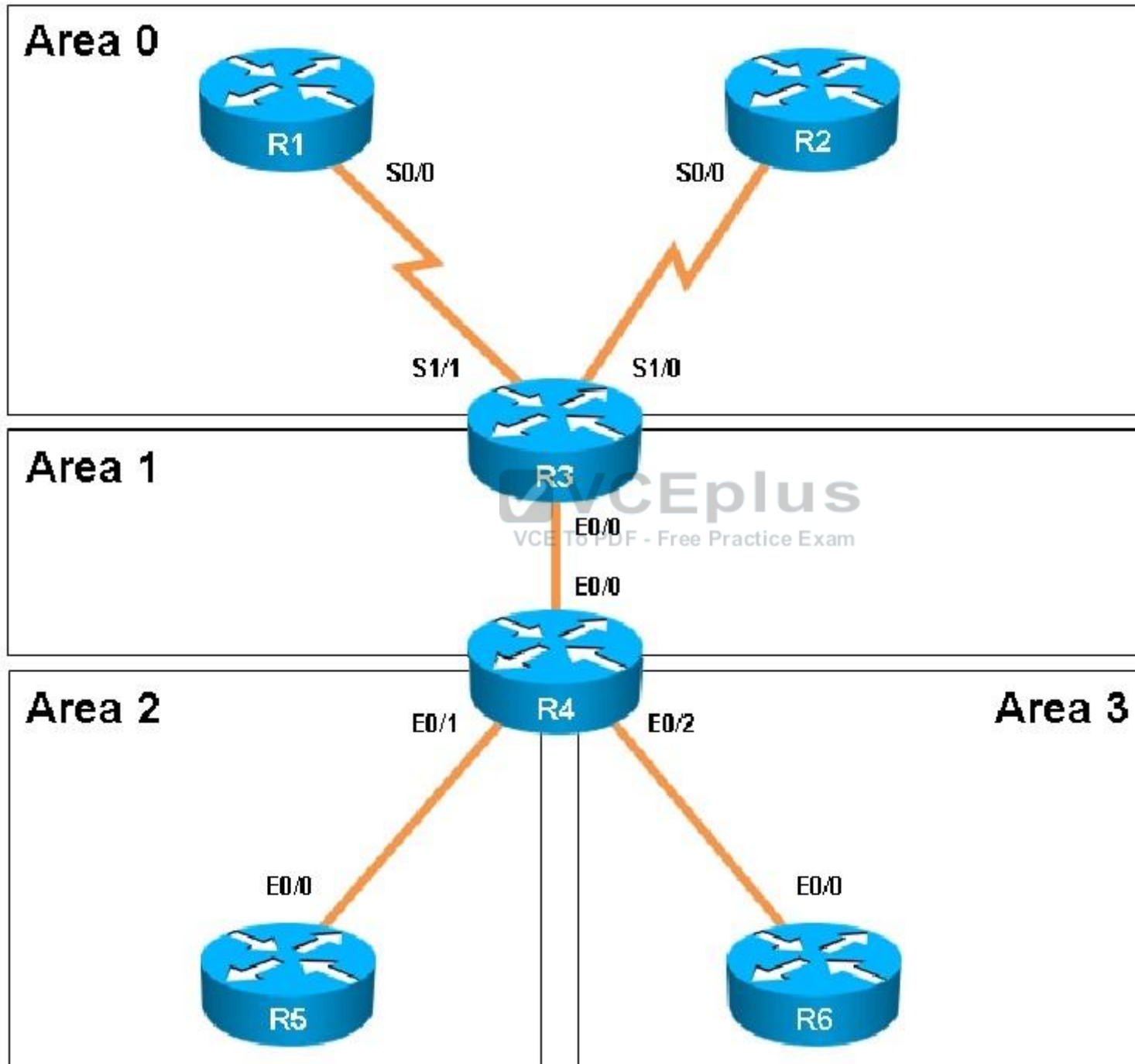
Explanation/Reference:

QUESTION 30

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 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 31

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

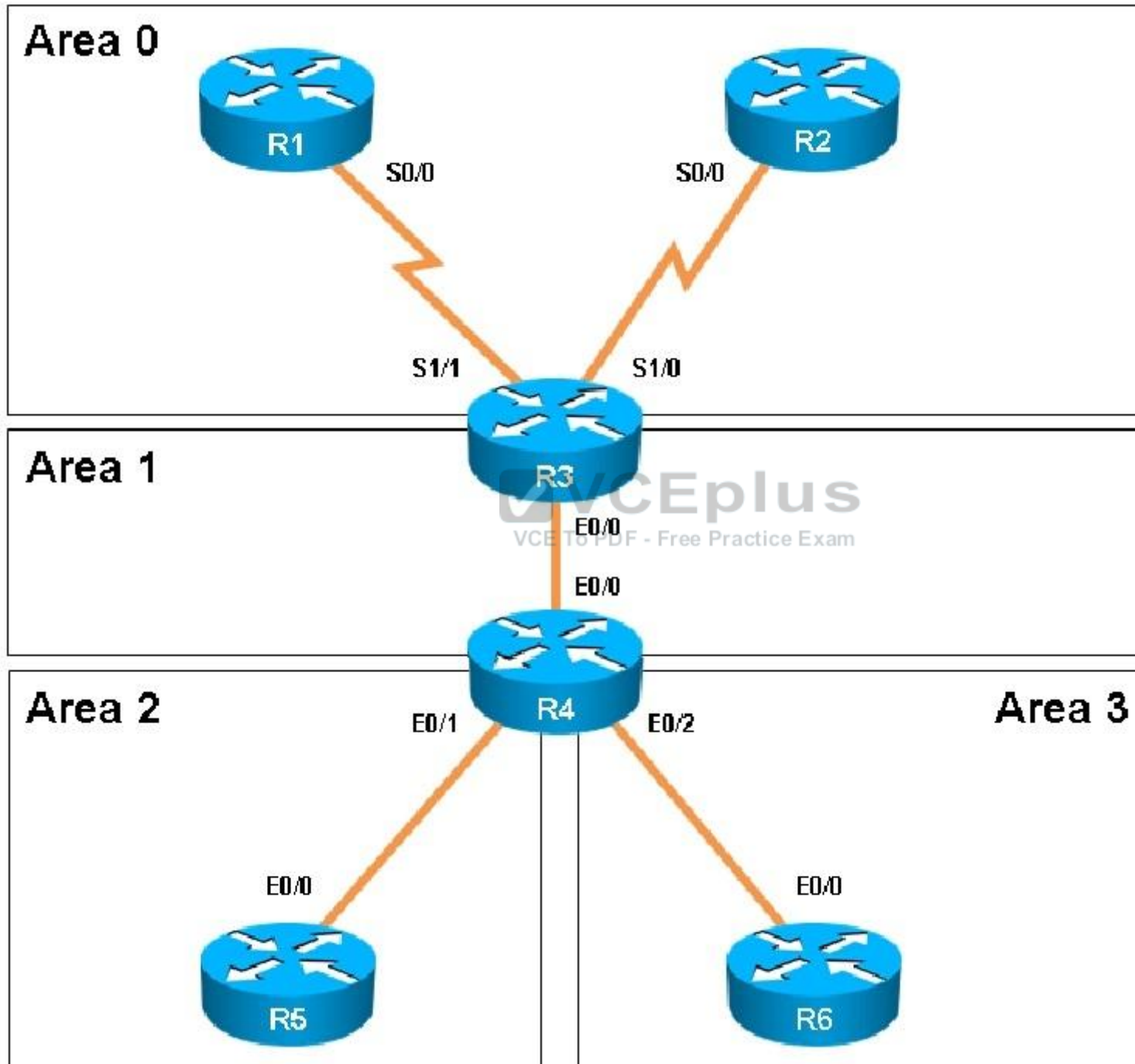
Explanation/Reference:



QUESTION 32

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)

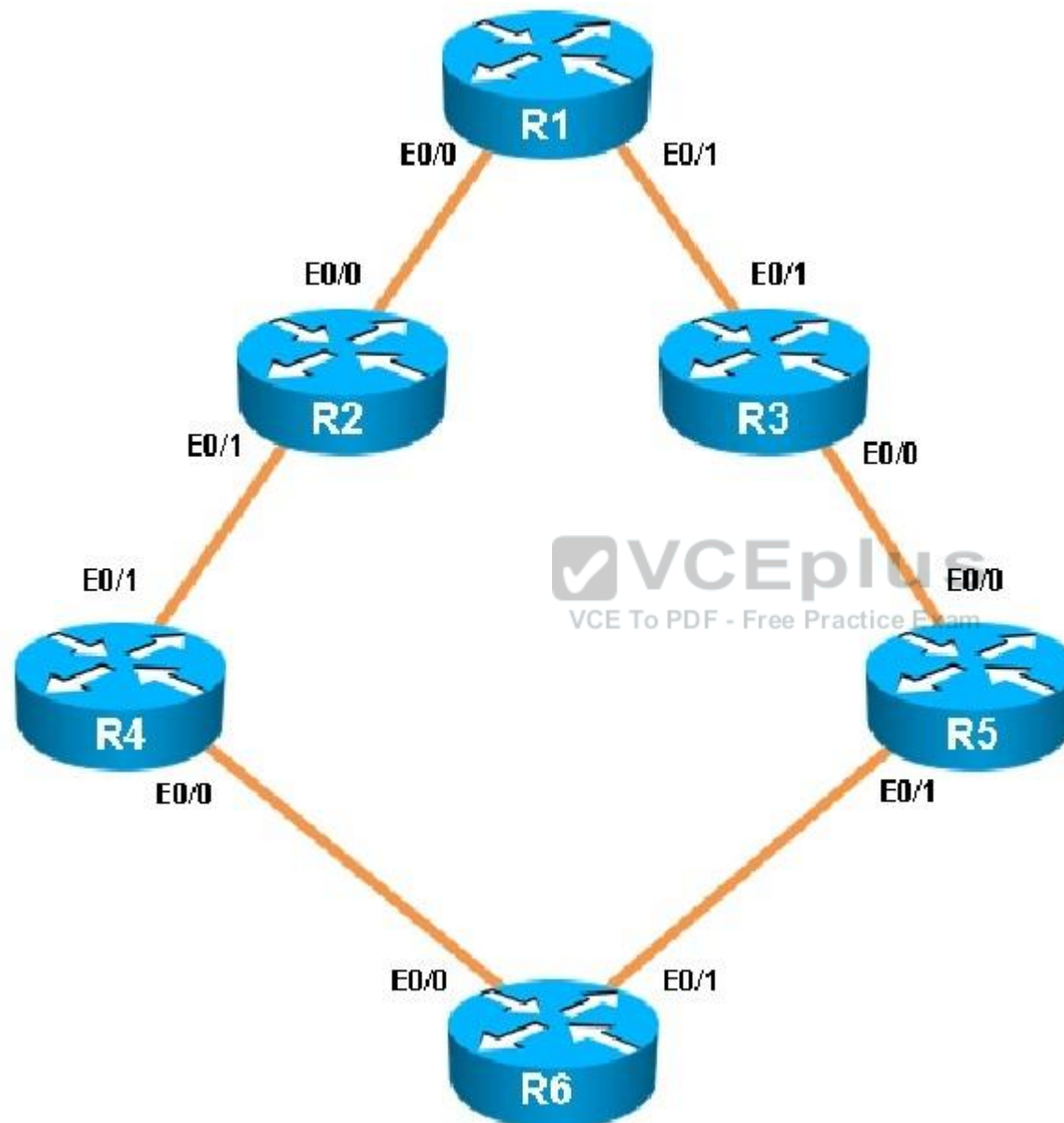
Explanation

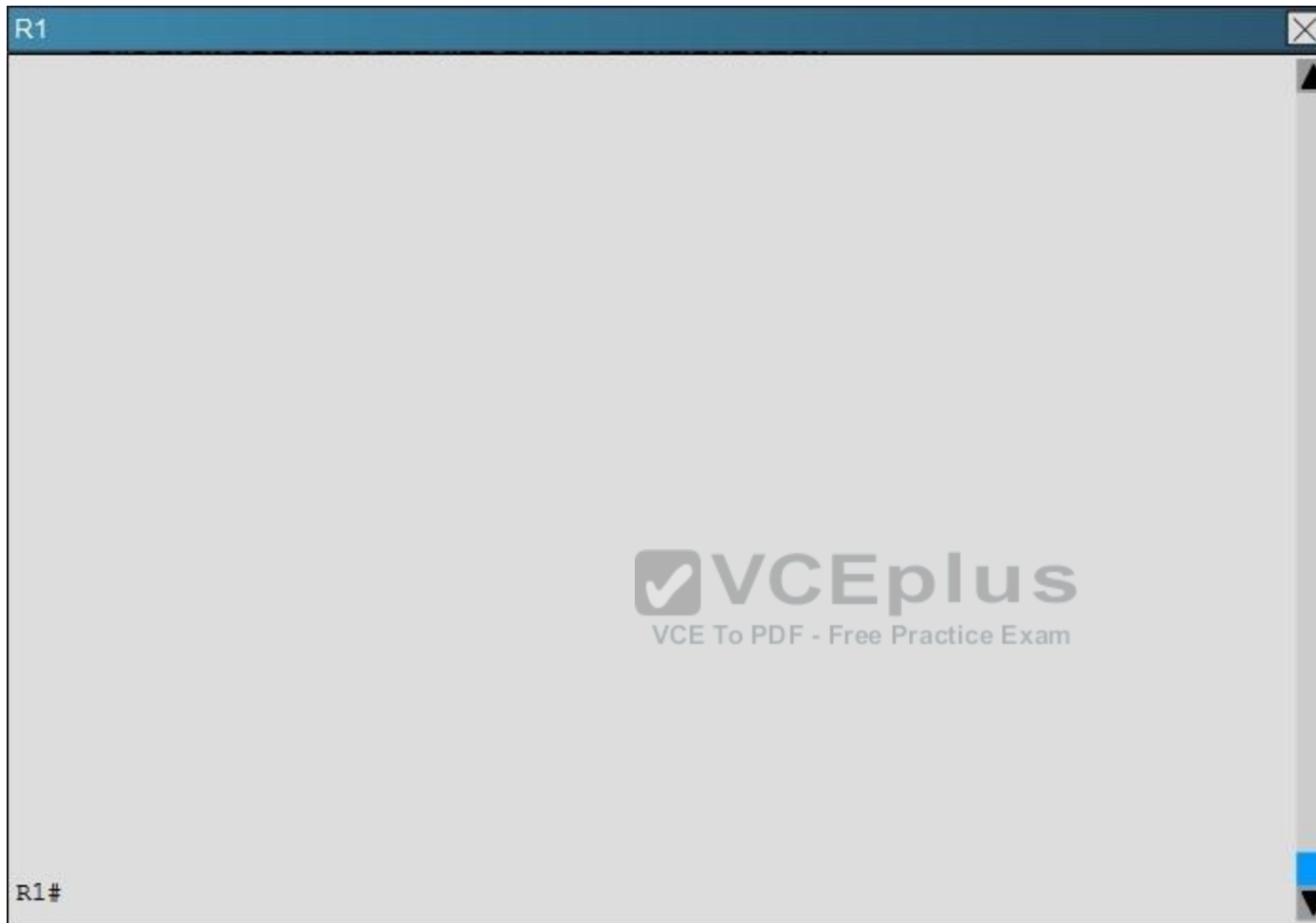
Explanation/Reference:

QUESTION 33

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)

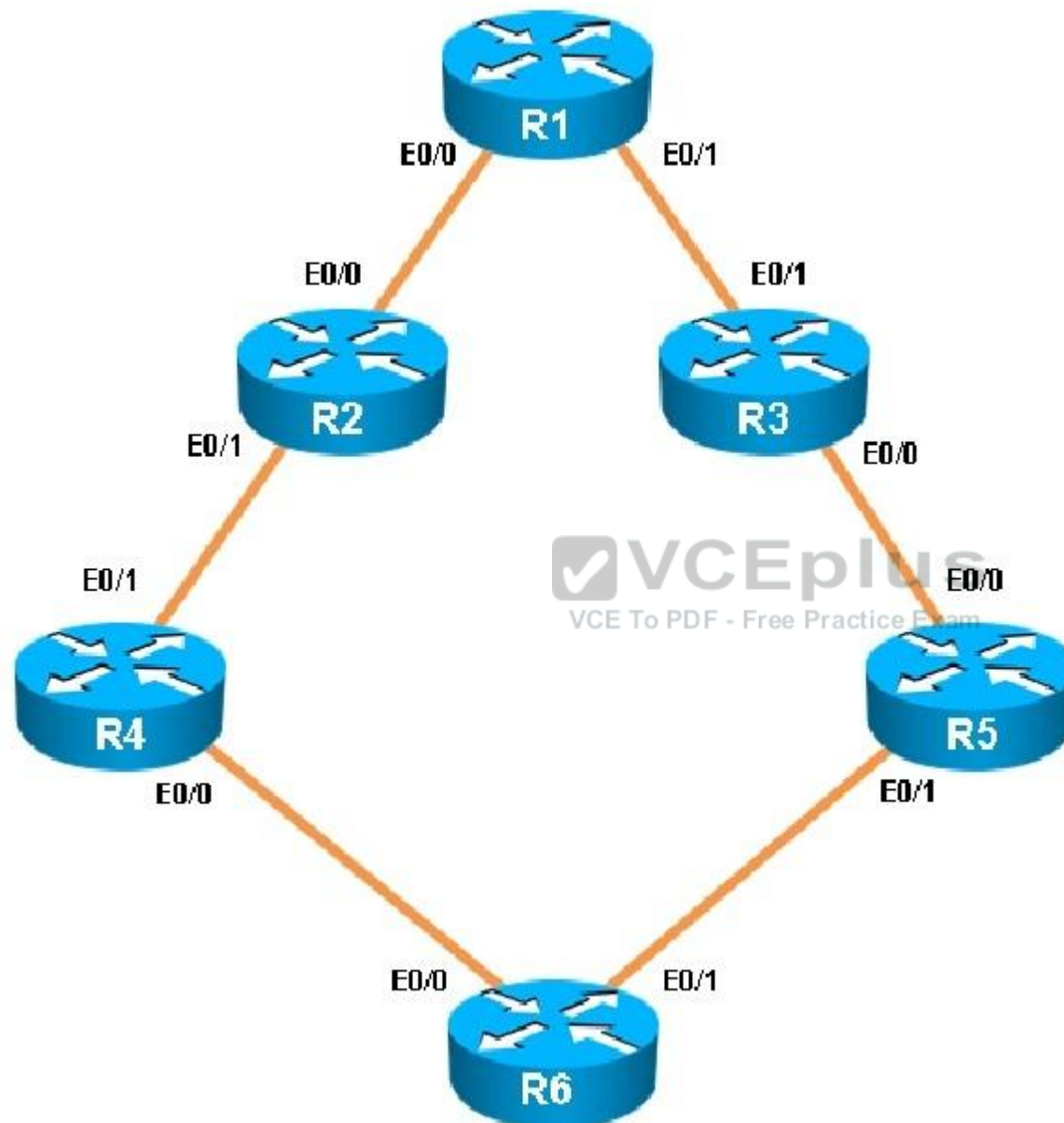
Explanation

Explanation/Reference:

QUESTION 34

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:



R2

```

!
no aaa new-model
clock timezone PST -8 0
!
ip cef
!
!
no ipv6 cef
ipv6 multicast rpf use-bgp
!
key chain CISCO
  key 1
    key-string firstkey
key chain FIRSTKEY
  key 1
    key-string CISCO
key chain R3
  key 1
    key-string R3
  key 2
    key-string R1
!
!
!

```

Clearly we see the actual key chain is named CISCO.

QUESTION 35

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 36

Refer to the exhibit.

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```
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 37

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

Password: cisco

NewYork

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

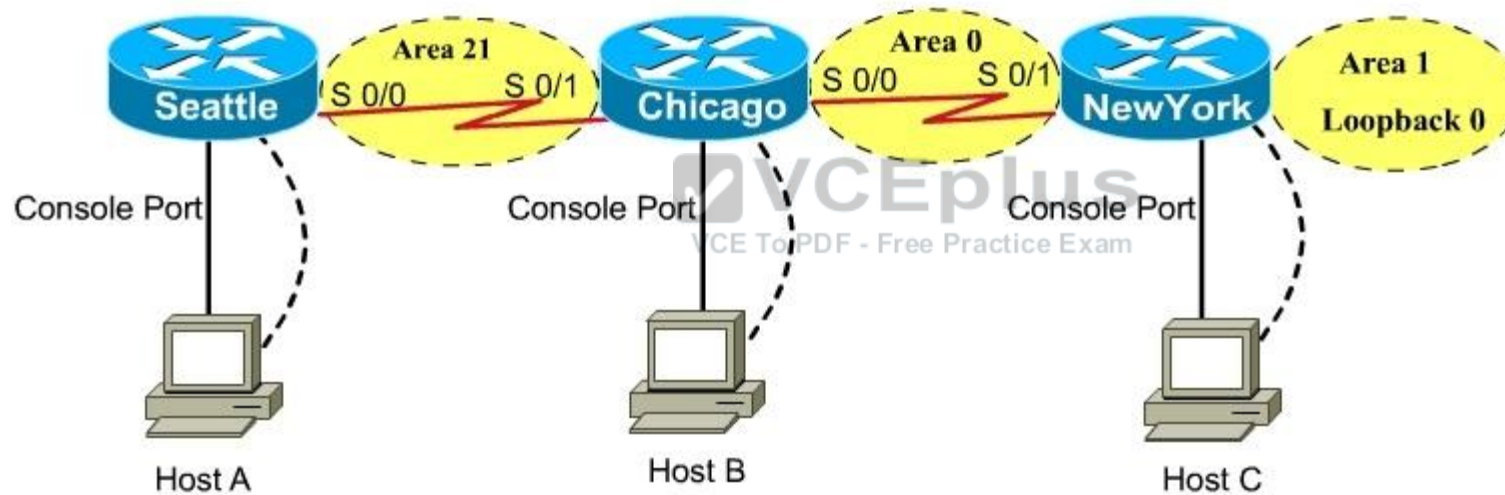
Loopback0 172.16.189.189

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



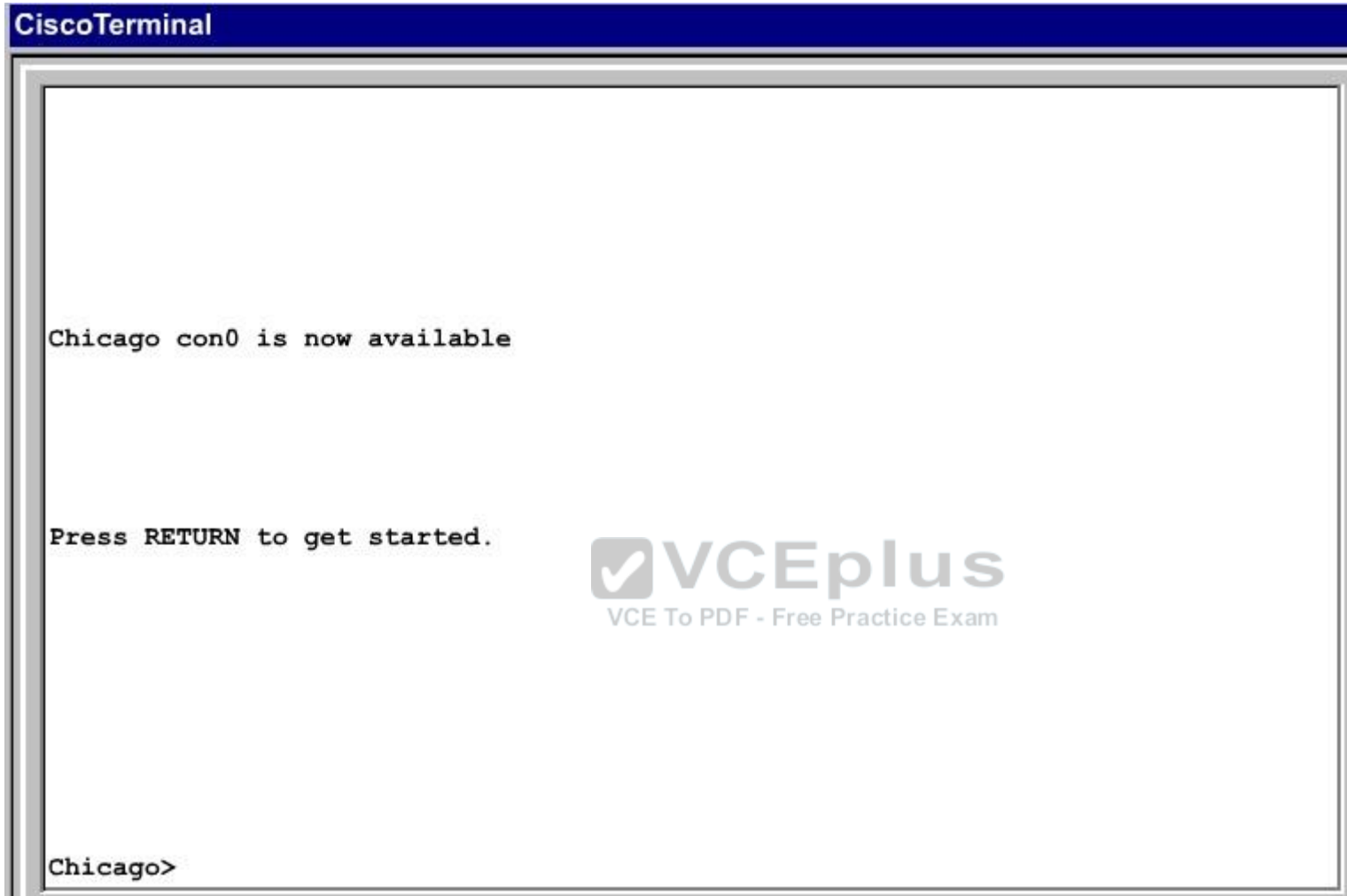
CiscoTerminal

Seattle con0 is now available

Press RETURN to get started.



Seattle>



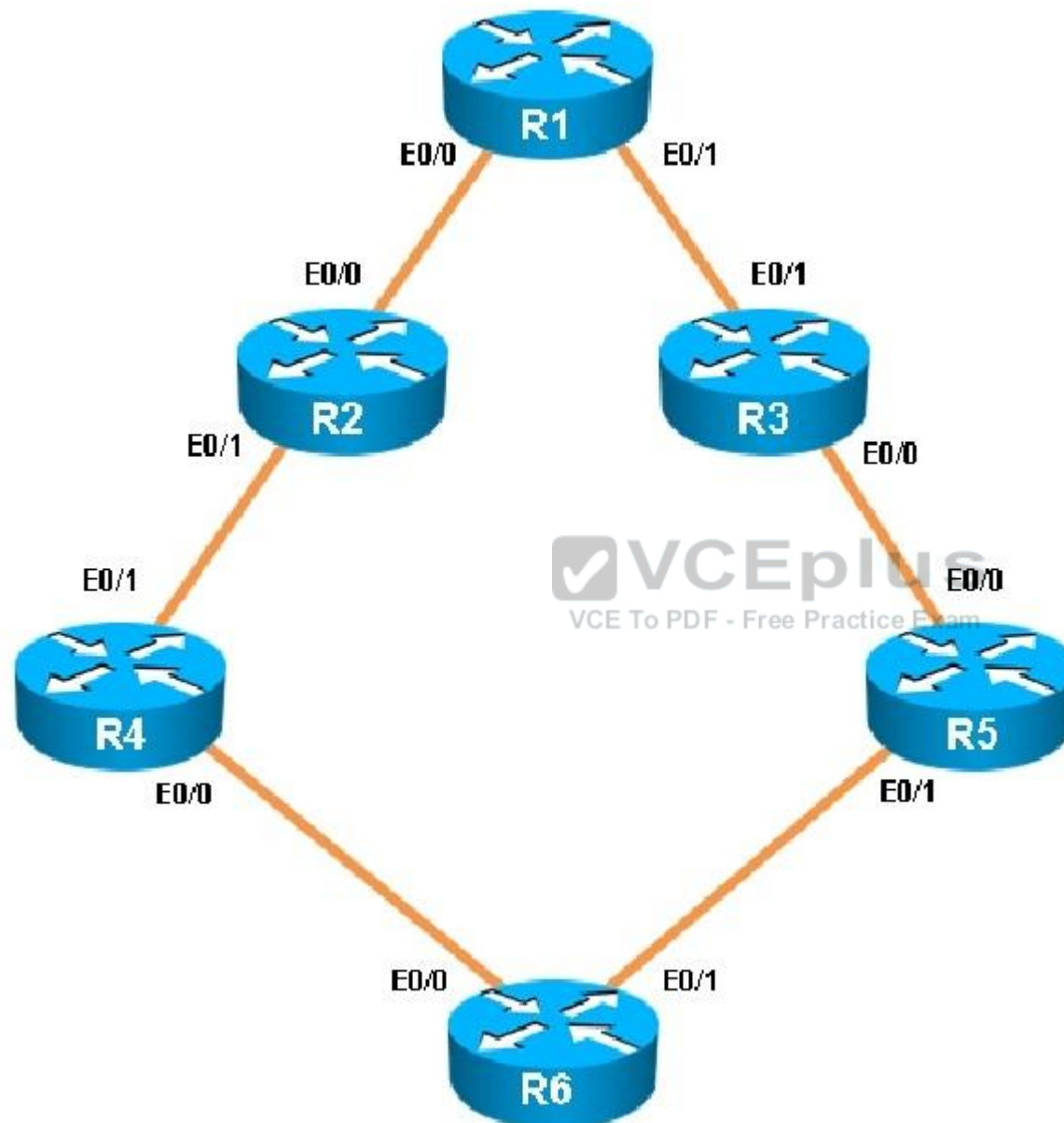
- A.
- B.
- C.
- D.

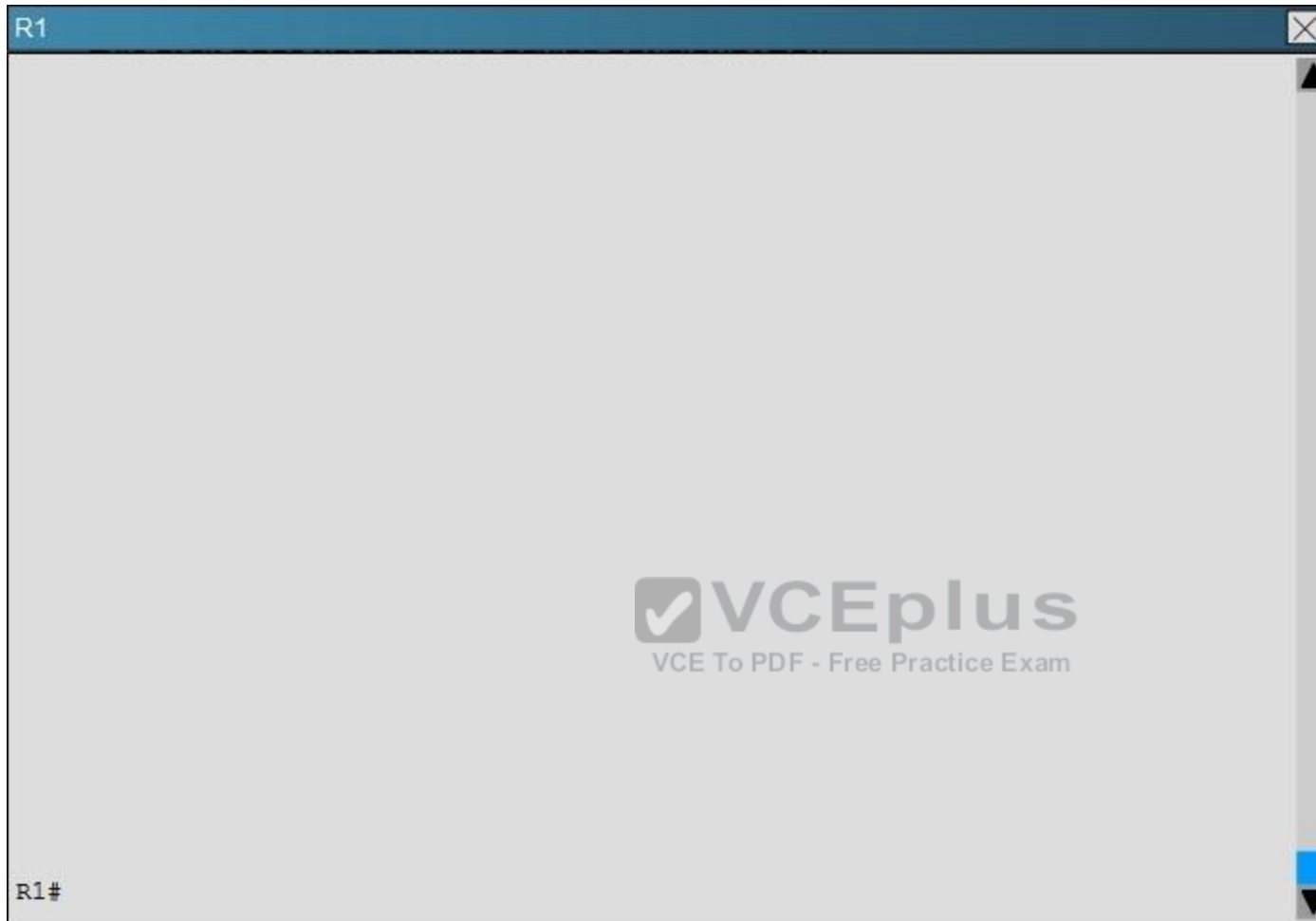
Correct Answer:
Section: (none)

Explanation**Explanation/Reference:****QUESTION 38**

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











Traffic from R1 to R61 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

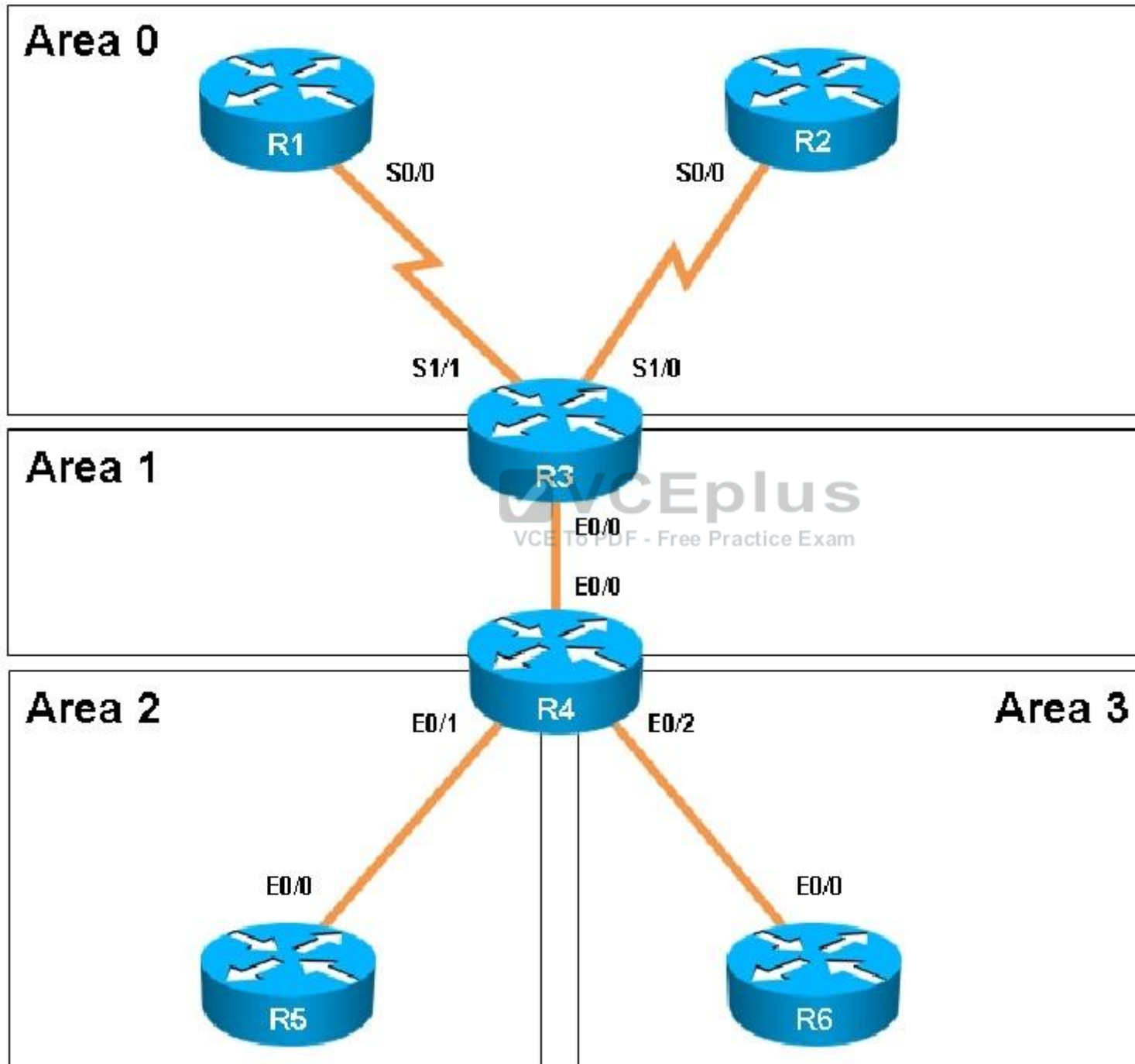
Explanation/Reference:

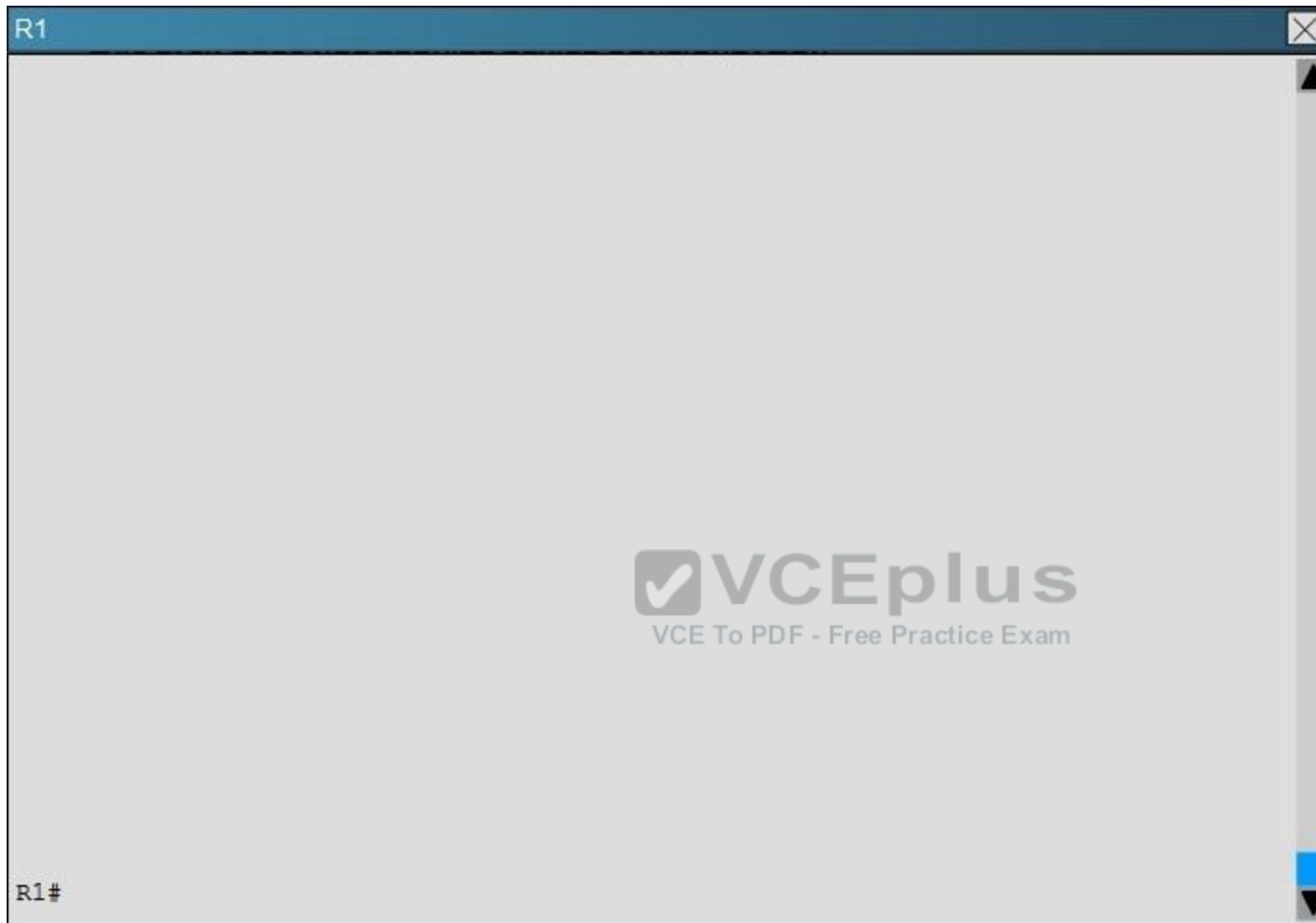
QUESTION 39

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:

QUESTION 40

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 41

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 42

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

TypeE. 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 43

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 44

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 45

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 46

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 47

Which common issue causes intermittent DMVPN tunnel flaps?

- A. a routing neighbor reachability issue
- B. a suboptimal routing table
- C. interface bandwidth congestion
- D. that the GRE tunnel to hub router is not encrypted

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 48

Refer to the following command:

```
router(config)# ip http secure-port 4433
```

Which statement is true?

- A. The router will listen on port 4433 for HTTPS traffic.
- B. The router will listen on port 4433 for HTTP traffic.
- C. The router will never accept any HTTP and HTTPS traffic.
- D. The router will listen to HTTP and HTTP traffic on port 4433.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 49

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 50

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 51

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 52

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 53

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 54

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 55**

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:****QUESTION 56**

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 57

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 58

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 59

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 60

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 61

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 62

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 63

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 64

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 65

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 66

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 67**

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 68**

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 69**

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 70

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 71

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 72

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 73

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 74

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 75

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 76

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 77

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 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

In IPv6, SLAAC provides the ability to address a host based on a network prefix that is advertised from a local network router. How is the prefix advertised?

- A. routing table
- B. router advertisements
- C. routing protocol
- D. routing type

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 83

Which statement describes what this command accomplishes when inside and outside interfaces are correctly identified for NAT?

```
ip nat inside source static tcp 192.168.1.50 80 209.165.201.1 8080 extendable
```

- A. It allows host 192.168.1.50 to access external websites using TCP port 8080.
- B. It allows external clients coming from public IP 209.165.201.1 to connect to a web server at 192.168.1.50.
- C. It allows external clients to connect to a web server hosted on 192.168.1.50.
- D. It represents an incorrect NAT configuration because it uses standard TCP ports.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 84

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 85

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
- E. decreased BGP neighbor configurations

Correct Answer: ABC

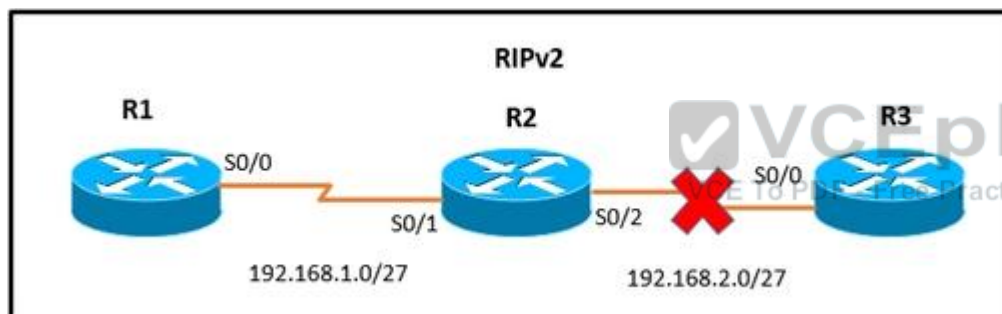
Section: (none)

Explanation

Explanation/Reference:

QUESTION 86

Refer to the exhibit. The network setup is running the RIPv2 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

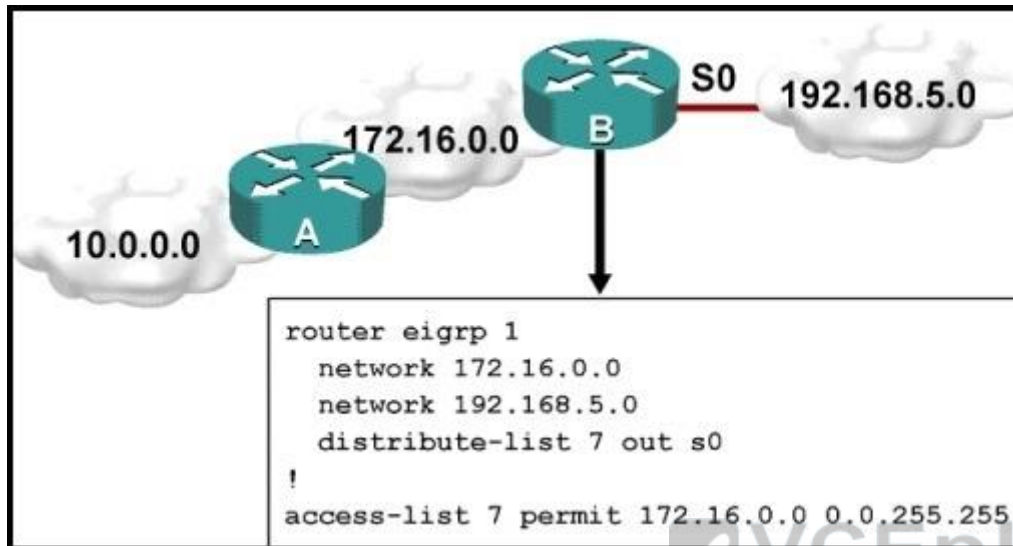
Section: (none)

Explanation

Explanation/Reference:

QUESTION 87

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 88

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

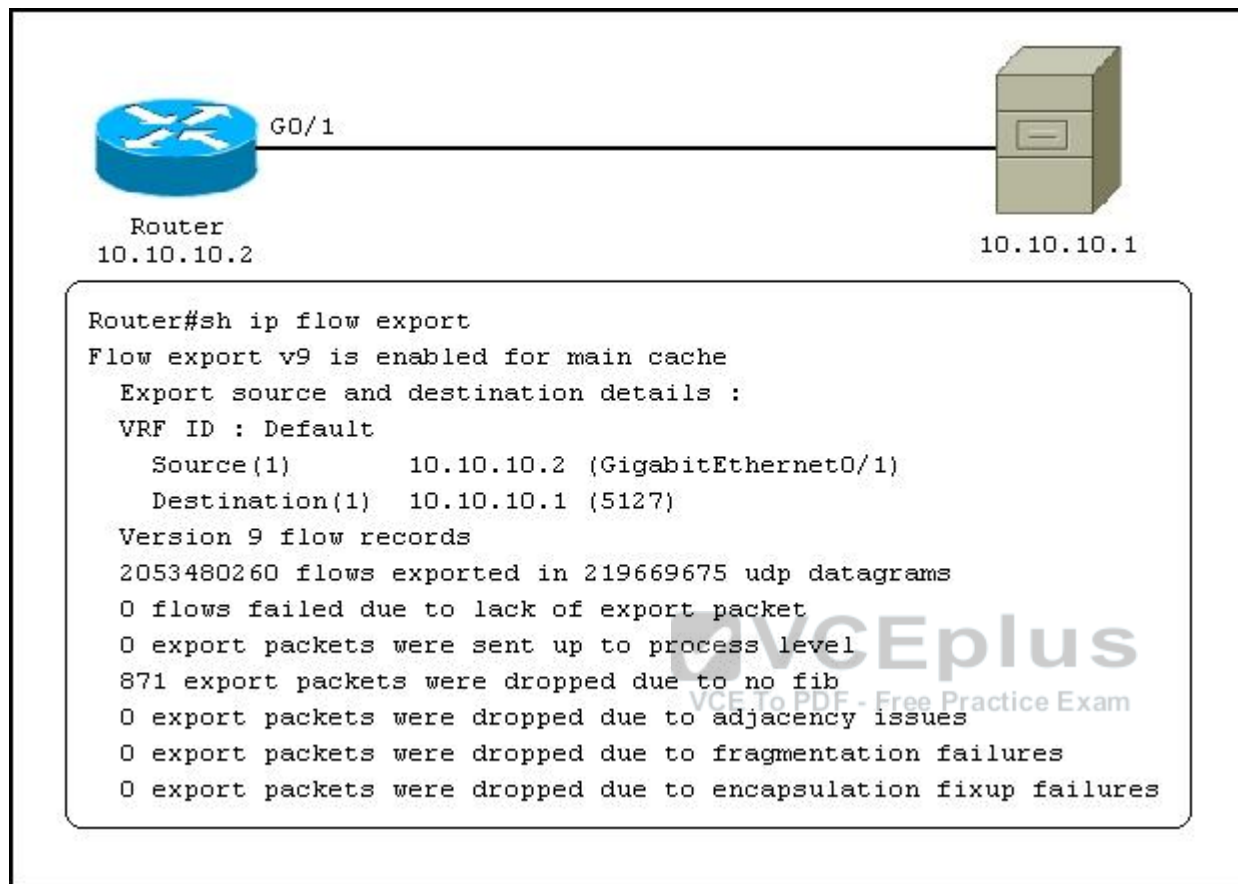
Section: (none)

Explanation

Explanation/Reference:

QUESTION 89

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 90

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 91

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 92

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 93

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 94

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 95

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 96

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::102 102
```

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

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 97

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 98

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 99

A network engineer has configured a tracking object to monitor the reachability of IP SLA 1. In order to update the next hop for the interesting traffic, which feature must be used in conjunction with the newly created tracking object to manipulate the traffic flow as required?

- A. SNMP
- B. PBR
- C. IP SLA
- D. SAA
- E. ACLs
- F. IGP

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:



QUESTION 100

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 101

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:

Section: (none)

Explanation

Explanation/Reference:

QUESTION 102

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 103

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 104

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
- E. 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 105

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 106**

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 107**

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 108**

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 109

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 110

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 111

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

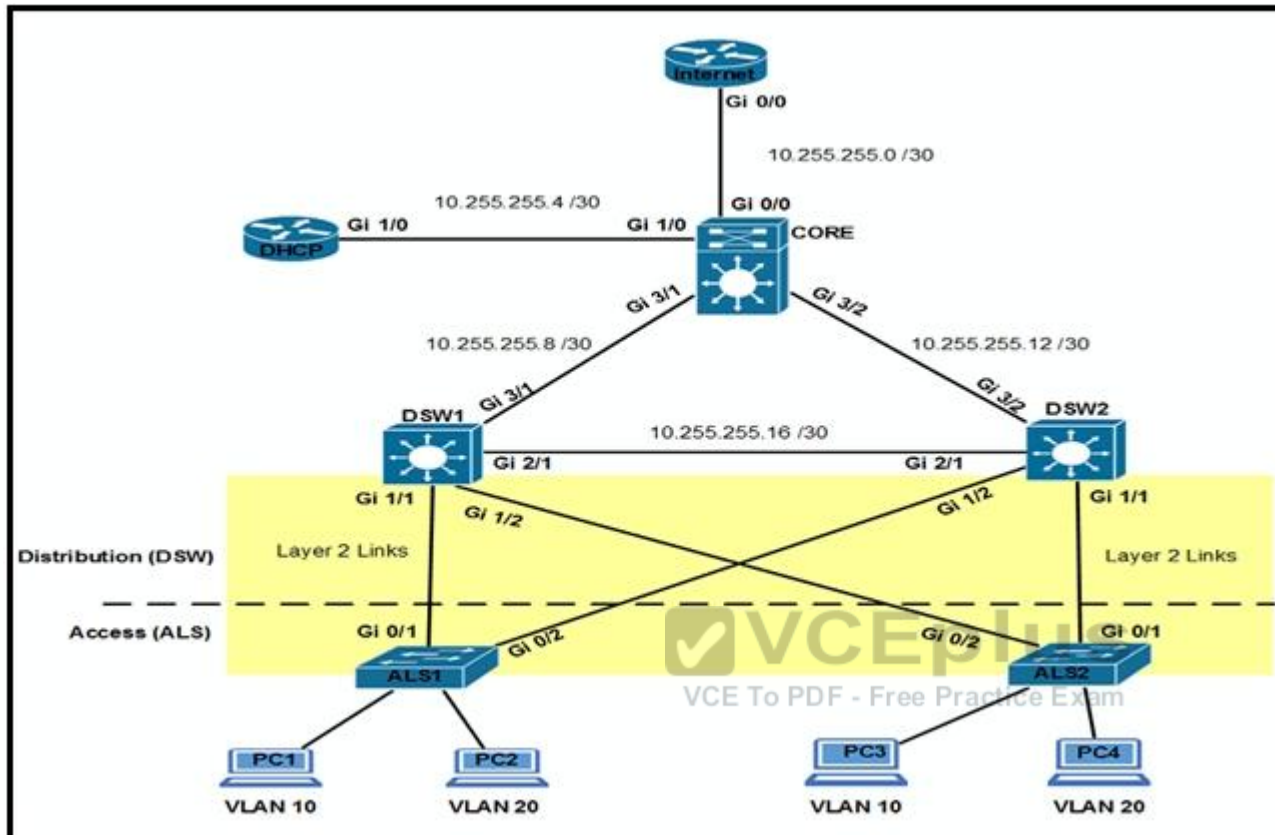
Section: (none)

Explanation

Explanation/Reference:

QUESTION 112

Refer to the exhibit.



Which option prevents routing updates from being sent to the DHCP router, while still allowing routing update messages to flow to the Internet router and the distribution switches?

- A. DHCP(config-router)# passive-interface default DHCP(config-router)# no passive- interface Gi1/0 Internet(config-router)# passive-interface Gi0/1 Internet (config-router)# passive-interface Gi0/2
- B. Core(config-router)# passive-interface Gi0/0 Core(config-router)# passive-interface Gi3/1 Core(config-router)# passive-interface Gi3/2 DHCP(config-router)# no passive- interface Gi1/0
- C. Core(config-router)# passive-interface default Core(config-router)# no passive-interface Gi0/0 Core(config-router)# no passive-interface Gi3/1 Core (config-router)# no passive- interface Gi3/2
- D. Internet(config-router)# passive-interface default Core(config-router)# passive-interface default DSW1(config-router)# passive-interface default DSW2(config-router)# passive- interface default

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 113

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 114

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

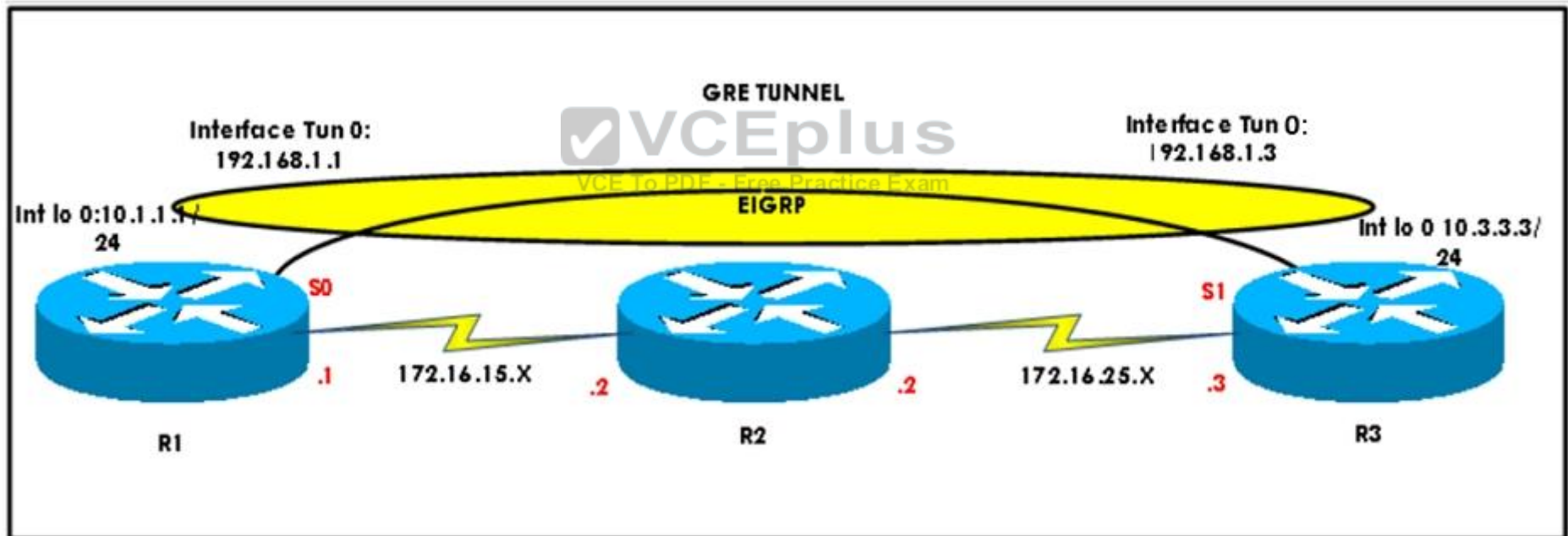
Section: (none)

Explanation

Explanation/Reference:

QUESTION 115

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 116

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 117

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 118

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 119

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 120

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 121**

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 122**

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

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

Correct Answer: BC

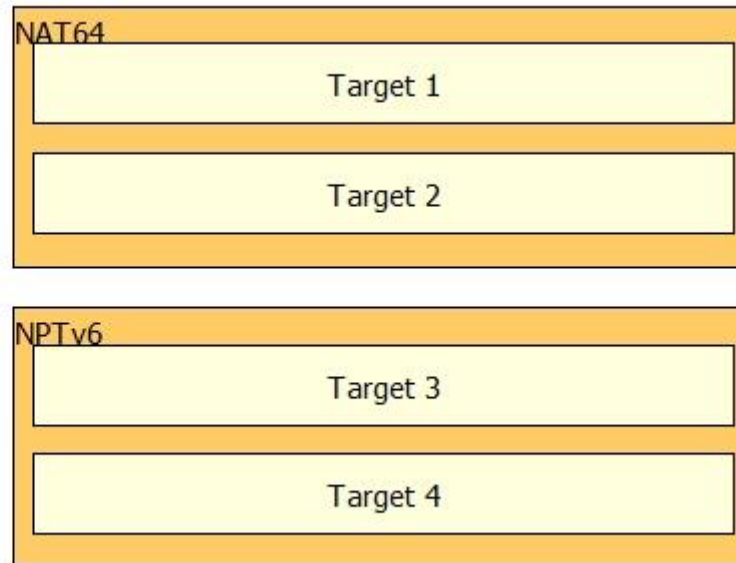
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Explanation

Explanation/Reference:**QUESTION 123**

Drag and drop the IPv6 NAT characteristic from the left to the matching IPv6 NAT category on the right.

- Modifies IP header in Transit
- Maps one IPv6 address prefix to another IPv6 prefix
- Uses Network-specific prefix
- Modifies session during translation



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

Correct Answer:

Section: (none)

Explanation

Explanation/Reference:

- Modifies IP header in Transit
- Maps one IPv6 address prefix to another IPv6 prefix
- Uses Network-specific prefix
- Modifies session during translation

NAT64

- Modifies session during translation
- Uses Network-specific prefix

NPTv6

- Maps one IPv6 address prefix to another IPv6 prefix
- Modifies IP header in Transit

QUESTION 124

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:

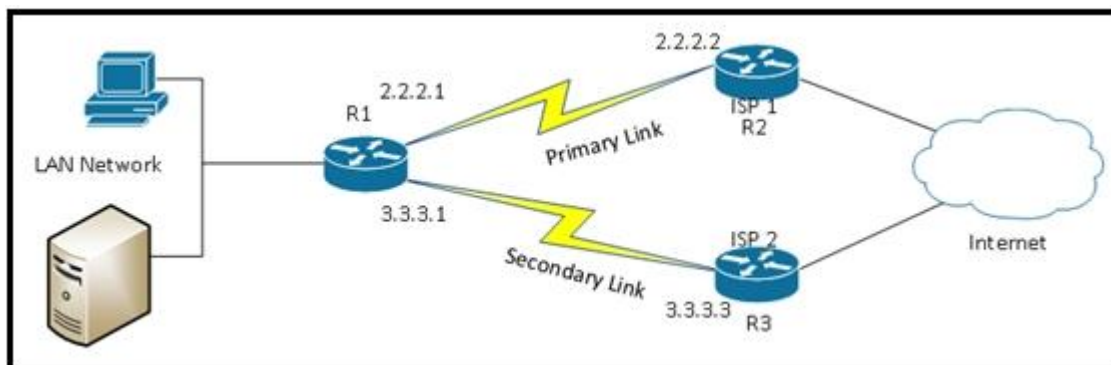
Section: (none)

Explanation

Explanation/Reference:

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

QUESTION 125
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 126

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:

QUESTION 127

Which two statements indicate a valid association mode for NTP synchronization? (Choose two.)

- A. The client polls NTP servers for time.
- B. The client broadcasts NTP requests.
- C. The client listens to NTP broadcasts.
- D. The client creates a VPN tunnel to an NTP server.
- E. The client multicasts NTP requests.

Correct Answer: AC

Section: (none)

Explanation

Explanation/Reference:**QUESTION 128**

Drag and drop the Cisco Express Forwarding adjacency types from the left to the correct type of processing on the right.

punt adjacency	Packets are discarded.
drop adjacency	Features that require special handling or features that are not yet supported in conjunction with Cisco Express Forwarding switching paths are forwarded to the next switching layer for handling. Features that are not supported are forwarded to the next higher
null adjacency	When a router is connected directly to several hosts, the FIB table on the router maintains a prefix for the subnet rather than for the individual host prefixes. The subnet prefix points to a glean adjacency. When packets need to be forwarded to
discard adjacency	Packets are dropped, but the prefix is checked.
glean adjacency	Packets destined for a Null0 interface are dropped. This can be used as an effective form of access filtering.

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

Correct Answer:

Section: (none)

Explanation

Explanation/Reference:



punt adjacency

discard adjacency

drop adjacency

punt adjacency

null adjacency

glean adjacency

discard adjacency

drop adjacency

glean adjacency

null adjacency