

Cisco

Exam Questions 300-510

Implementing Cisco Service Provider Advanced Routing Solutions (SPRI)



NEW QUESTION 1

<pre>PE-A vrf definition Customer-A rd 65000:1111 route-target export 65000:1111 route-target import 65000:1111 ! address-family ipv4 mdt default 233.0.0.1 mdt data 233.0.0.2 0.0.0.0 threshold 100 exit-address-family</pre>	<pre>PE-B vrf definition Customer-A rd 65000:1111 route-target export 65000:1111 route-target import 65000:1111 ! address-family ipv4 mdt default 233.0.0.1 mdt data 233.0.0.3 0.0.0.0 threshold 100 exit-address-family</pre>
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Refer to the exhibit. Which tree does multicast traffic follow?

- A. shared tree
- B. MDT default
- C. source tree
- D. MDT voice

Answer: B

NEW QUESTION 2

```
R1
interface g0/0
 ip address 192.168.1.1 255.255.255.0
 ip router isis
router isis
 net 49.0022.1111.1111.1111.00
 area-password ciSCo

R2
interface g0/1
 ip address 192.168.1.2 255.255.255.0
 ip router isis
router isis
 net 49.0022.1111.1111.1111.00
 area-password ciSco
```

Refer to the exhibit. After you applied these configurations to routers R1 and R2, the two devices could not form a neighbor relationship. Which reason for the problem is the most likely?

- A. The two routers cannot authenticate with one another.
- B. The two routers have the same area ID.
- C. The two routers have the same network ID.
- D. The two routers have different IS-types.

Answer: C

NEW QUESTION 3

Refer to the exhibit. Which effect of this configuration is true?

- A. It sets the keepalive timer to 30 seconds and the hold timer to 240 seconds.
- B. It sets the keepalive timer to 30 milliseconds and the hold timer to 240 milliseconds
- C. It sets the hold timer to 30 milliseconds and the keepalive timer to 240 milliseconds
- D. It sets the hold timer to 30 seconds and the keepalive timer to 240 seconds

Answer: A

NEW QUESTION 4

```
RP/0/0/CPU0:XR1#show run

route-policy AGGRO
  if destination in (10.0.0.0/8 ge 8 le 25) then
    set community (10:825)
  endif
  if destination in (10.2.0.0/24) then
    drop
  endif
  if destination in (10.1.0.0/24) then
    suppress-route
  endif
end-policy
!
!
router bgp 1
  bgp router-id 192.168.0.7
  address-family ipv4 unicast
    aggregate-address 10.0.0.0/8 route-policy AGGRO

RP/0/0/CPU0:XR1#
```

Refer to the exhibit. A network operator is working to filter routes from being advertised that are covered under an aggregate announcement. The receiving router of the aggregate announcement block is still getting some of the more specific routes plus the aggregate. Which configuration change ensures that only the aggregate is announced now and in the future if other networks are to be added?

- A. Configure the summary-only keyword on the aggregate command
- B. Set each specific route in the AGGRO policy to drop instead of suppress-route
- C. Filter the routes on the receiving router
- D. Set each specific route in the AGGRO policy to remove instead of suppress-route

Answer: A

NEW QUESTION 5

DRAG DROP

Compare different features between OSPFv2 and OSPFv3. Drag and drop the descriptions of OSPF from the left onto the correct OSPF versions on the right. Select and Place:

- A. Mastered
- B. Not Mastered

Answer: A

NEW QUESTION 6

Refer to the exhibit. Which LSA type is indicated by this router output?

```
OSPF Router with ID (192.168.1.1) (Process ID 1)
Router Link States (Area 1234)
LS age: 691
Options: (No TOS-capability, DC)
LS Type: Router Links
Link State ID: 192.168.1.1
```

- A. type 3 LSA
- B. type 4 LSA
- C. type 1 LSA
- D. type 2 LSA

Answer: C

NEW QUESTION 7

Which statement about enabling segment routing for IGP is true?

- A. Segment routing must first be enabled under then routing process and then globally
- B. Segment routing must first be enabled globally and then under the routing process
- C. Segment routing can be enabled only under the routing process
- D. Segment routing can be enabled only globally

Answer: B

NEW QUESTION 8

Which task is performed when troubleshooting LDP?

- A. Execute the ping utility to generate information about the MAC addresses used along the path
- B. Verify that MPLS is disabled globally and enabled on the necessary interfaces in a per-interface basis
- C. Execute the traceroute utility to generate information about the labels used along the path
- D. Verify that Cisco Express Forwarding has been disabled on the network

Answer: C

NEW QUESTION 9

```

R1#sh ip int bri
Interface          IP-Address      OK? Method Status  Protocol
FastEthernet0/0    10.1.12.1       YES manual up      up
FastEthernet0/1    10.1.13.1       YES manual up      up

R1#sh run | s router bgp
!
router bgp 123
  bgp log-neighbor-changes
  neighbor TEST peer-group
  neighbor TEST remote-as 2 alternate-as 3
  neighbor 10.1.12.2 peer-group TEST
  neighbor 10.1.13.3 peer-group TEST

R2#sh ip int bri
Interface          IP-Address      OK? Method Status  Protocol
FastEthernet0/0    10.1.12.2       YES manual up      up

R2#sh run | s router bgp
!
router bgp 2
  bgp log-neighbor-changes
  neighbor 10.1.12.1 remote-as 123

R3#sh ip int bri
Interface          IP-Address      OK? Method Status  Protocol
FastEthernet0/1    10.1.13.3       YES manual up      up

R3#sh run | s router bgp
router bgp 3
  bgp log-neighbor-changes
  neighbor 10.1.13.1 remote-as 123
  
```

Refer to the exhibit. R1 is directly connected to R2 and R3. R1 is in BGP AS 123, R2 is in BGP AS 2, and R3 is in BGP AS 3. Assume that there is no connectivity issue between R1, R2 and R1, R3. Which result between BGP peers R1, R2 and R1, R3 is true?

- A. The BGP session does not come up between R1 and R2 and between R1 and R3.
- B. The BGP session comes up between R1 and R2 and between R1 and R3.
- C. The BGP session comes up between R1 and R3, but not between R1 and R2.
- D. The BGP session comes up between R1 and R2, but not between R1 and R3.

Answer: B

NEW QUESTION 10

```

Router 1:

interface tunnel-te12
  ipv4 unnumbered loopback0
  autoroute announce
  destination 192.168.1.2
  path-option 12 dynamic segment-routing
  path-protection
  
```

Refer to the exhibit. Router 1 has established an SR-TE tunnel with router 2. Which statement describes this configuration?

- A. Router 1 has a list of labels used to explicitly lay out a path to router 2.
- B. Router 1 and router 2 have a bidirectional tunnel set up with dynamic path selection.
- C. Router 1 is the head-end tunnel and has dynamically chosen a path to router 2.
- D. Router 2 is the head-end tunnel and has explicitly set a path to router 1.

Answer: C

NEW QUESTION 10

Refer to the exhibit. Why is neighbor 10.1.5.5 stuck in "2WAY" state?

- A. Router ID 10.1.5.5 is not reachable from R2
- B. OSPF authentication has failed between R2 and 10.1.5.5
- C. It is an expected behavior when OSPF network type is broadcast
- D. OSPF parameters (Area ID or hello interval) are mismatched between R2 and 10.1.5.5

Answer: C

NEW QUESTION 13

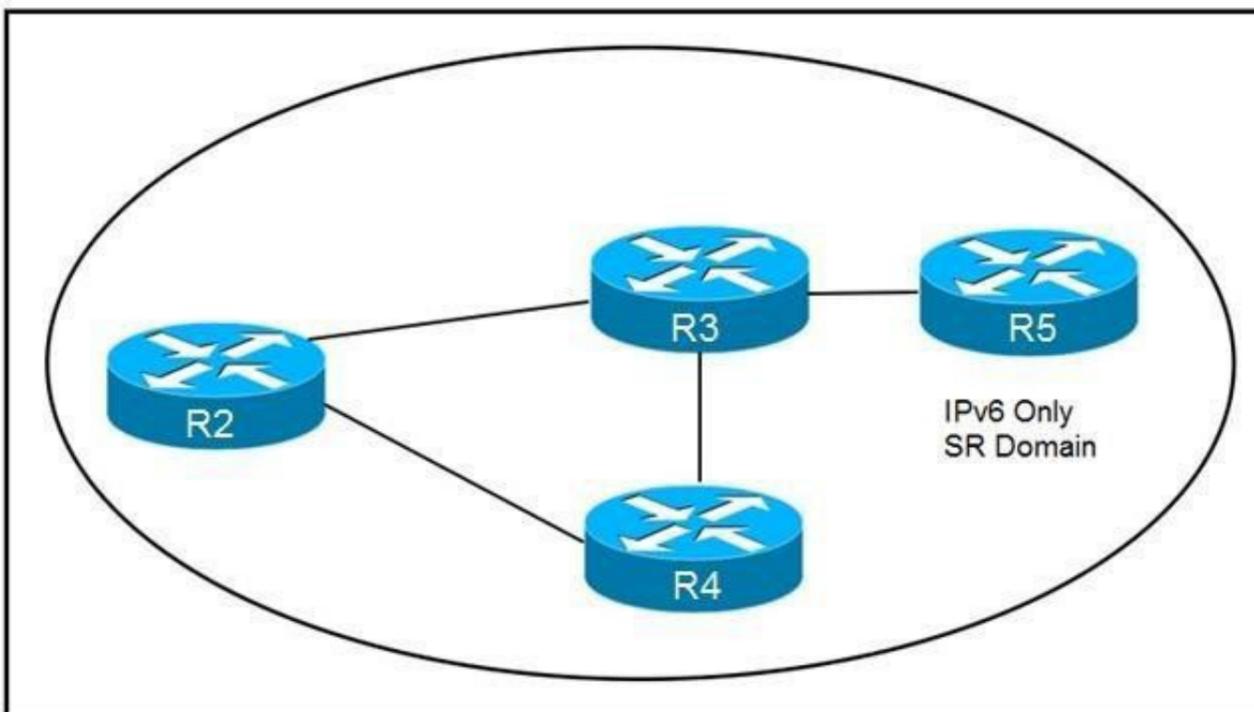
Which feature is used in multicast routing to prevent loops?

- A. STP
- B. inverse ARP
- C. RPF
- D. split horizon

Answer: C

NEW QUESTION 16

Refer to the exhibit. How are packets directed through the data plane when SRv6 is implemented?



- A. An ordered list of segments is encoded in a routing extension header
- B. The MPLS data plane is used to push labels onto IGP routes
- C. A stack of labels represents an ordered list of segments
- D. The packet is encapsulated with a header and trailer encoding the ordered list of segments

Answer: A

NEW QUESTION 17

Refer to the exhibit. Which task must you perform on interface g1/0/0 to complete the SSM implementation?

- A. configure OSPFv3
- B. enable CDP
- C. disable IGMP
- D. configure IGMPv3

Answer: D

NEW QUESTION 19

```
Router 1:
router bgp 65530
 address-family ipv4 unicast
  bgp additional-paths select all
  neighbor 192.168.1.1 additional-paths send
  neighbor 192.168.1.1 advertise additional-paths all
```

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

- A. Router 1 sends and receives multiple best paths from neighbor 192.168.1.1
- B. Router 1 sends up to two paths to neighbor 192.168.1.1 for all routes
- C. Router 1 receives up to two paths from neighbor 192.168.1.1 for all routes in the same AS
- D. Router 1 receives only the best path from neighbor 192.168.1.1

Answer: A

NEW QUESTION 24

```
Router 1:
router ospf 20
 redistribute eigrp 1
 network 192.168.0.0 0.0.0.255 area 0
```

Refer to the exhibit. An engineer is troubleshooting an OSPF issue. Router 1 has a neighbor relationship with router 2. Only router 1 classful EIGRP routes can be seen on router 2. In order for all EIGRP routes to be redistributed correctly, which action should be taken?

- A. Router 1 must have the keyword subnets included in the redistribution command for all EIGRP routes to be redistributed.
- B. Router 1 must remove the AS number 1 from the redistribution command for all EIGRP routes to be redistributed.
- C. Router 1 must have the keyword ospf-metric included in the redistribution command for all EIGRP routes to be redistributed.
- D. Router 1 must have the keyword metric-type 1 included in the redistribution command for all EIGRP routes to be redistributed.

Answer: A

NEW QUESTION 29

Refer to the exhibit. A network operator must inject a Level 1 route from XR2 (10.16.16.0/24) into the ISIS topology. Which configuration allows the injection in a way that XR3 and XR1 have a valid and working route for 10.16.16.0/24?

A. A. #XR3

```
route-policy ISIS_PROPO
 if destination in(10.0.0.0/8 ge 8 le 22) then
  pass
 endif
end-policy
!
router isis 1
 net 49.1921.6800.0003.00
 address-family ipv4 unicast
!
propagate level 1 into level 2 route-policy ISIS_PROPO
```

B. #XR2

```
route-policy ISIS_PROPO
 if destination in(10.0.0.0/8 ge 8 le 32) then
  pass
 endif
end-policy
!
router isis 1
 net 49.1921.6800.0003.00
 address-family ipv4 unicast
!
propagate level 2 into level 1 route-policy ISIS_PROPO
```

C.

```
#XR2
route-policy ISIS_PROPO
  if destination in(10.0.0.0/8 ge 8 le 32) then
    pass
  endif
end-policy
!
router isis 1
  net 49.1921.6800.0003.00
  address-family ipv4 unicast
!
propagate level 1 into level 2 route-policy ISIS_PROPO
```

B. #XR3

```
route-policy ISIS_PROPO
  if destination in(10.0.0.0/8 ge 8 le 32) then
    pass
  endif
end-policy
!
router isis 1
  net 49.1921.6800.0003.00
  address-family ipv4 unicast
!
propagate level 2 into level 1 route-policy ISIS_PROPO
```

Answer: C

NEW QUESTION 33

Refer to the exhibit. Router 1 has attempted to establish a Cisco MPLS TE tunnel to router 2, but the tunnel has failed. Which statement about this configuration is true?

- A. Router 1 must define an explicit path to router 2
- B. Router 1 and router 2 must define the RSVP bandwidth reserved on the physical interfaces
- C. Router 2 must have a tunnel interface created with router 1 as the destination
- D. Router 1 must have Cisco MPLS TE enabled on interface gigabitethernet0/1

Answer: D

NEW QUESTION 34

```

RP/0/0/CPU/0:P1#
!
key chain BGP
key 1
accept-lifetime 13:14:06 february 14 1993 infinitive
send-lifetime 13:14:06 february 14 1993 infinitive
key-string password cisco123
cryptographic-algorithm MD5
!
!
router bgp 1
address-family ipv4 unicast
!
neighbor 192.168.13.3
remote-as 1
keychain BGP
address-family ipv4 unicast

RP/0/0/CPU/0:PE3#
!
key chain BGP
key 1
accept-lifetime 13:14:06 february 14 1993 infinitive
send-lifetime 13:14:06 february 14 1993 infinitive
key-string password cisco123
cryptographic-algorithm MD5
!
!
router bgp 1
address-family ipv4 unicast
!
neighbor 192.168.13.1
remote-as 1
keychain BGP
address-family ipv4 unicast

```

Refer to the exhibit. P1 and PE3 Cisco IOS XR routers are directly connected and have this configuration applied. The BGP session is not coming up. Assume that there is no IP reachability problem and both routers can open tcp port 179 to each other. Which two actions fix the issue? (Choose two.)

- A. Change MD5 to HMAC-SHA1-12
- B. Change MD5 to HMAC-ESP
- C. Change MD5 to SHA-1
- D. Change MD5 to HMAC-MD5
- E. Remove the send and accept lifetime under key 1

Answer: AD

NEW QUESTION 38

Which output from the show isis interface command helps an engineer troubleshoot an IS-IS adjacency problem on a Cisco IOS-XR platform?

- A. metric
- B. priority
- C. circuit type
- D. hello interval

Answer: D

NEW QUESTION 42

For which reason can two BGP peers fail to establish a neighbor relationship?

- A. Their BGP send-community strings are misconfigured
- B. Their BGP timers are mismatched
- C. Their remote-as numbers are misconfigured
- D. They are both activated under an IPv4 address family

Answer: C

NEW QUESTION 46

Which statement about BFD on Cisco IOS XR Software is true?

- A. Cisco IOS XR router must use LDP to route back to the Cisco IOS router to establish the peer relationship.
- B. Cisco IOS XR Software does not support BFD multihop for IPv4.
- C. Cisco IOS XR router must use dynamic routing or a static route back to the Cisco IOS router to establish the peer relationship.
- D. BFD is not compatible between Cisco IOS XR and Cisco IOS Software.

Answer: C

NEW QUESTION 47

```
RP/0/0/CPU0:iosxr# show run segment-routing

segment-routing
  global-block 18000 24999
!

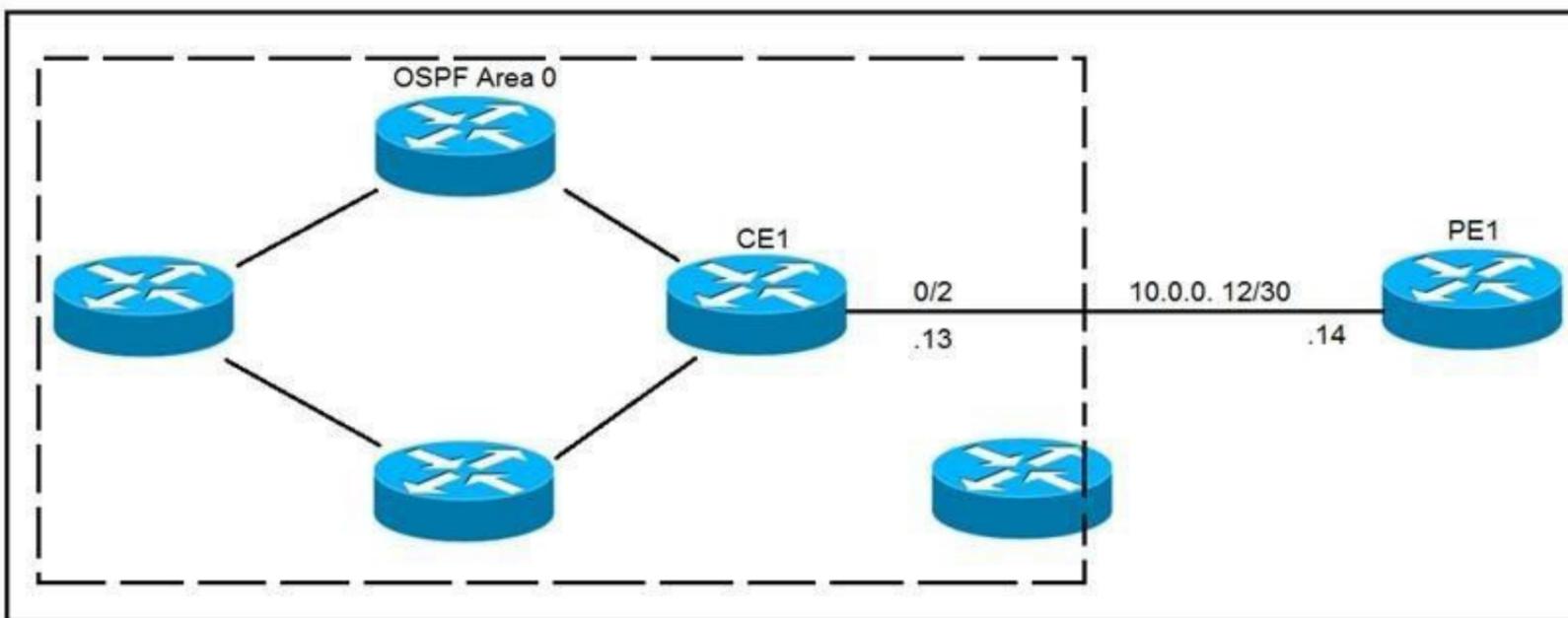
RP/0/0/CPU0:iosxr#
```

Refer to the exhibit. A network engineer implemented this segment routing configuration. Which statement about the output is true?

- A. This range conflicts with the segment routing local block range.
- B. The device must be reloaded for these ranges to be allocated and used.
- C. The default segment routing global block range is being used on this device.
- D. A nondefault segment routing global block range is being used on this device.

Answer: D

NEW QUESTION 52

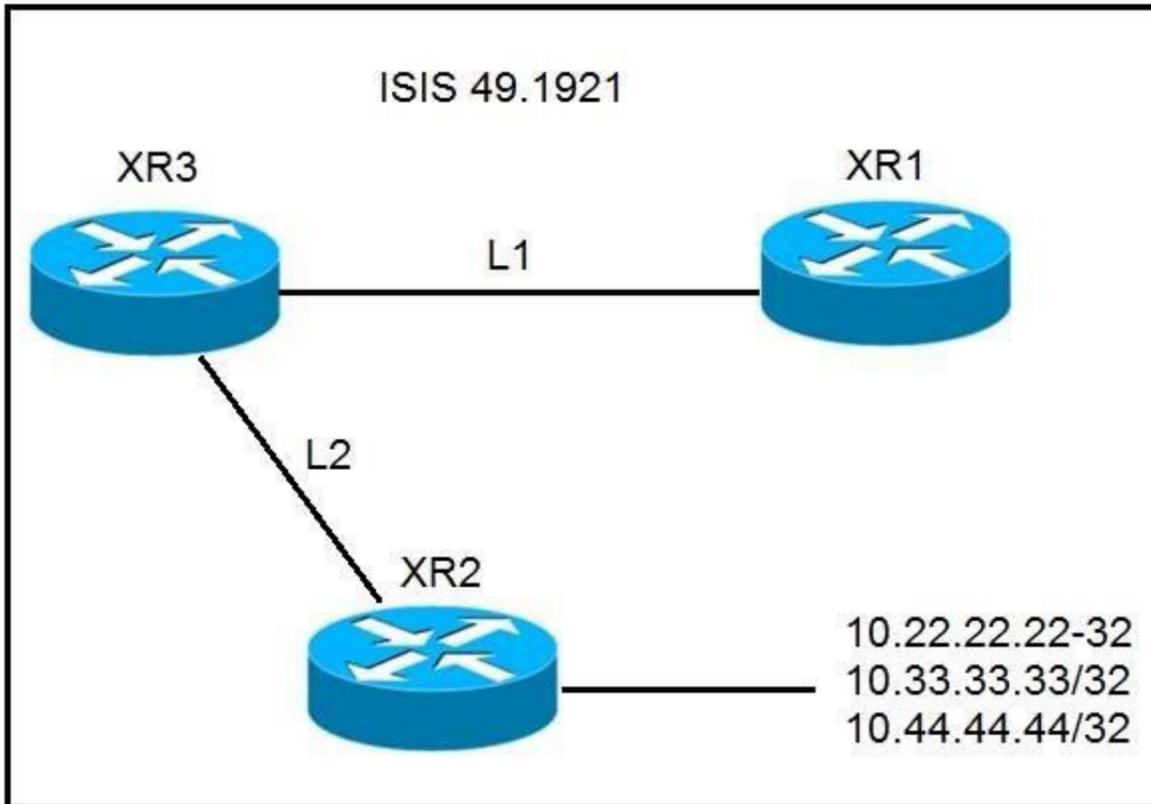


Refer to the exhibit. CE1 is the gateway router into the provider network via PE1. A network operator must inject a default route into OSPF area 0. All devices inside area 0 must be able to reach PE1. Which configuration achieves this goal?

- A. #CE1
 router ospf 1
 default-information originate always
- B. #CE1
 ip route 0.0.0.0 0.0.0.0 GigabitEthernet0/2 10.0.0.14
 !
 router ospf 1
 default-information originate

Answer: B

NEW QUESTION 53



Refer to the exhibit. A network operator must stop 10.33.33.33/32 from being redistributed into Level 1 router XR1. Which configuration meets this need?

- A. #XR2
- ```
prefix-set NO_33
 10.33.33.33/32
end-set
!
route-policy ISIS_NO_33
 if destination in NO_33 then
 drop
 else
 pass
 endif
end-policy
!
router isis 1
 address-family ipv4 unicast
 propagate level 2 into level 1 route-policy ISIS_NO_33
```
- B. #XR3
- ```
prefix-set NO_33
 10.33.33.33/32
end-set
!
route-policy ISIS_NO_33
 if destination in NO_33 then
  drop
 endif
end-policy
!
router isis 1
 address-family ipv4 unicast
 propagate level 2 into level 1 route-policy ISIS_NO_33
```
- C.

```
#XR3
prefix-set NO_33
 10.33.33.33/32
end-set
!
route-policy ISIS_NO_33
 if destination in NO_33 then
  drop
 else
  pass
 endif
end-policy
!
router isis 1
 address-family ipv4 unicast
 propagate level 2 into level 1 route-policy ISIS_NO_33
```

D. #XR3

```
prefix-set NO_33
 10.33.33.33/23
end-set
!
route-policy ISIS_NO_33
 if destination in NO_33 then
  drop
 else
  pass
 endif
end-policy
!
router isis 1
 address-family ipv4 unicast
 propagate level 2 into level 1 route-policy ISIS_NO_33
```

Answer: C

NEW QUESTION 56

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