300-101_formatted

Number: 000-000
Passing Score: 800
Time Limit: 120 min
File Version: 1.0

Cisco

Exam 300-101

Implementing Cisco IP Routing

Exam A

QUESTION 1
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 2
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 3
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 4
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 5
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.

B. Execute the command ip tcp queuemax.

C. Set TCP options to "enabled" on the remote host.

D. Execute the command ip tcp adjust-mss.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 6
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 7
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 8
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 9
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 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
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 12
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 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
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 15
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 16
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.
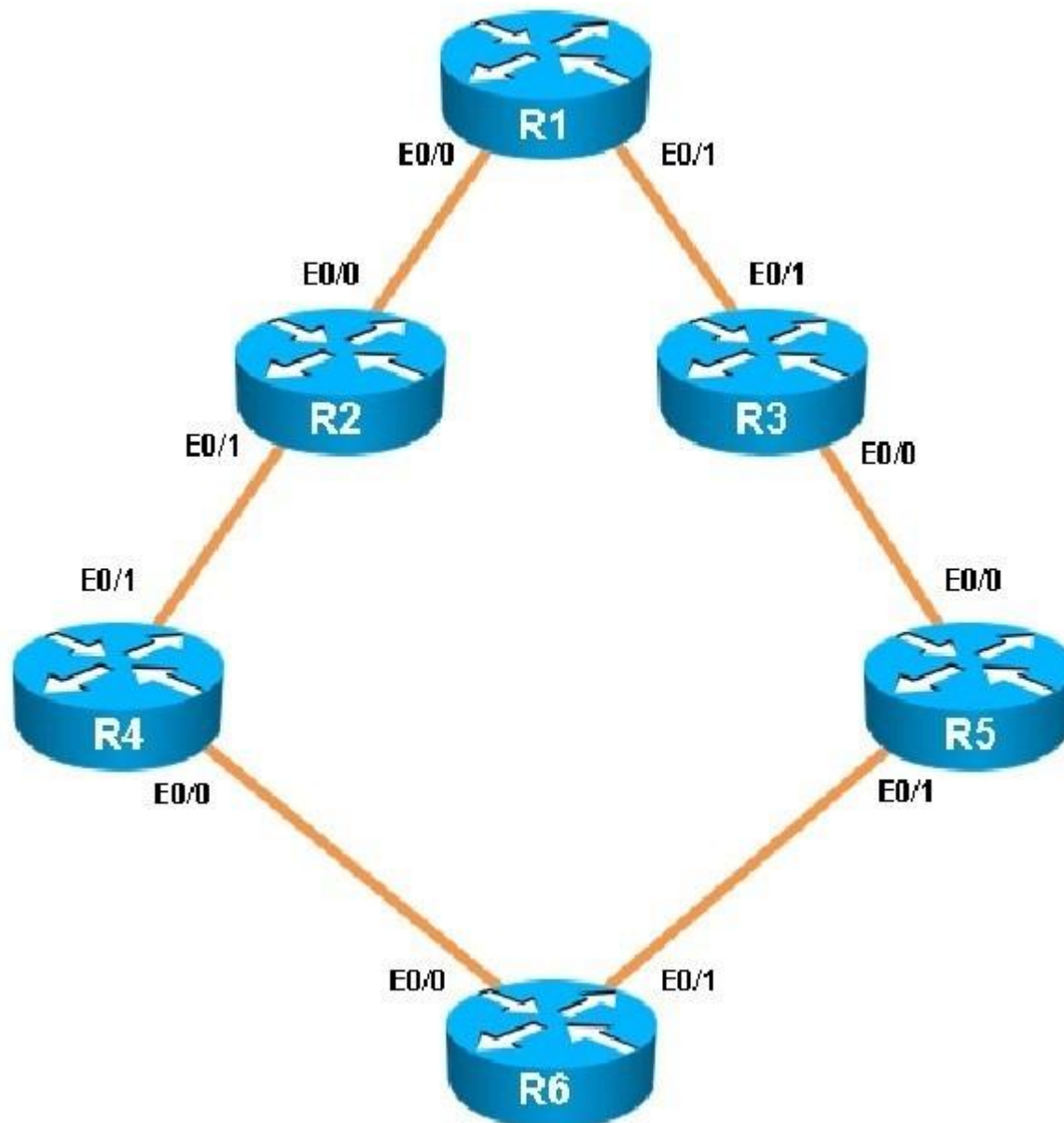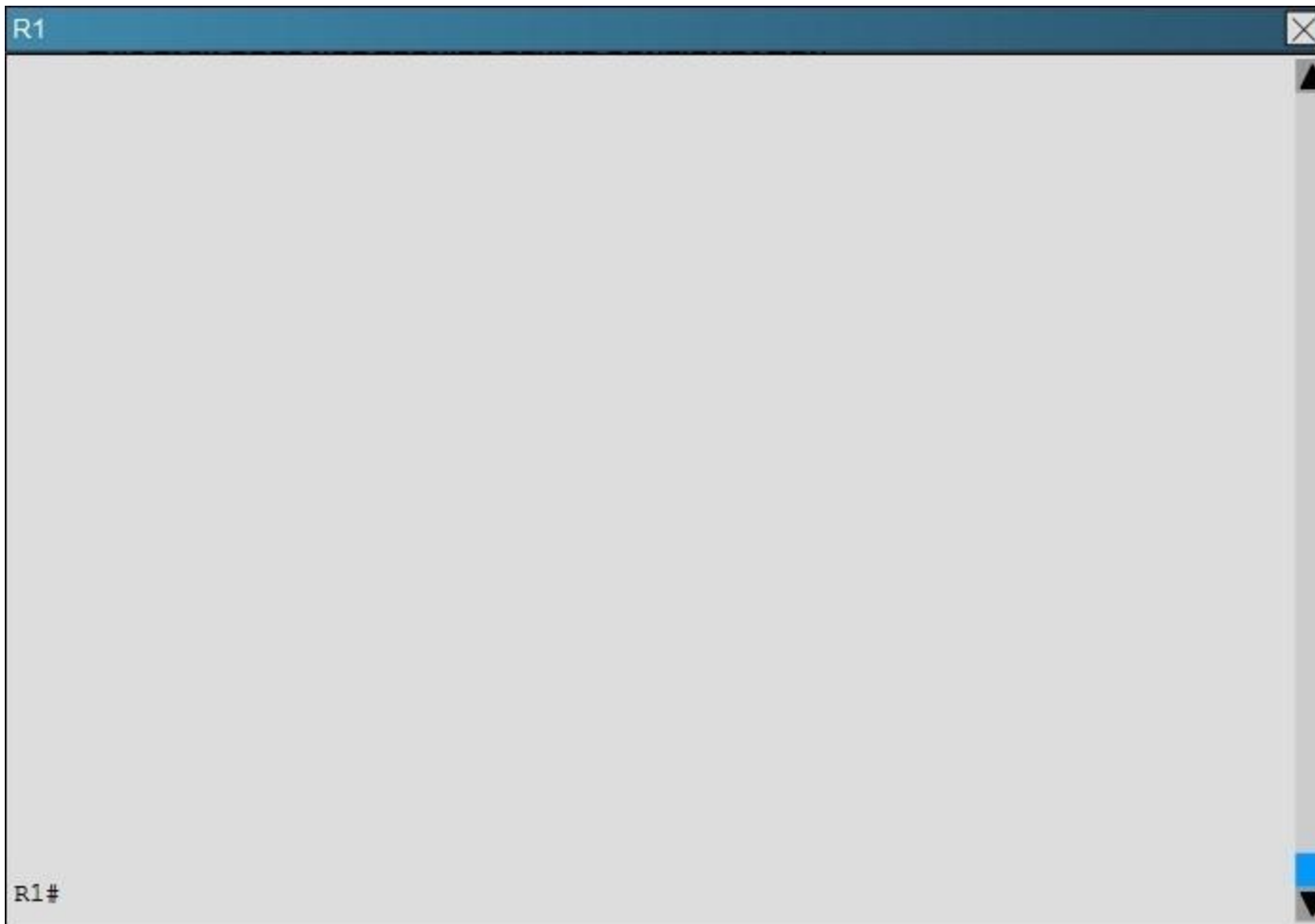
Correct Answer: A
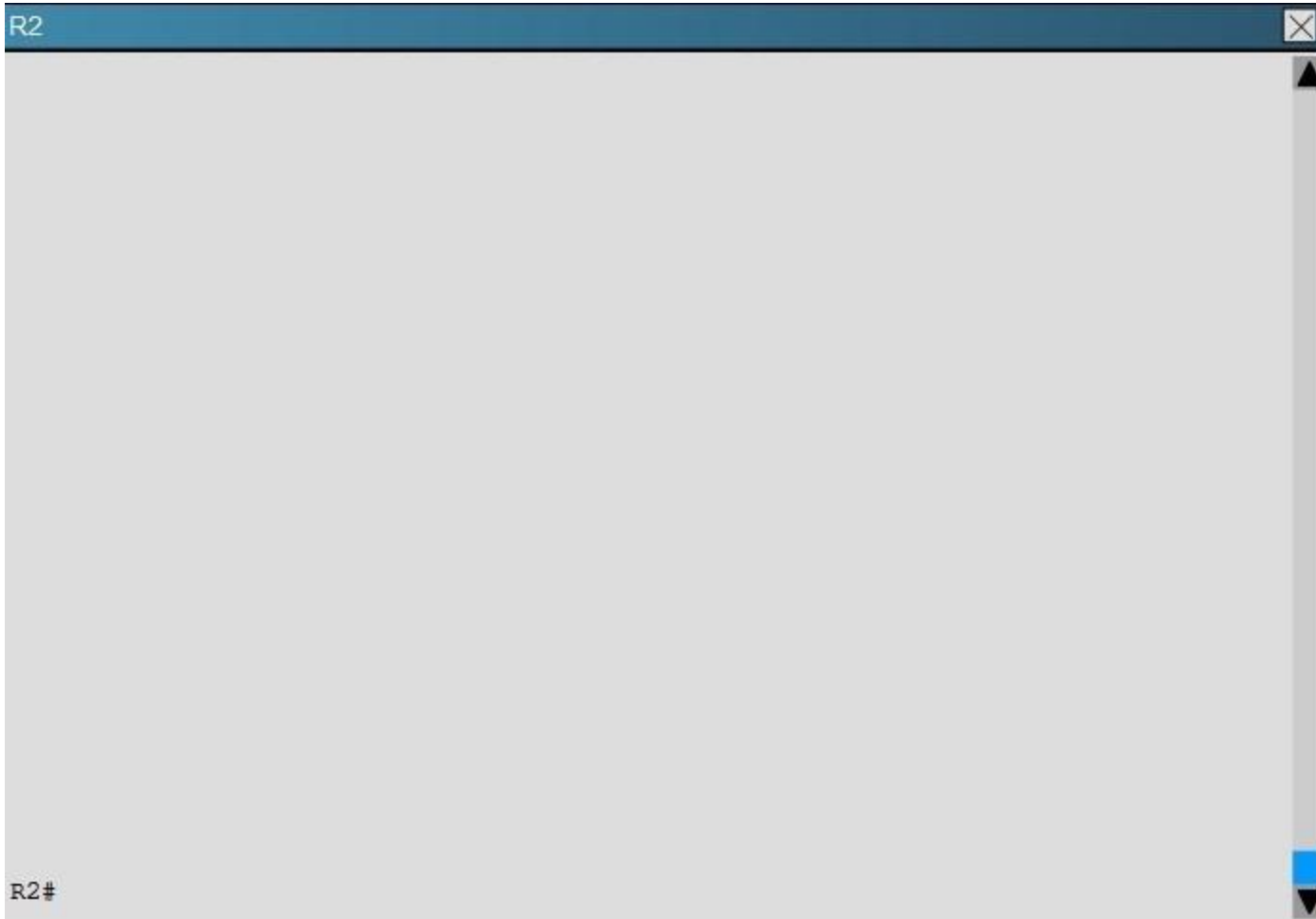**Section: (none)**
Explanation

Explanation/Reference:

QUESTION 17
You have been asked to evaluate how EIGRP is functioning in a customer network.

R1

R1#

R2

R2#

R3

R3#

R4

R4#

VCEPlus

R5

R5#

```
R6                                                    ⊠

                                                      ▲




















R6#
                                                      ▼
```
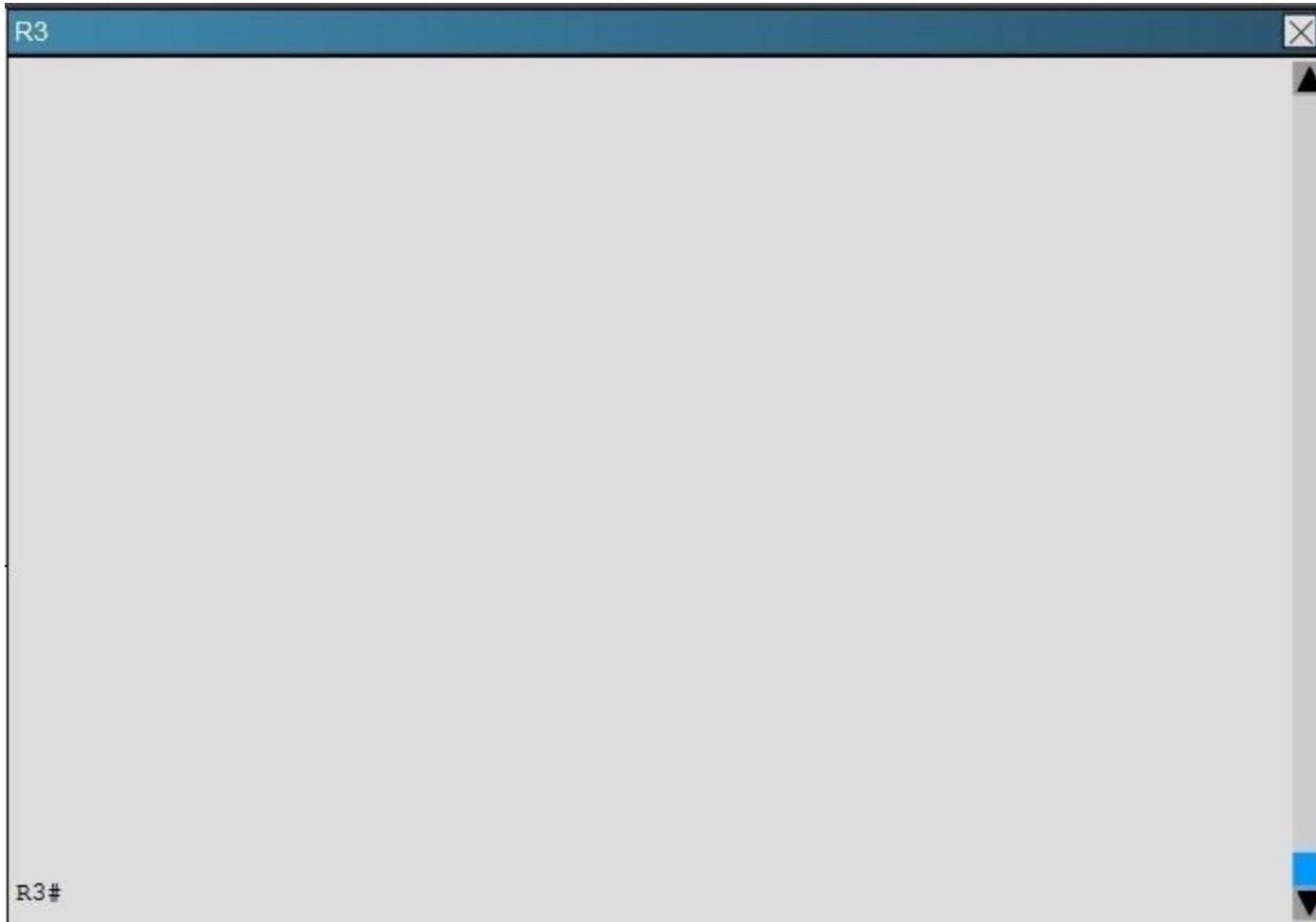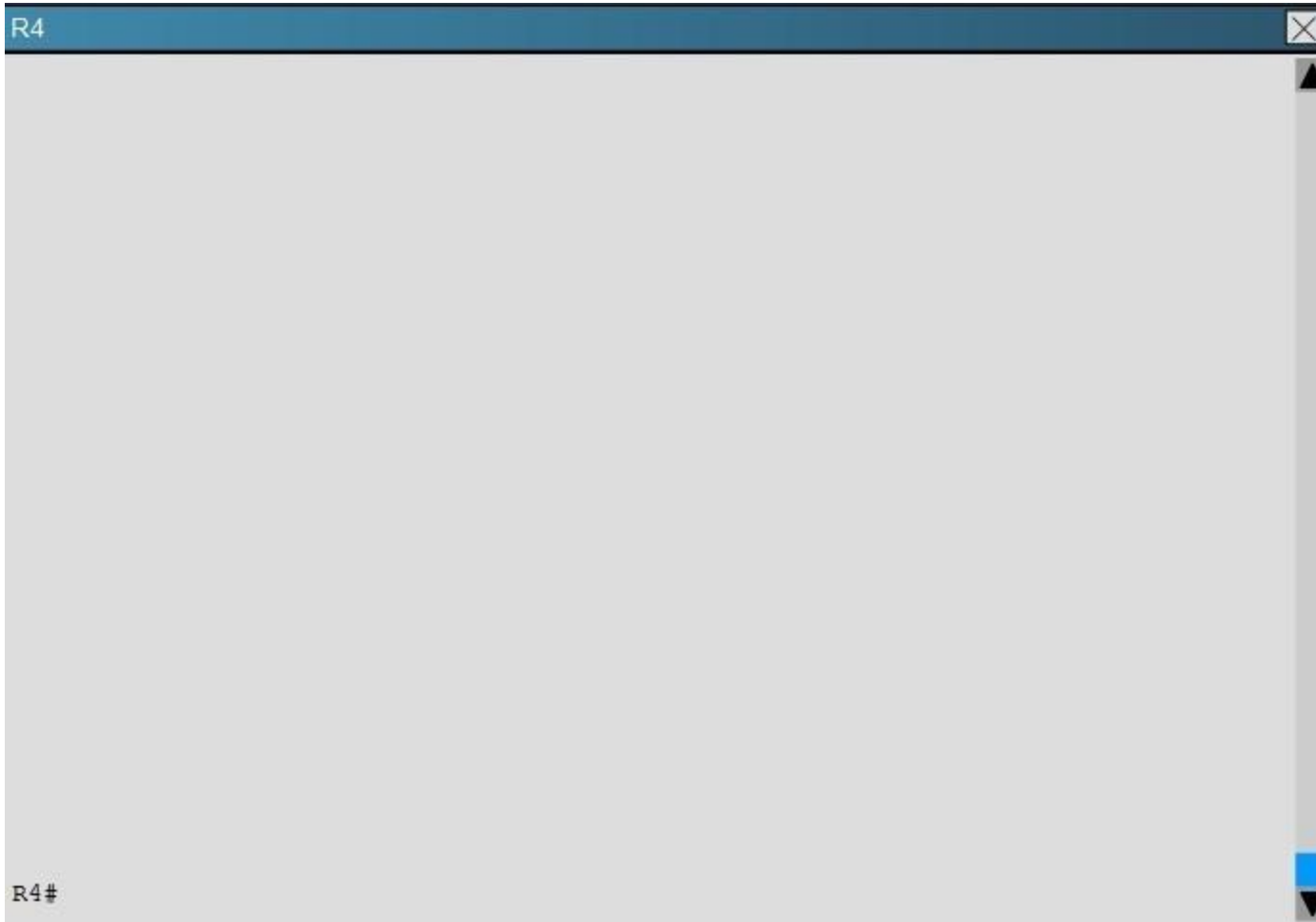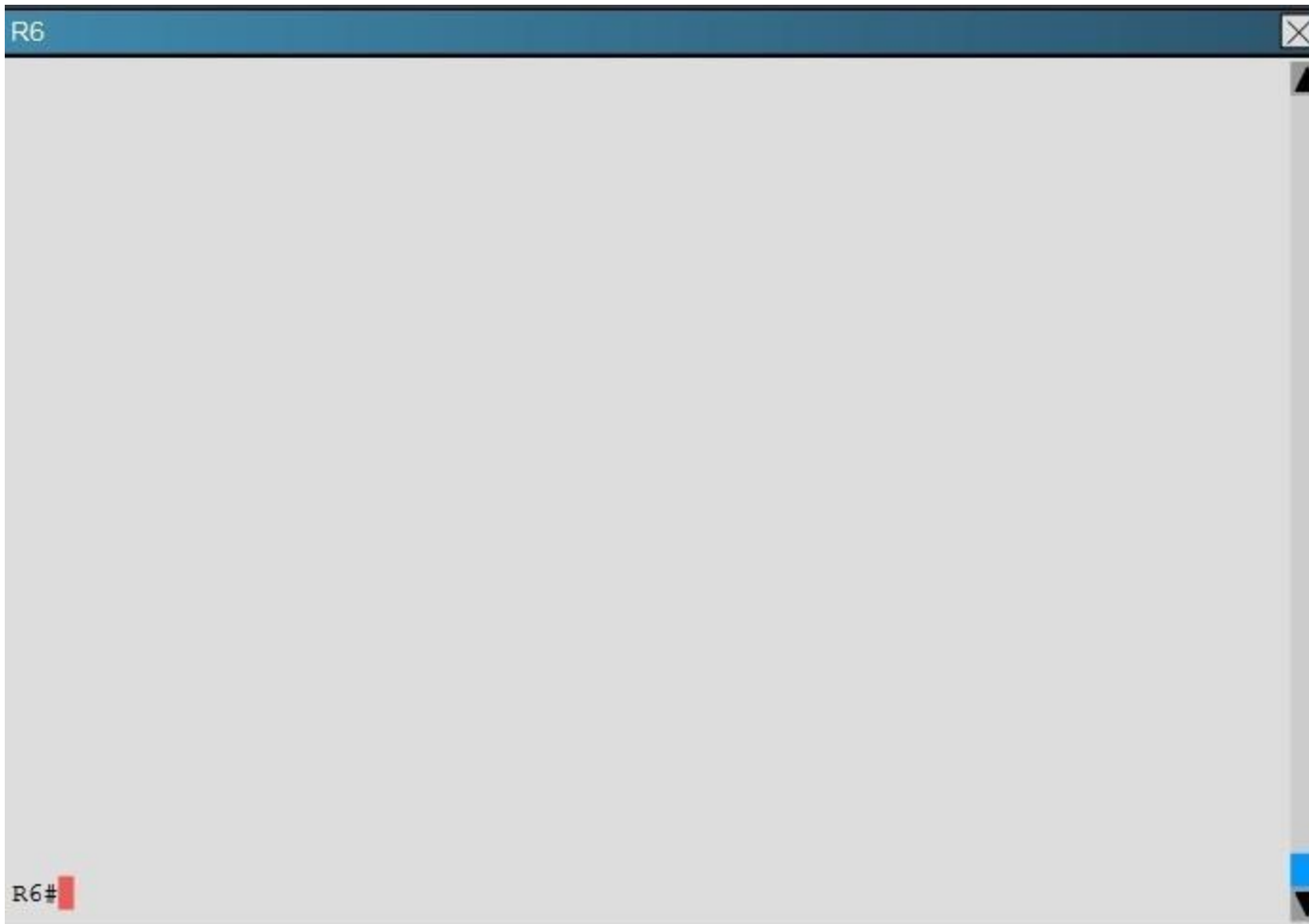
What percent of R1's interfaces bandwidth is EIGRP allowed to use?
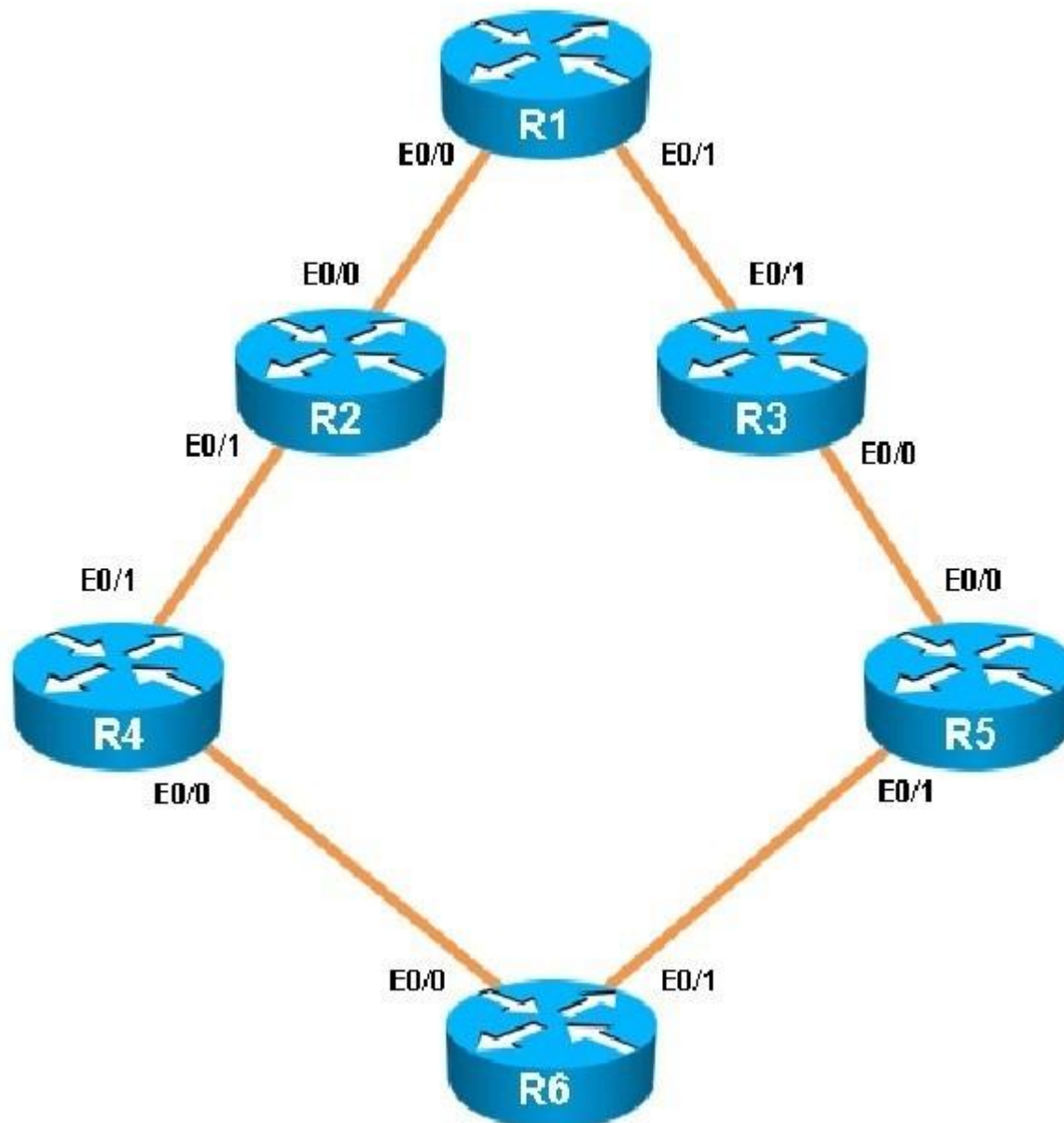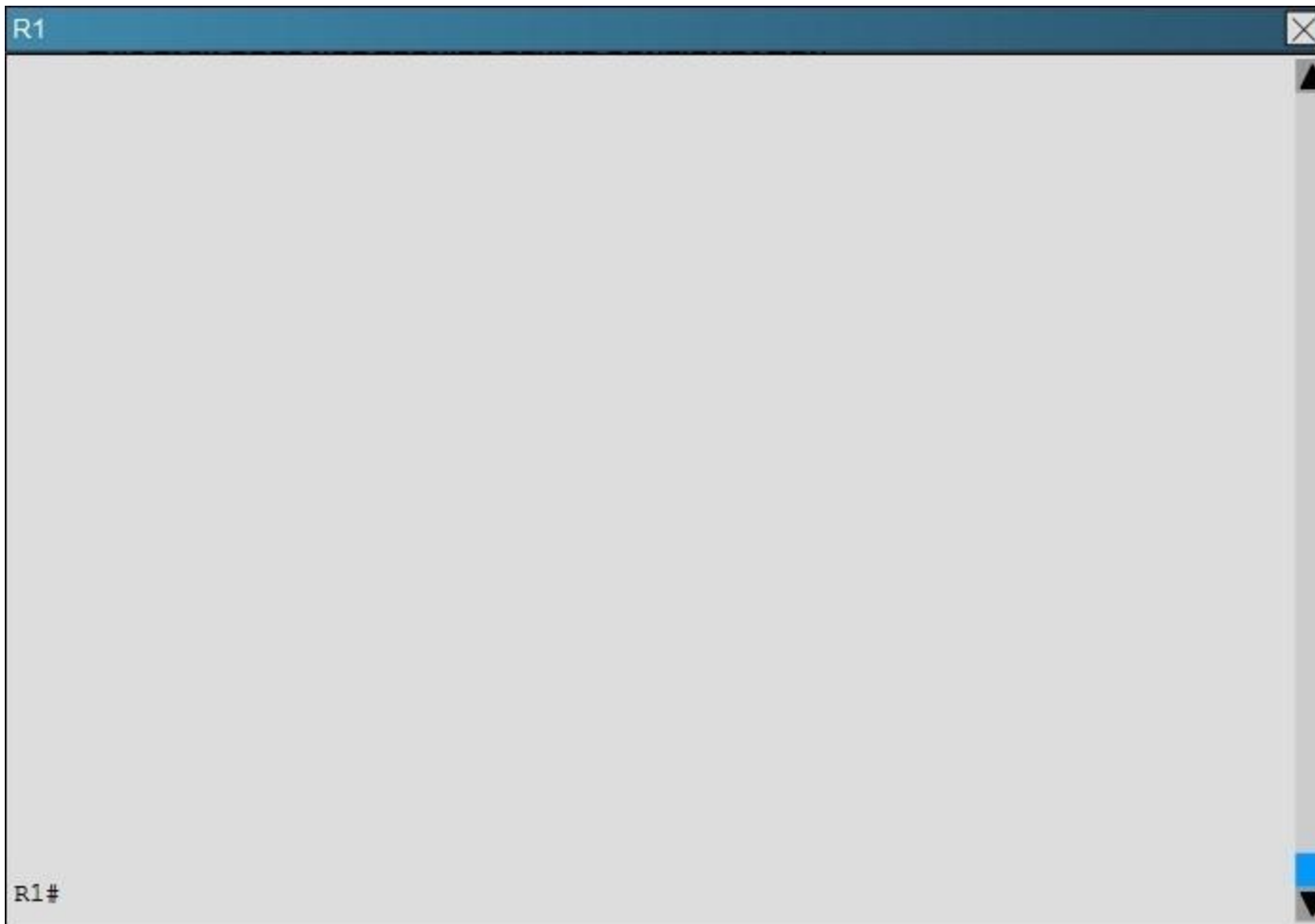
A. 10
B. 20
C. 30
D. 40

Correct Answer: B
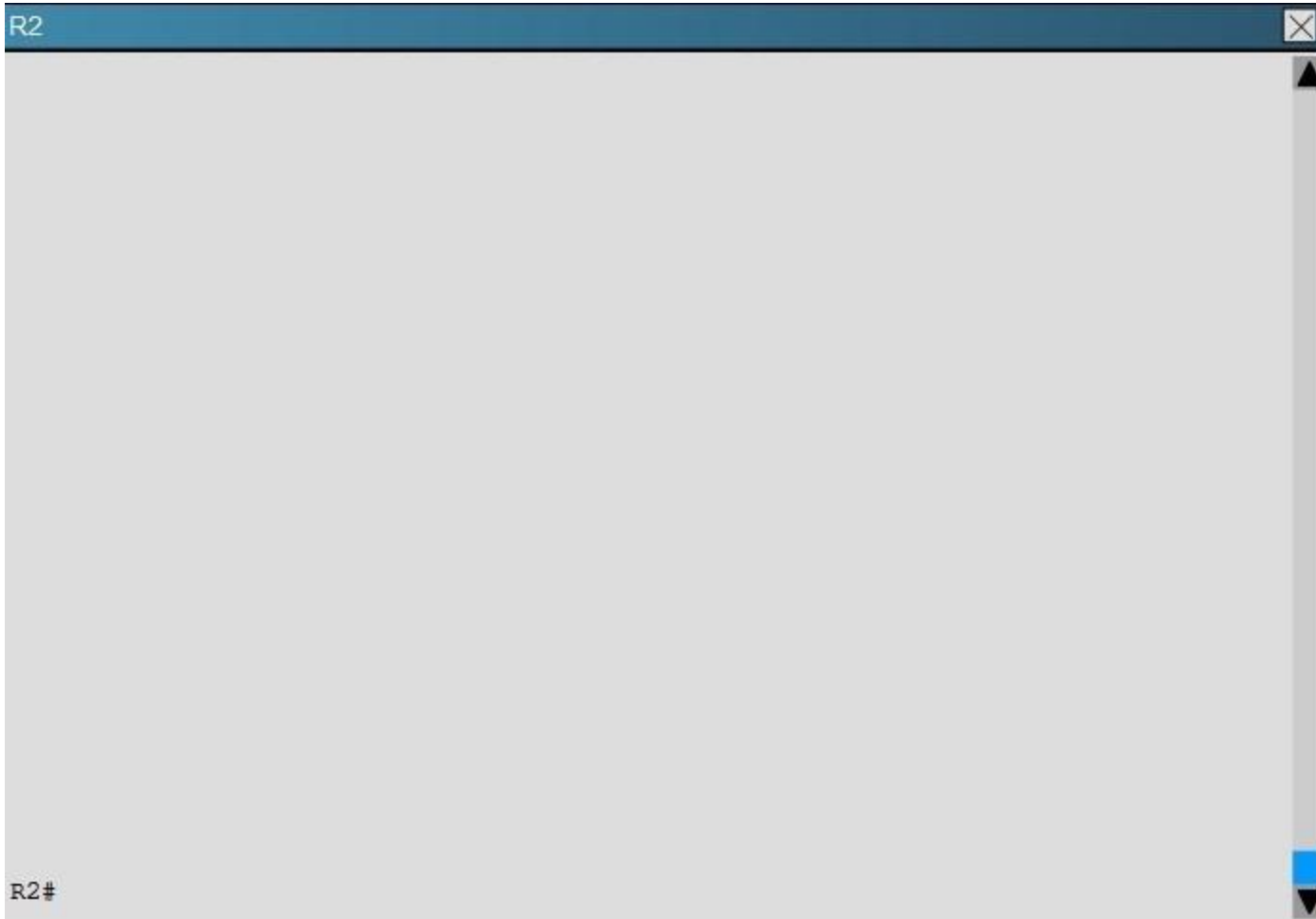
Section: (none)
Explanation

Explanation/Reference:

QUESTION 18
You have been asked to evaluate how EIGRP is functioning in a customer network.

VCEPlus

R1 ✕

R1#

R2   ✕

R2#

R3

R3#

R4

R4#

R5

R5#

R6   ☒

R6#

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 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
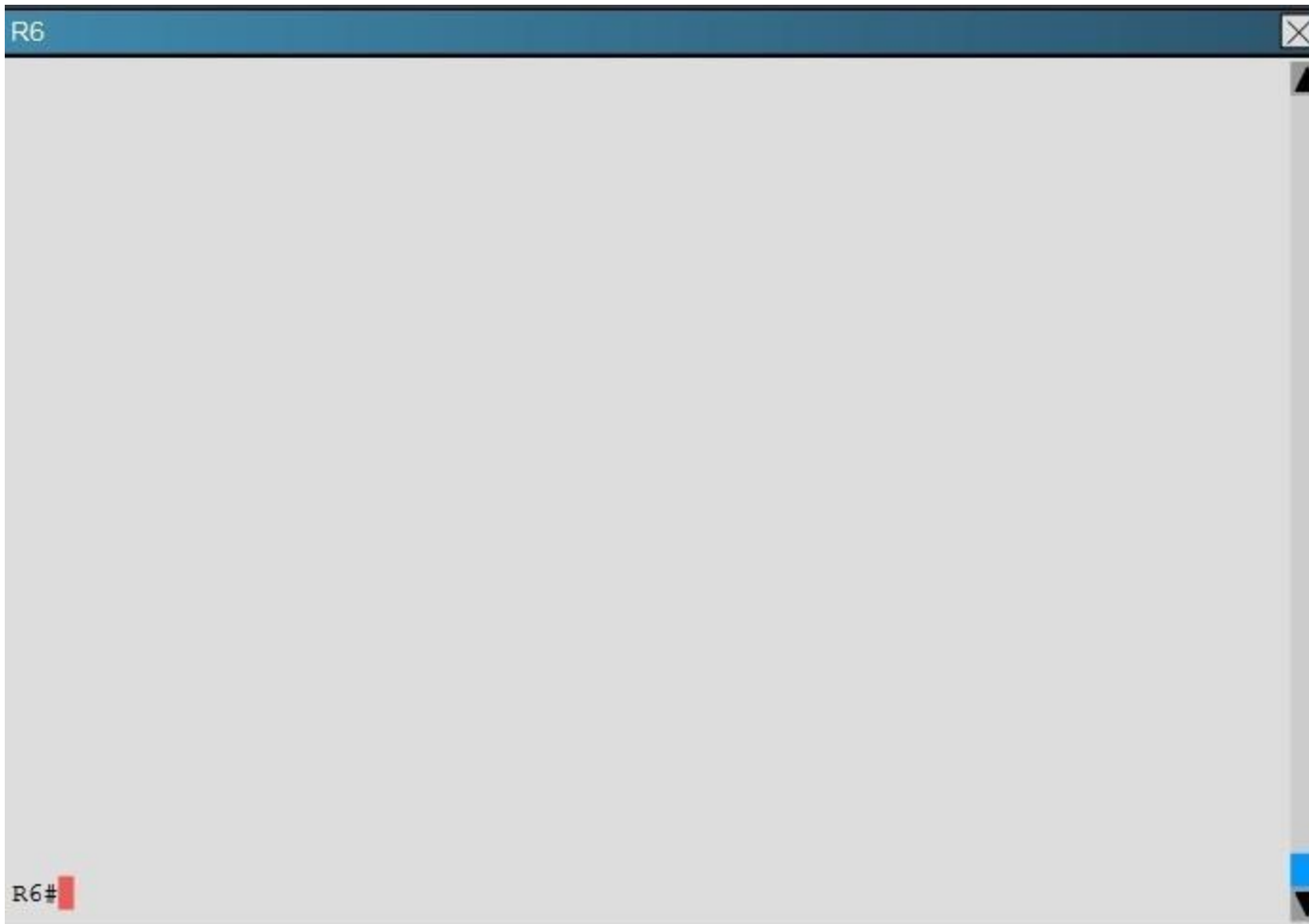**Section: (none)**
Explanation

Explanation/Reference:

QUESTION 20
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 21
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 22
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 23
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
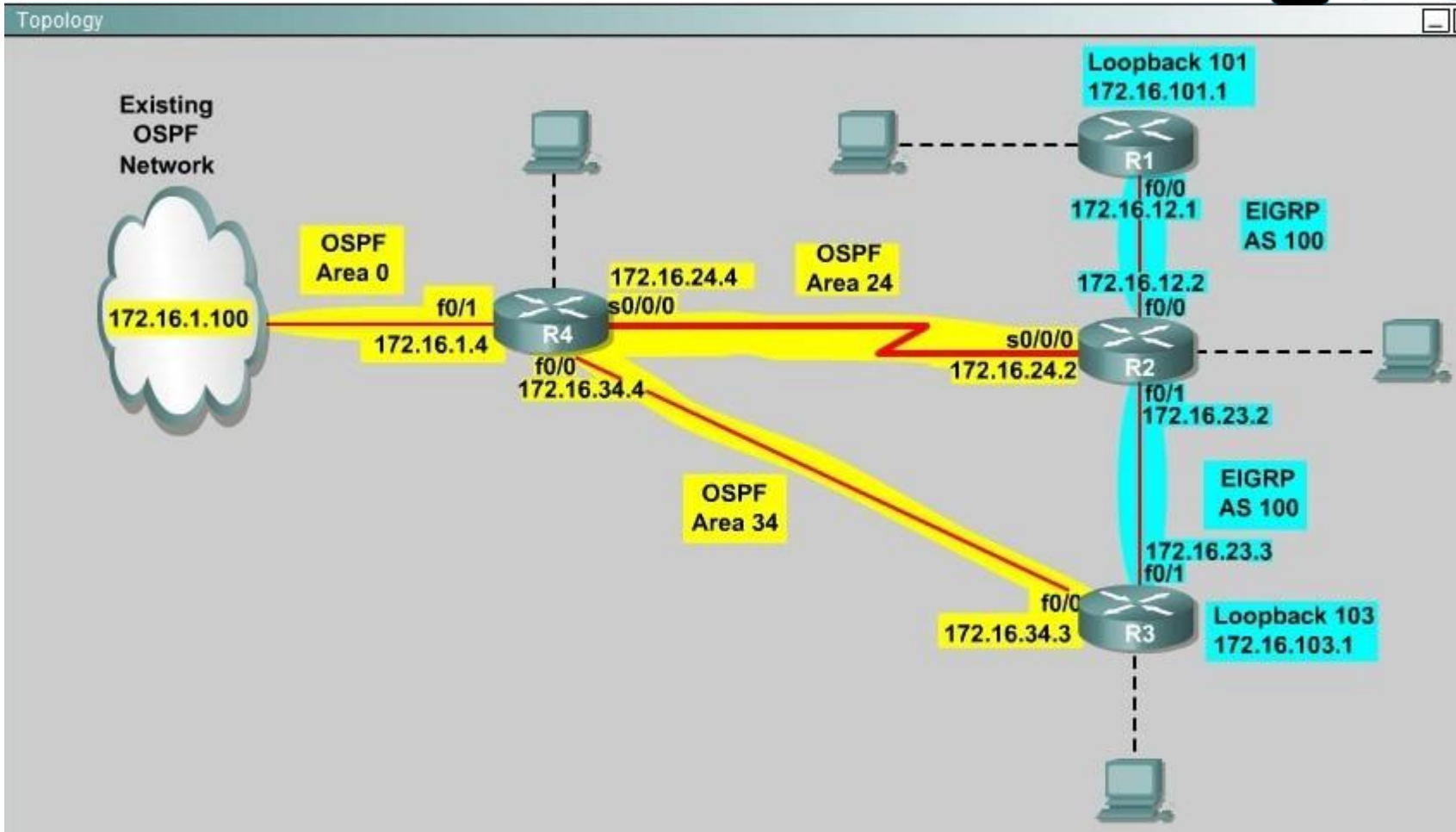**Section: (none)**
Explanation

Explanation/Reference:

QUESTION 24
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.

Topology

Existing OSPF Network

Loopback 101
172.16.101.1

R1
f0/0
172.16.12.1

EIGRP AS 100

OSPF Area 0

172.16.24.4
s0/0/0

OSPF Area 24

172.16.12.2
f0/0

172.16.1.100

f0/1

172.16.1.4

R4

s0/0/0

172.16.24.2

R2

172.16.34.4
f0/0

f0/1
172.16.23.2

OSPF Area 34

EIGRP AS 100

172.16.23.3
f0/1

f0/0
172.16.34.3

R3

Loopback 103
172.16.103.1

A.

B.

C.

D.

Correct Answer:
Section: (none)
Explanation

Explanation/Reference:
Answer: First we need to find out 5 parameters (Bandwidth, Delay, Reliability, Load, MTU) of the s0/0/0 interface (the interface of R2 connected to R4) for redistribution:
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.
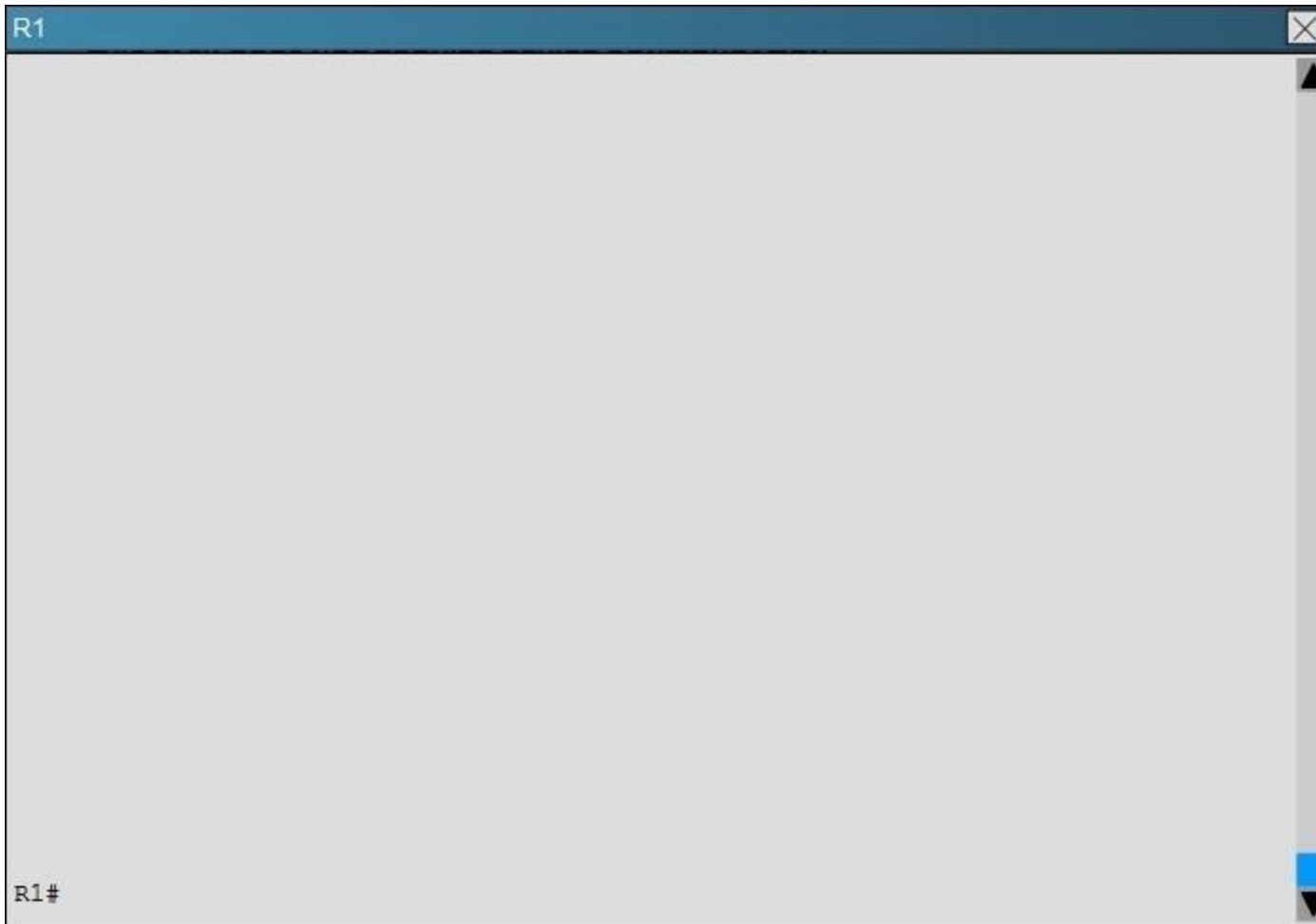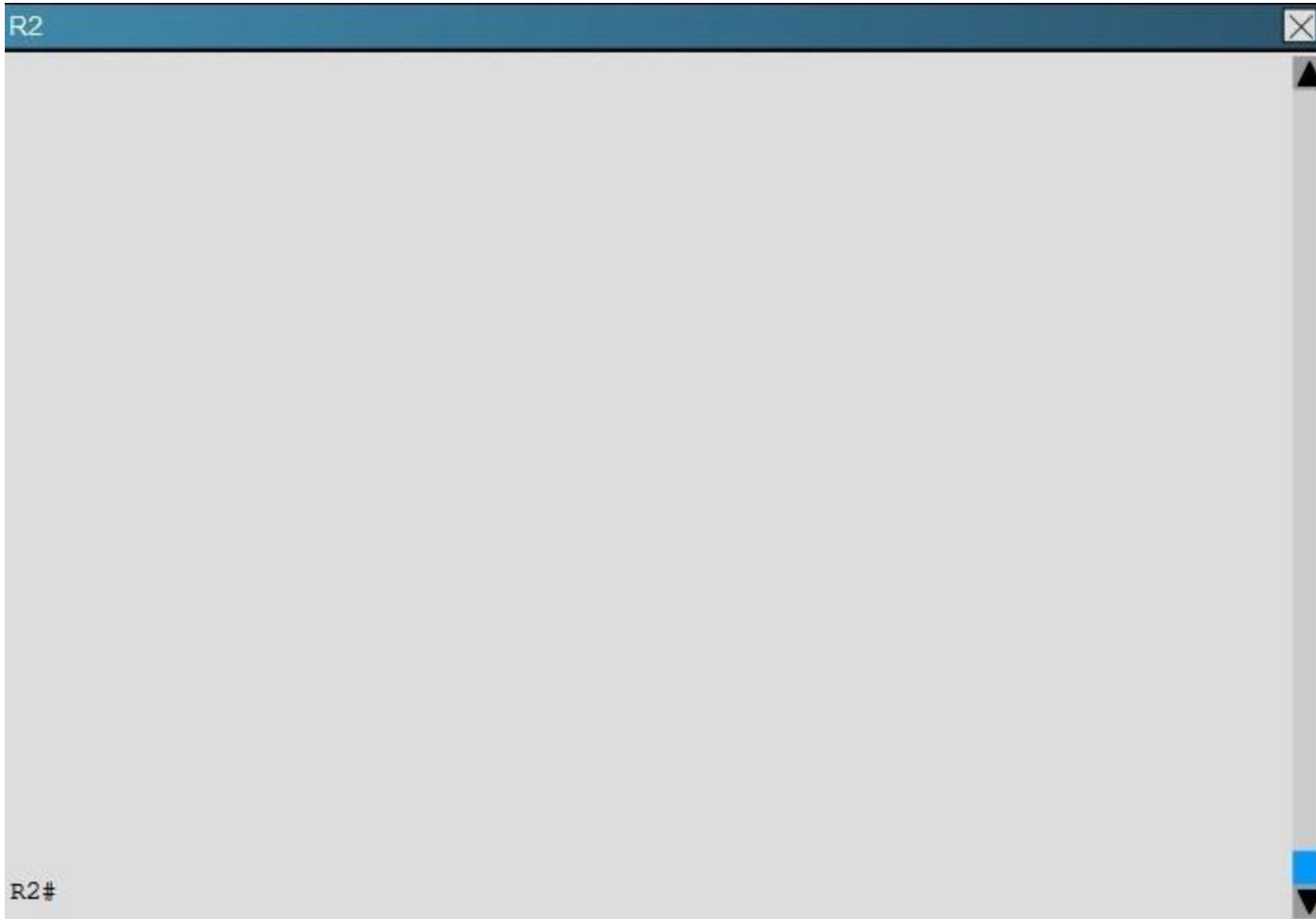R2(config-router)# distance eigrp 90 105
This command sets the Administrative Distance of all EIGRP internal routes to 90 and all EIGRP external routes to 105, which is smaller than the Administrative Distance of OSPF (110) -> the link between R2 & R3 will be preferred to the serial link between R2 & 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.
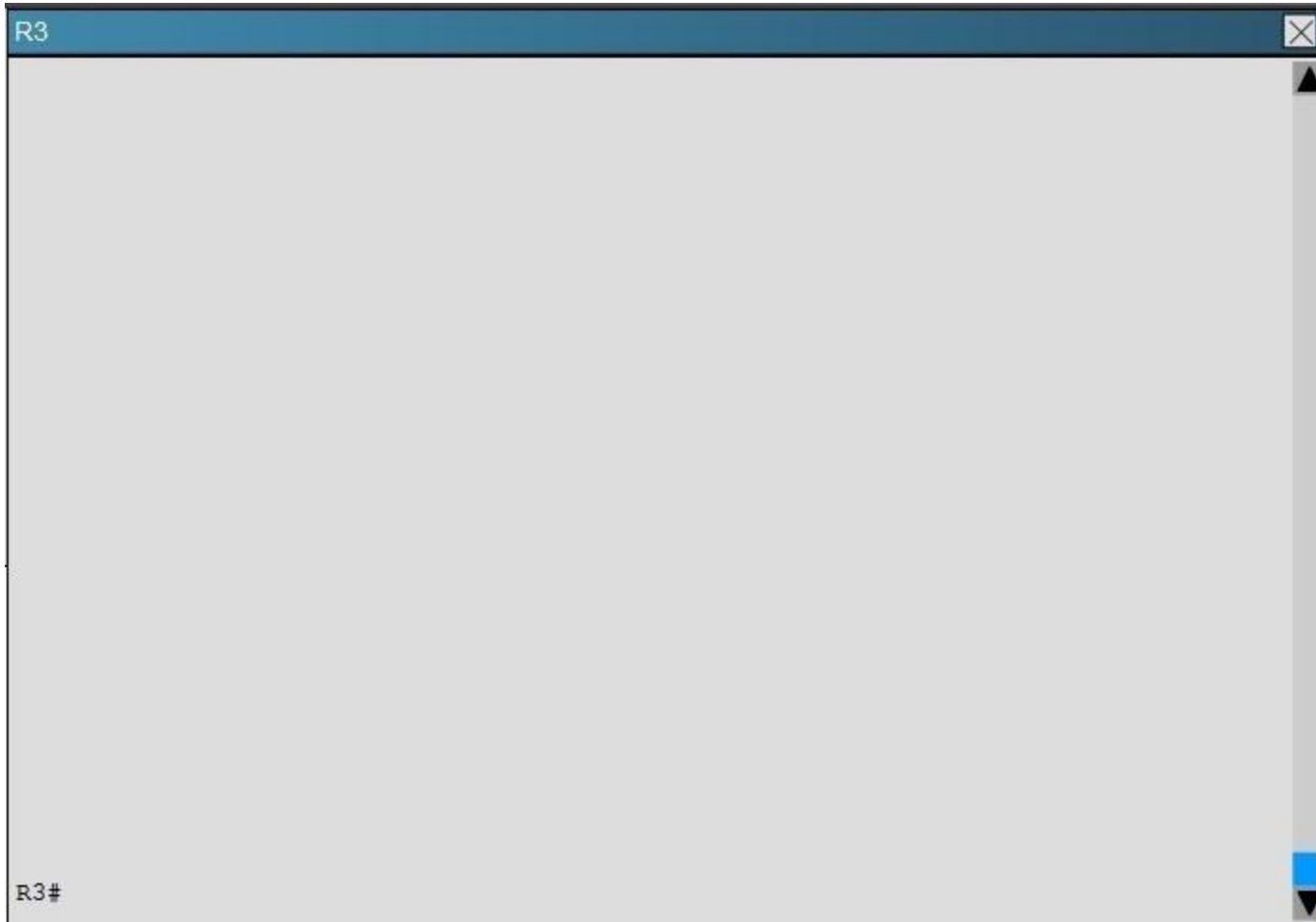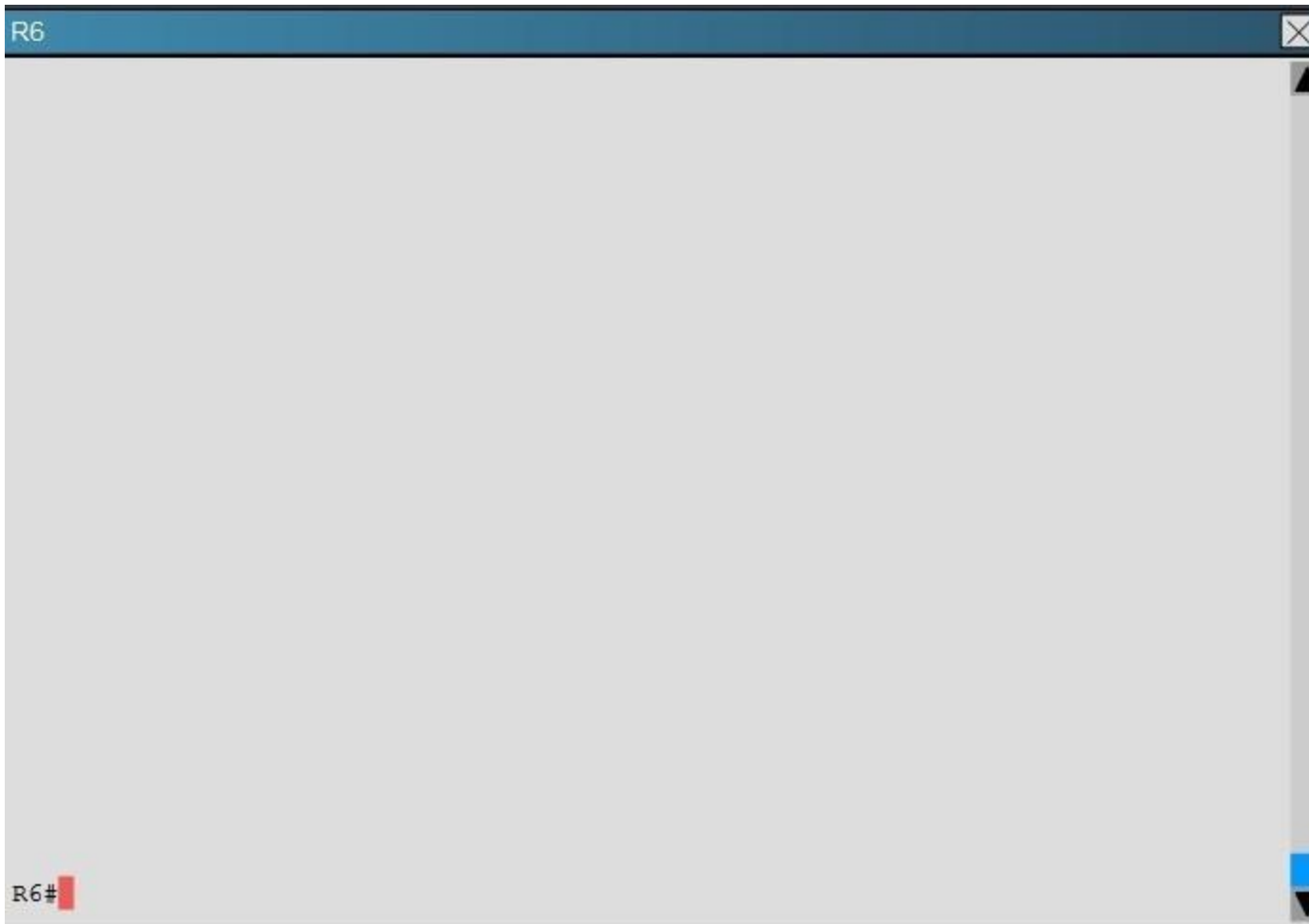
QUESTION 25
Scenario:

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.

R1 ☒

R1#

R2

R2#

R3

R3#

R5

X

▲

R5#

▼

```
R6                                                                          ☒
                                                                            ▲



















R6#
                                                                            ▼
```

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 26
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 27
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.

R1

R1#

R2

R2#

R3

R3#

R4

R4#

R6

R6#
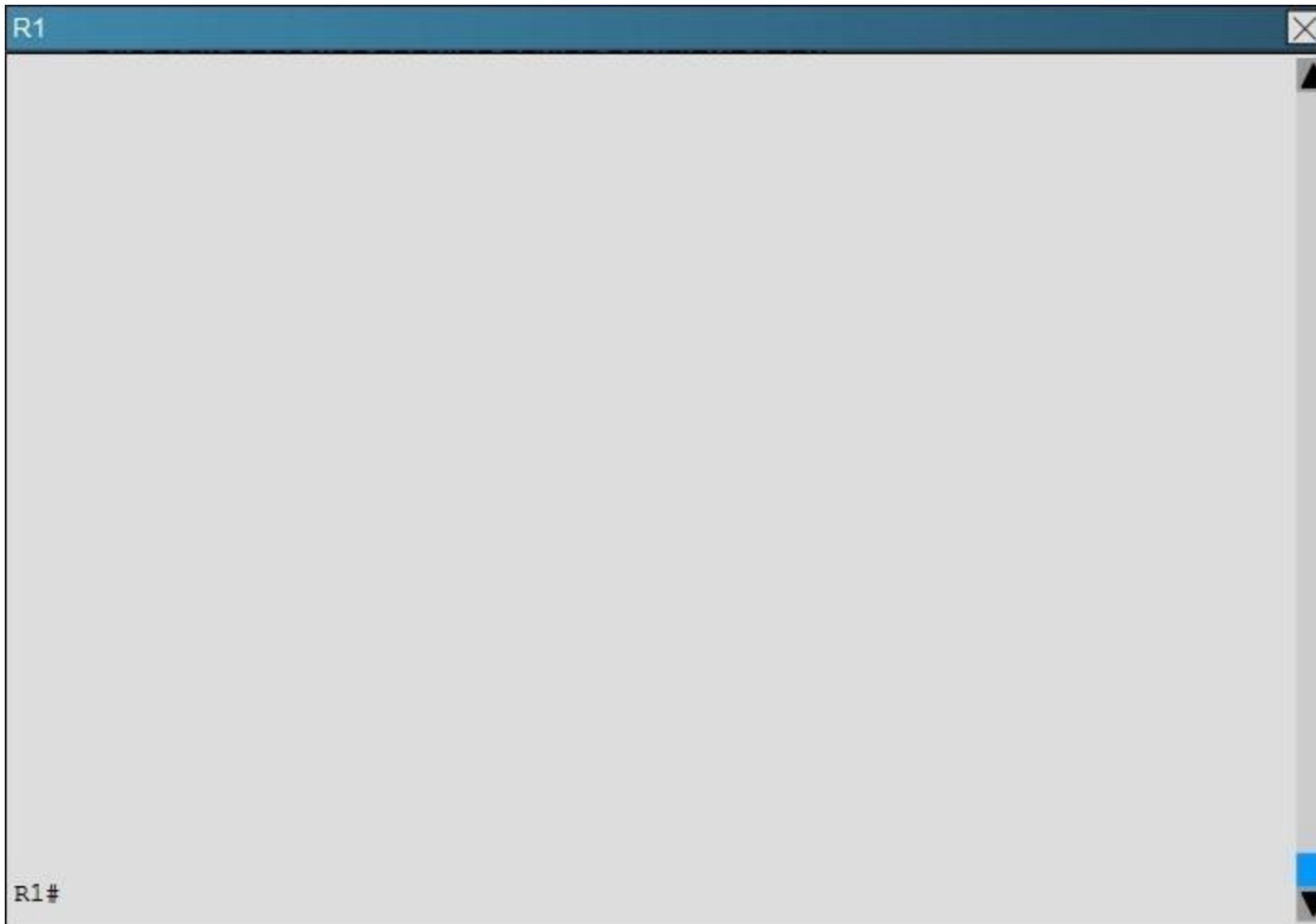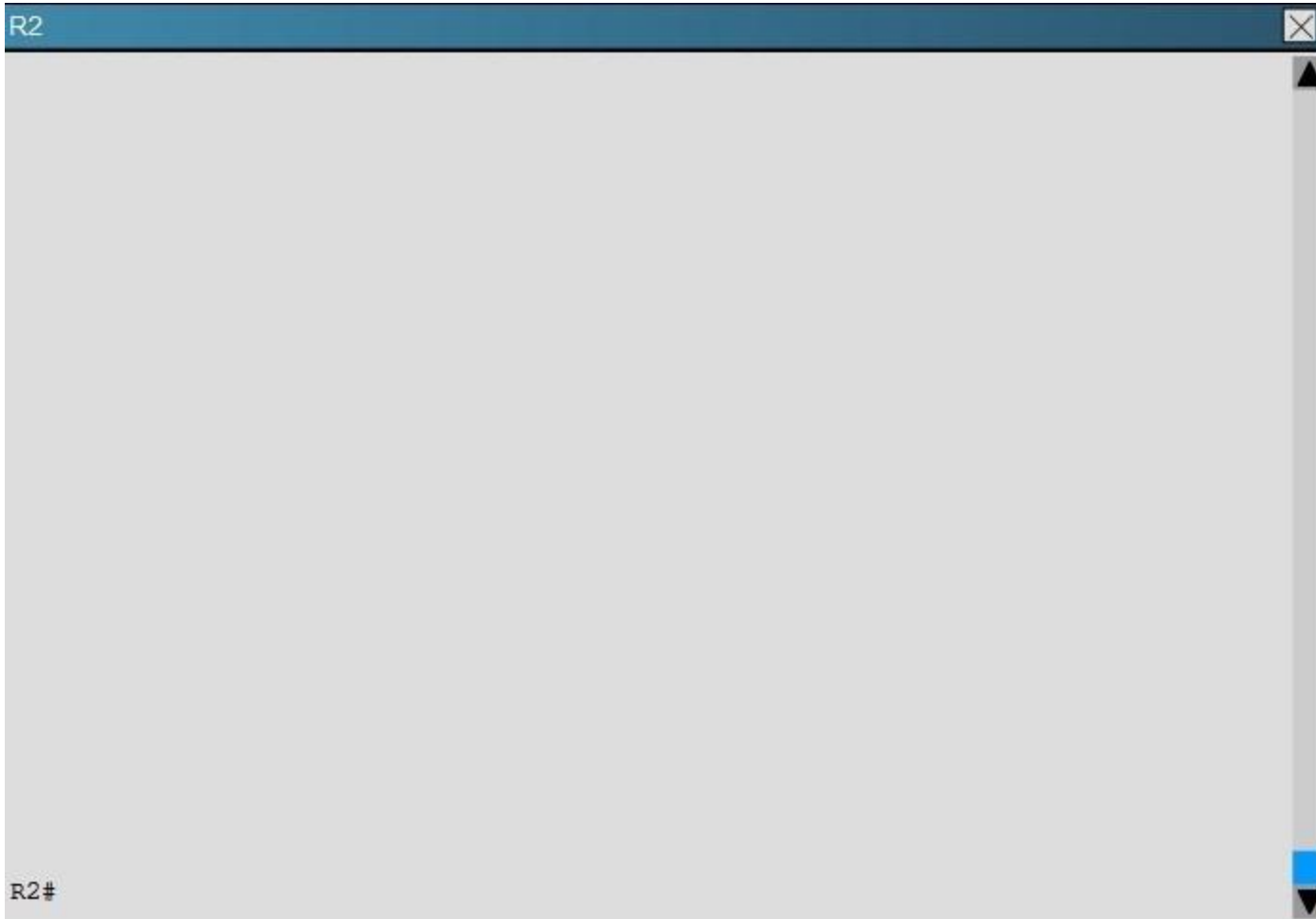
How old is the Type 4 LSA from Router 3 for area 1 on the router R5 based on the output you have examined?

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

Correct Answer: A

Section: (none)
Explanation

Explanation/Reference:

QUESTION 28
A network engineer executes the show crypto ipsec sa command. Which three pieces of information are displayed in the output? (Choose three.)
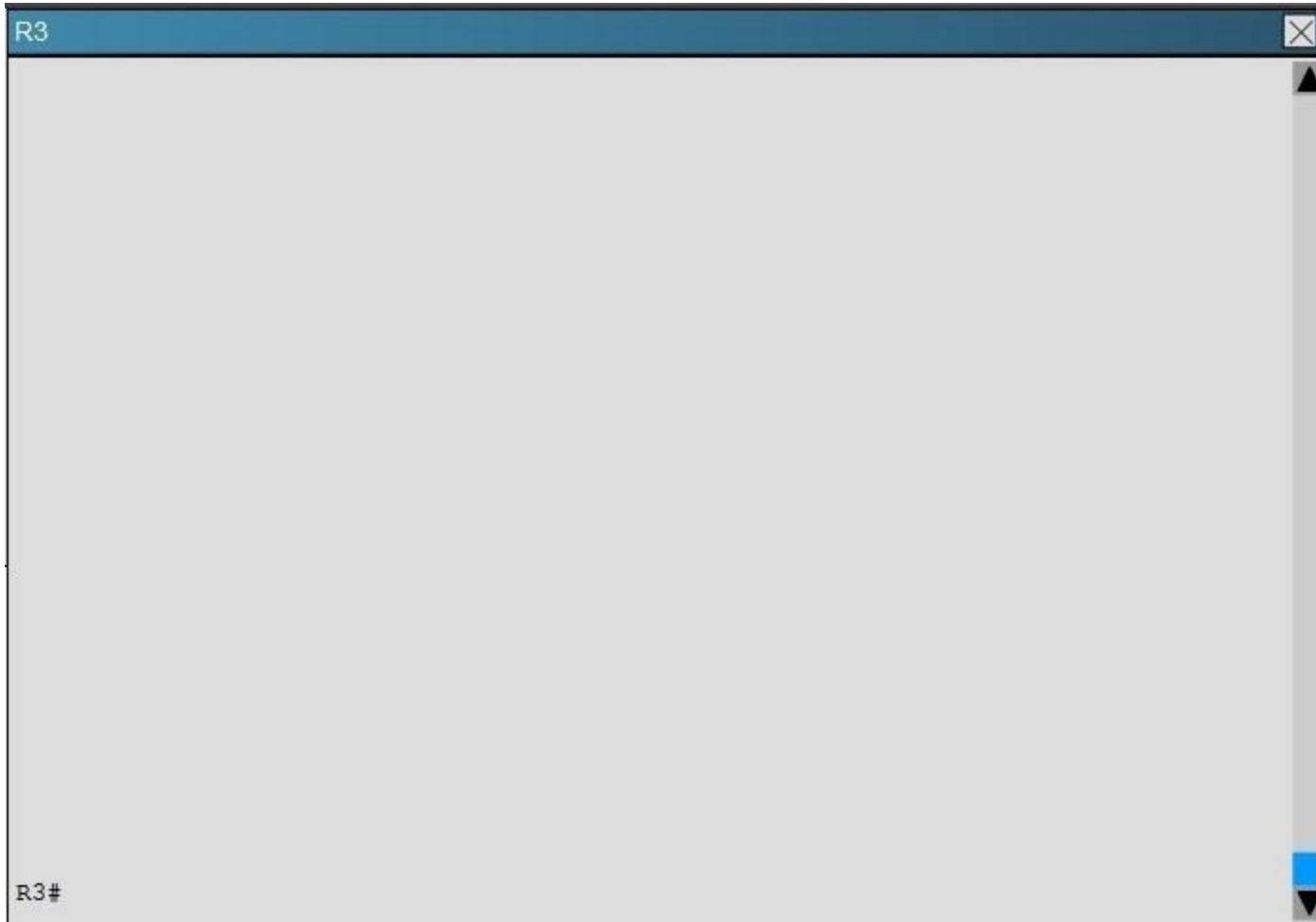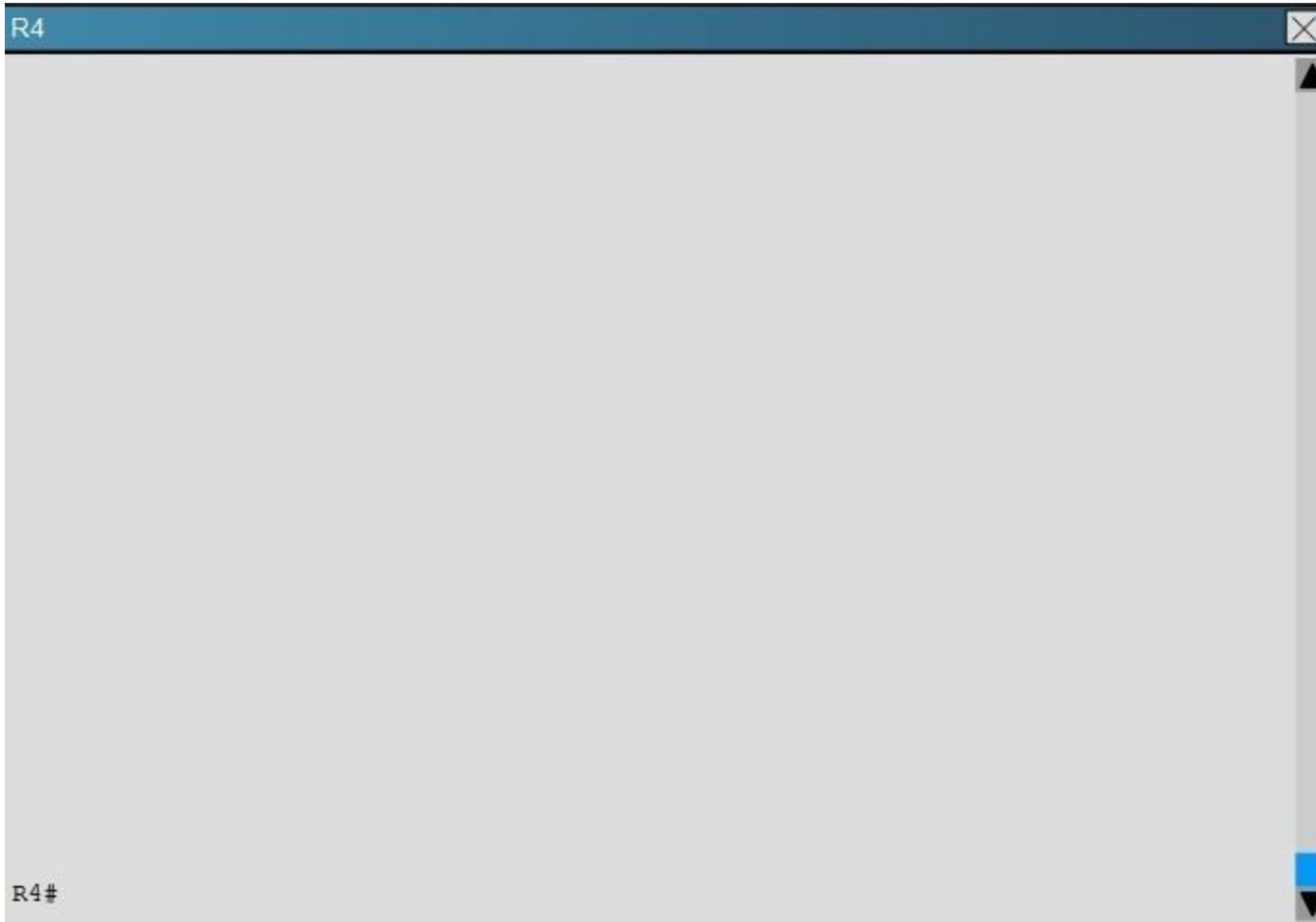
A. inbound crypto map
B. remaining key lifetime
C. path MTU
D. tagged packets
E. untagged packets
F. invalid identity packets

Correct Answer: ABC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 29
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 30
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 31
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 32
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 33
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 34
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 35
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 36
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 37
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 38
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 39
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 40
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 41
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 42
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 43
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 44
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 45
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 46
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 47
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 48
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 49
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 50
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 51
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 52
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 53
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 54
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 55
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 56
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 57
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 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
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 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 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 62
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 63
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 64
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. enqueuing for the RP
C. fragmentation failures
D. adjacency issues

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 65
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 66
Which statement about dual stack is true?

A. Dual stack translates IPv6 addresses to IPv4 addresses.
B. Dual stack means that devices are able to run IPv4 and IPv6 in parallel.
C. Dual stack translates IPv4 addresses to IPv6 addresses.
D. Dual stack changes the IP addresses on hosts from IPv4 to IPv6 automatically.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 67
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 68
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 69
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 70
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 71
Which Cisco VPN technology uses AAA to implement group policies and authorization and is also used for the XAUTH authentication method?

A. DMVPN

B. Cisco Easy VPN

C. GETVPN

D. GREVPN

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 72
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 73
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 74
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 75
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?
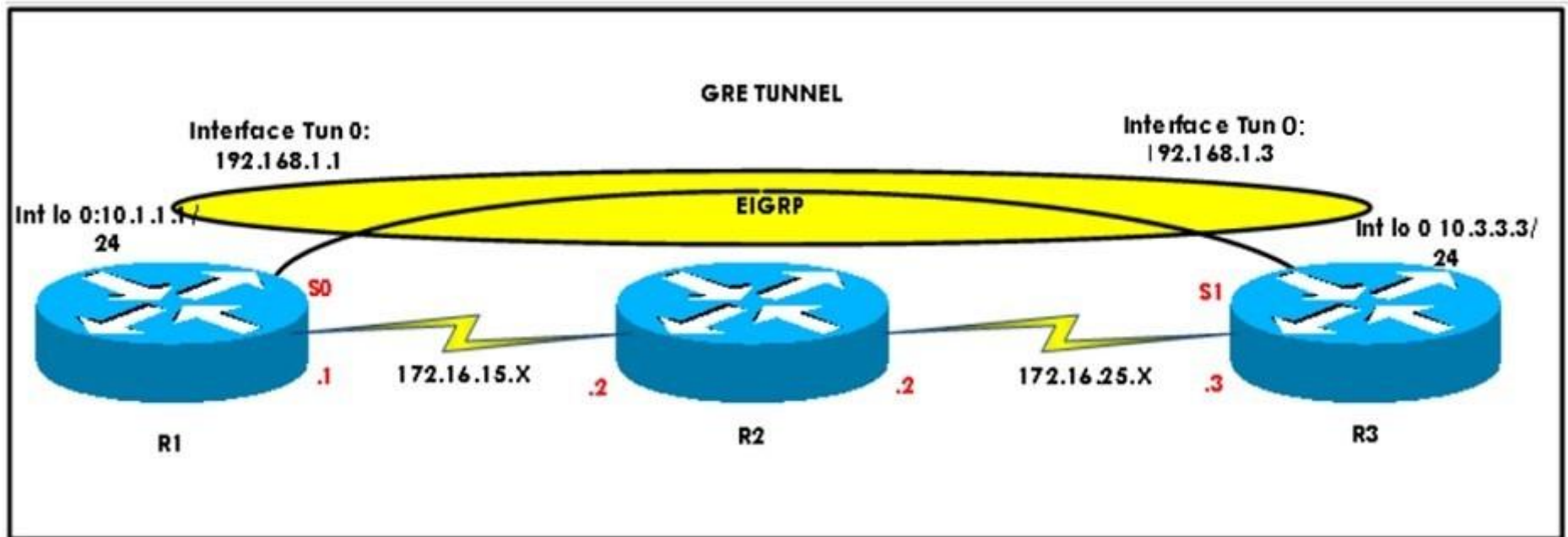
A. Either a firewall between the two routers or an ACL on the router is blocking IP protocol number 47.
B. Either a firewall between the two routers or an ACL on the router is blocking UDP 57.
C. Either a firewall between the two routers or an ACL on the router is blocking TCP 47.

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 76
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 77
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 78
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 79
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 80
Which three items can you track when you use two time stamps with IP SLAs? (Choose three.)

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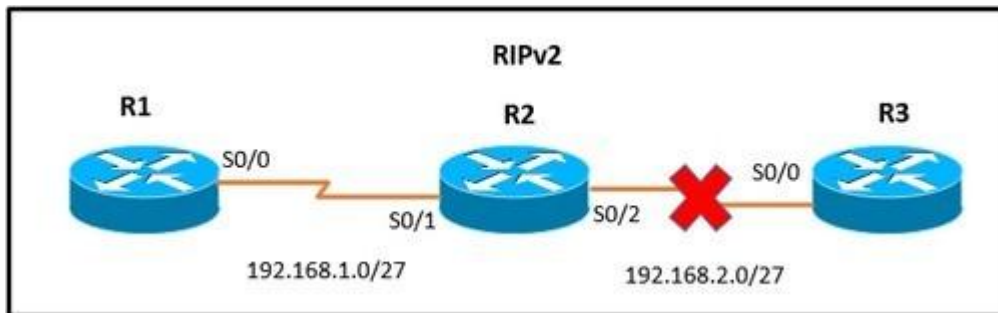D. load
E. throughput
F. path

Correct Answer: ABC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 81
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 82
Which parameter in an SNMPv3 configuration offers authentication and encryption?

A. auth
B. noauth
C. priv
D. secret

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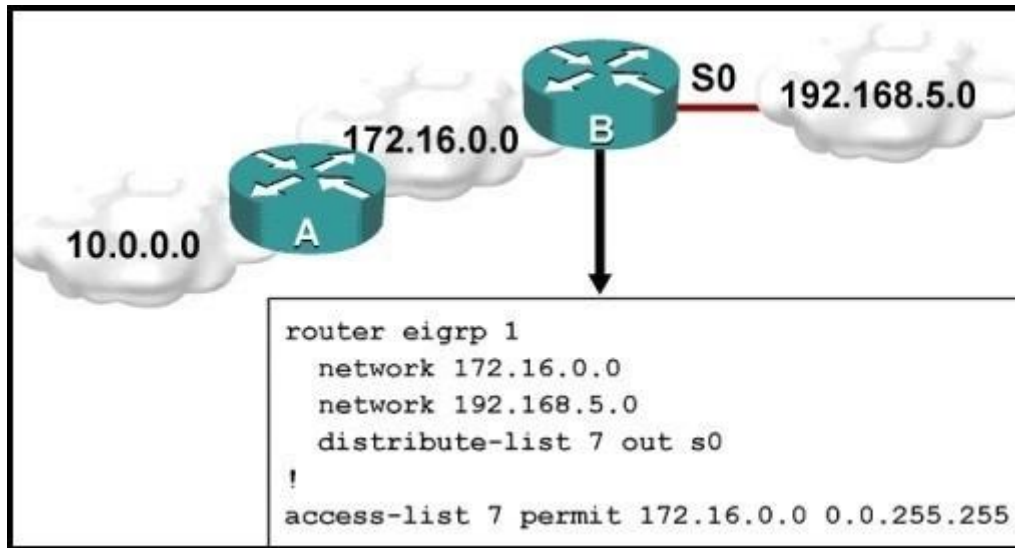**Explanation**

Explanation/Reference:

QUESTION 83
Refer to the exhibit. Which statement is true?

```
router eigrp 1
  network 172.16.0.0
  network 192.168.5.0
  distribute-list 7 out s0
!
access-list 7 permit 172.16.0.0 0.0.255.255
```

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 84
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 85
Refer to the exhibit. The DHCP client is unable to receive a DHCP address from the DHCP server. Consider the following output:

hostname RouterB

!

interface fastethernet 0/0

ip address 172.31.1.1 255.255.255.0

interface serial 0/0

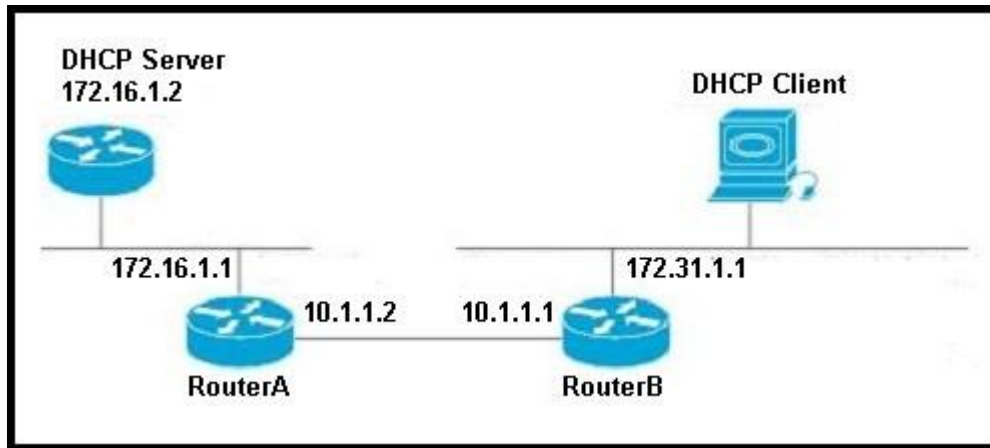ip address 10.1.1.1 255.255.255.252

!

ip route 172.16.1.0 255.255.255.0 10.1.1.2

Which configuration is required on the Router B fastethernet 0/0 port in order to allow the DHCP client to successfully receive an IP address from the DHCP server?

A. RouterB(config-if)# ip helper-address 172.16.1.2
B. RouterB(config-if)# ip helper-address 172.16.1.1
C. RouterB(config-if)# ip helper-address 172.31.1.1
D. RouterB(config-if)# ip helper-address 255.255.255.255

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 86
Which Cisco VPN technology can use multipoint tunnel, resulting in a single GRE tunnel interface on the hub, to support multiple connections from multiple spoke devices?

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

Correct Answer: A
Section: (none)
Explanation

QUESTION 87
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 88
An engineer executes the ip flow ingress command in interface configuration mode. What is the result of this action?

A. It enables the collection of IP flow samples arriving to the interface.
B. It enables the collection of IP flow samples leaving the interface.
C. It enables IP flow while disabling IP CEF on the interface.
D. It enables IP flow collection on the physical interface and its subinterfaces.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 89
Which PPP authentication method sends authentication information in cleartext?

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

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 90
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
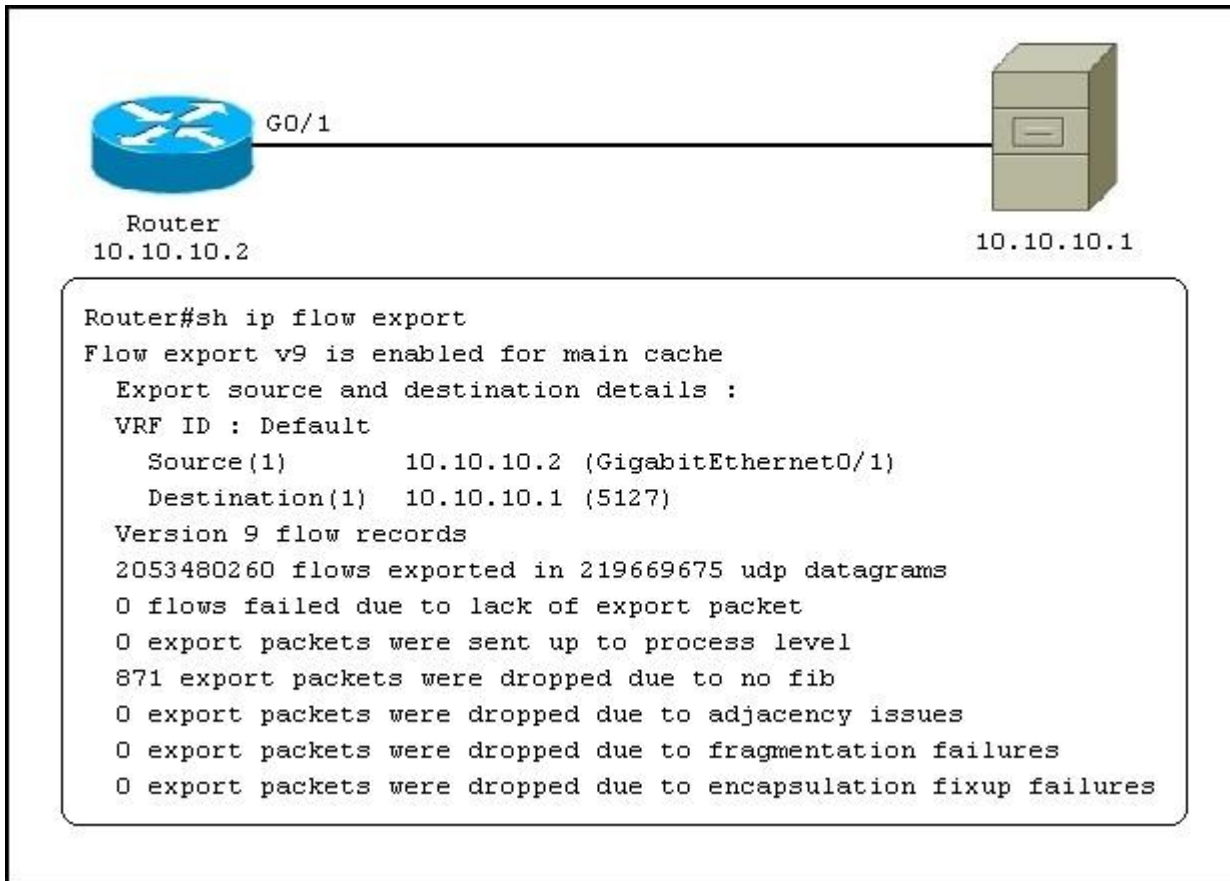D. multicast

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 91
Refer to the exhibit. Which statement about the command output is true?

Router#sh ip flow export
Flow export v9 is enabled for main cache
  Export source and destination details :
  VRF ID : Default
    Source(1)   10.10.10.2 (GigabitEthernet0/1)
    Destination(1)   10.10.10.1 (5127)
  Version 9 flow records
  2053480260 flows exported in 219669675 udp datagrams
  0 flows failed due to lack of export packet
  0 export packets were sent up to process level
  871 export packets were dropped due to no fib
  0 export packets were dropped due to adjacency issues
  0 export packets were dropped due to fragmentation failures
  0 export packets were dropped due to encapsulation fixup failures

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 92
Which traffic characteristic is the reason that UDP traffic that carries voice and video is assigned to the queue only on a link that is at least 768 kbps?

A. typically is not fragmented
B. typically is fragmented
C. causes windowing
D. causes excessive delays for video traffic

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference: