

## Exam Questions 300-510

Implementing Cisco Service Provider Advanced Routing Solutions (SPRI)

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#### NEW QUESTION 1

<b>PE-A</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 233.0.0.2 0.0.0.0 threshold 100 exit-address-family	<b>PE-B</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
---	---

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

A network consultant is troubleshooting IS-IS instances to identify why a routing domains is having communication problems between the two instances. Which description of the possible cause of issues in the routing domain is true?

- A. The same interface cannot be advertised in two different IS-IS instances
- B. The IS-IS "ISP" and "ISP2" instances are unrelated and unable to intercommunicate
- C. The configured IS-IS NSEL value is not allowing the routing systems to establish a neighborhood
- D. The interface mode ip router is-is command was not included in the script

**Answer: A**

#### NEW QUESTION 3

What is used by SR-TE to steer traffic through the network?

- A. shortest path calculated by IGP
- B. dynamic rules
- C. path policy
- D. explicit maps

**Answer: C**

#### NEW QUESTION 4

For which reason can two devices fail to establish an OSPF neighbor relationship?

- A. The two devices have different process IDs
- B. The two devices have different network types
- C. The two devices have different router IDs
- D. The two devices have the same area ID

**Answer: B**

#### NEW QUESTION 5

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 6

Refer to the exhibit. Router 1 is a core ABR in a Cisco Unified MPLS environment. All of the router 1 BGP peers are established, but traffic between customers is failing. Which BGP configuration must be added to the configuration?

- A. It must be configured for graceful restart
- B. It must be configured with a route reflector
- C. It must be configured with send labels
- D. It must be configured with PIC edge

Answer: C

#### NEW QUESTION 7

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 8

Which two conditions must be met before separate ISPs can provide interdomain multicast routing? (Choose two.)

- A. Each ISP must configure MSDP to connect its individual multicast administrative domain to the domains at other ISPs.
- B. Each ISP must dedicate a single router to handle multicast traffic between providers.
- C. Each ISP must replace its RP assignment with a global RP.
- D. Each ISP must configure its network to use PIM-DM.
- E. Each ISP must support intradomain multicast routing.

Answer: AE

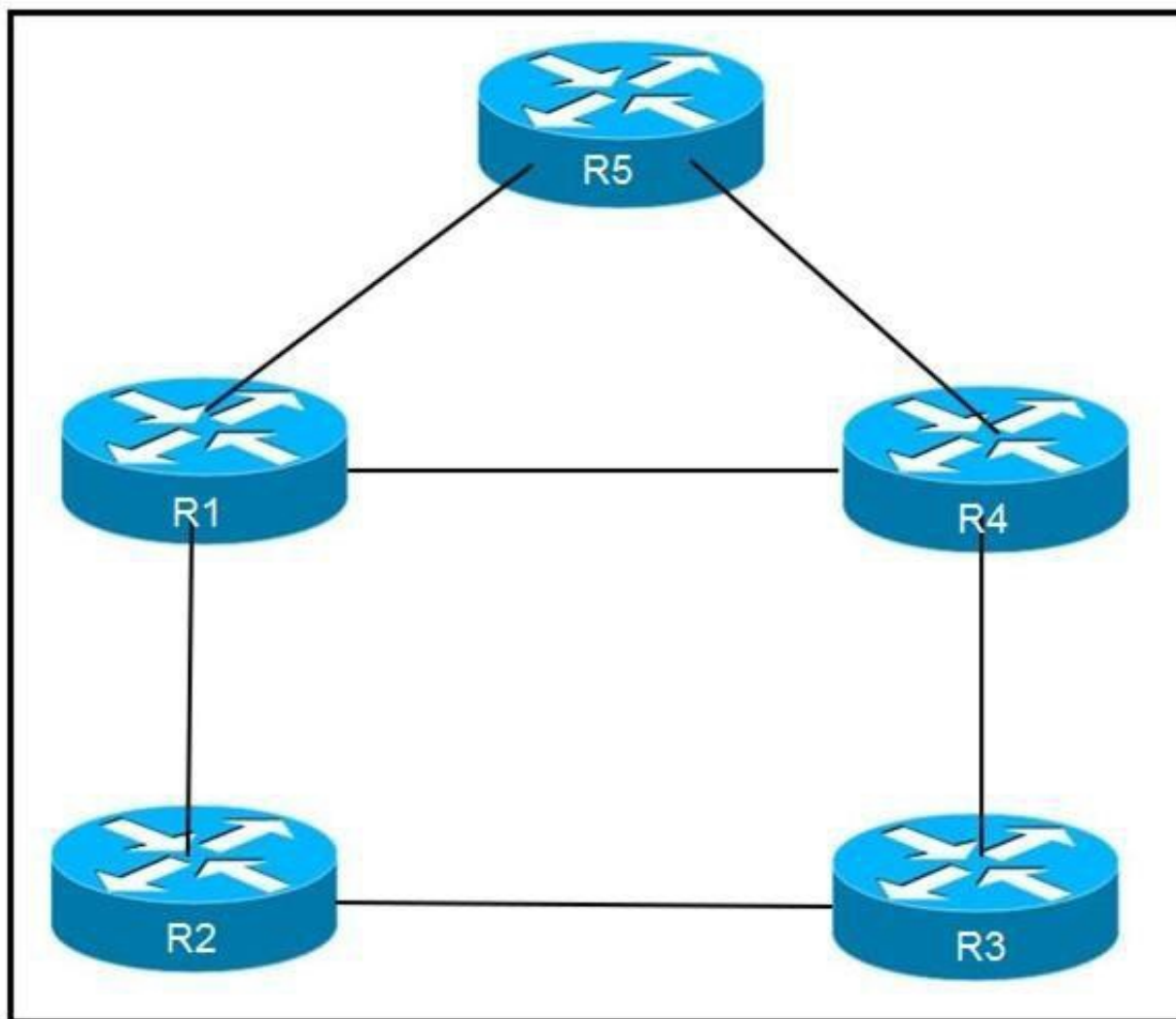
#### NEW QUESTION 9

Which feature is used in multicast routing to prevent loops?

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

Answer: C

#### NEW QUESTION 10



Refer to the exhibit. An engineer is addressing an IS-IS design issue which is running within the topology. All links are running on FastEthernet, except the link between R5 and R4, which is Gigabit Ethernet. Which statement about the design is true?

- A. R4 prefer to reach R5 using R1 as the next hop
- B. All links have equal cost if the default metric is used
- C. R5 prefers to use R4 as the next hop for all routes
- D. R1 prefer to use R5 as the next hop to reach R4

Answer: B

#### NEW QUESTION 10

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 15

```

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 16**

Which cost is the default when redistributing routes from BGP to OSPF?

- A. 20
- B. 1
- C. infinite
- D. automatic

**Answer: B**

**NEW QUESTION 17**

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

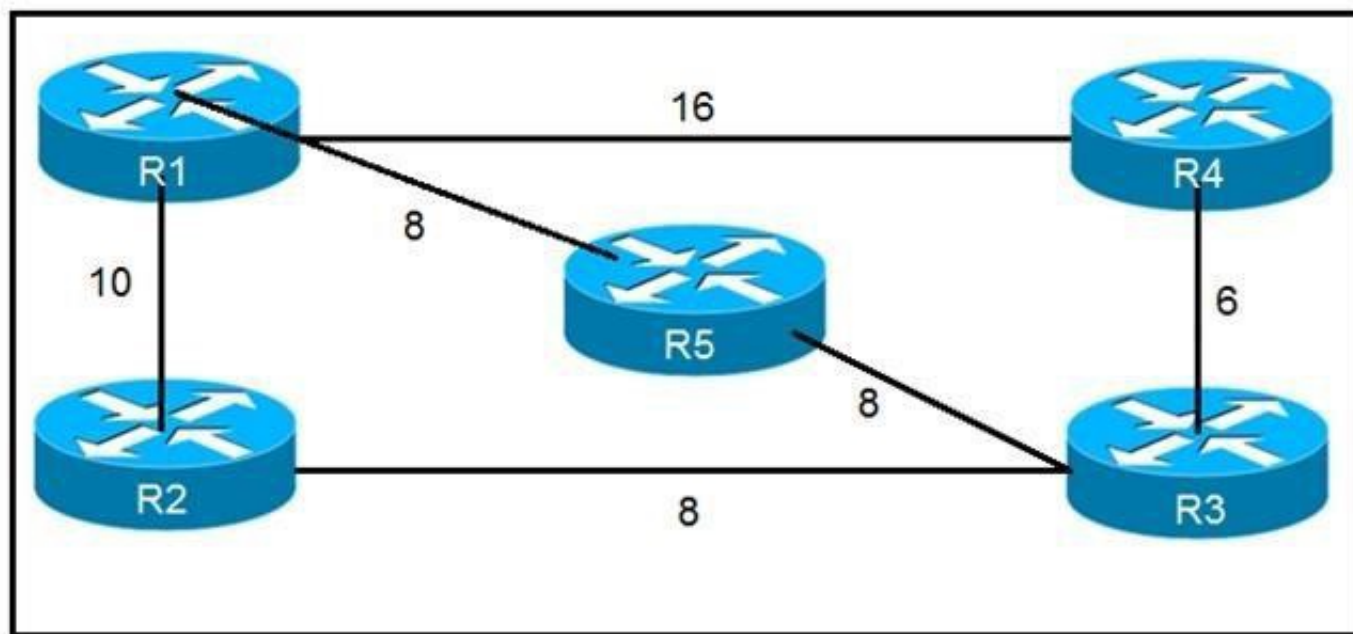
```
route-policy ISIS_PROPO
  if destination in(10.0.0.0/8 ge 8 le 32) then
    pass
  endif
end-policy
!
router isis 1
  net 49.1921.6800.0003.00
  address-family ipv4 unicast
!
propagate level 1 into level 2 route-policy ISIS_PROPO
```

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 18**



Refer to the exhibit. Which router does R1 install as an alternate next hop when trying to reach R3 if LFA is enabled?

- A. R5
- B. R3
- C. R4
- D. R2

**Answer: D**

#### NEW QUESTION 23

Which command is used to enable BIDIR-PIM under global configuration mode for Cisco IOS XE Software?

- A. ip pim bidir-enable
- B. ipv4 pim bidir-enable
- C. ip multicast-routing
- D. ip pim bidir

**Answer: A**

#### NEW QUESTION 25

A network engineer is troubleshooting OSPF multiarea. Which Cisco IOS XR feature should the engineer use in order to streamline OSPF issue?

- A. hierarchical CLI
- B. DR support for topology management
- C. routing process enabled by default on all interfaces
- D. show ip ospf topology command

**Answer: A**

#### NEW QUESTION 28

In a PIM-SM environment, which mechanism determines the traffic that a receiver receives?

- A. The receiver explicitly requests its desired traffic from the RP on the shared tree.
- B. The receiver explicitly requests traffic from a single source, which responds by forwarding all traffic.
- C. The RP on the shared tree floods traffic out of all PIM configured interfaces.
- D. The receiver explicitly requests traffic from each desired source, which responds by sending all traffic.

**Answer: D**

#### NEW QUESTION 30

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 33

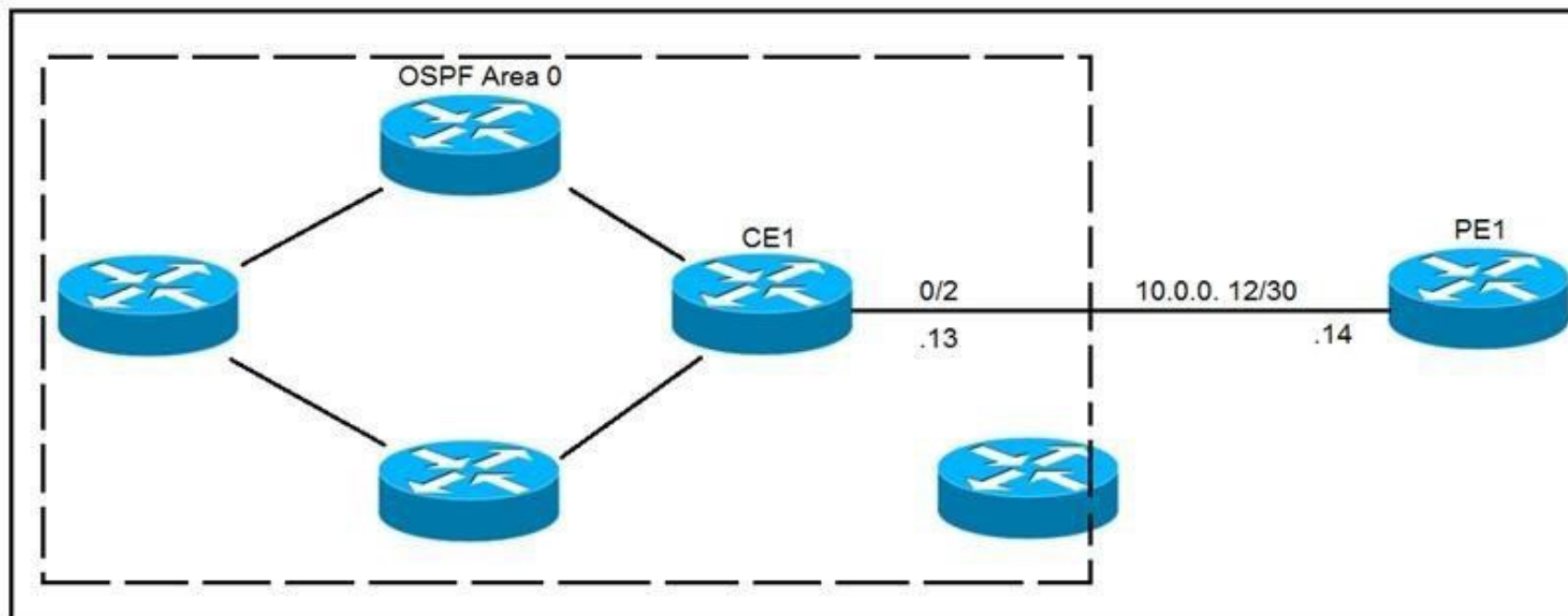
DRAG DROP

Drag and drop the attributes for the BGP route selection on the left into the correct order on the right. Not all options are used.  
 Select and Place:

- A. Mastered
- B. Not Mastered

**Answer: A**

# NEW QUESTION 36



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 38

Which two characteristics unique to SSM when compared to ASM are true? (Choose two.)

- A. It uses SPT switchover  
B. It uses (\*,G) exclusively  
C. It uses IGMPv3  
D. It uses RP  
E. It uses (S,G) exclusively

Answer: CE

# NEW QUESTION 43

RP/0/0/CPU/0:P1# ! key chain BGP key 1 key-string password cisco123 cryptographic-algorithm HMAC-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 key-string password cisco123 cryptographic-algorithm HMAC-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 action fixes the issue?

- A. Change HMAC-MD5 to HMAC-SHA1-20  
B. Configure the send and accept lifetime under key 1  
C. Change HMAC-MD5 to MD5  
D. Change HMAC-MD5 to HMAC-SHA1-12

Answer: B



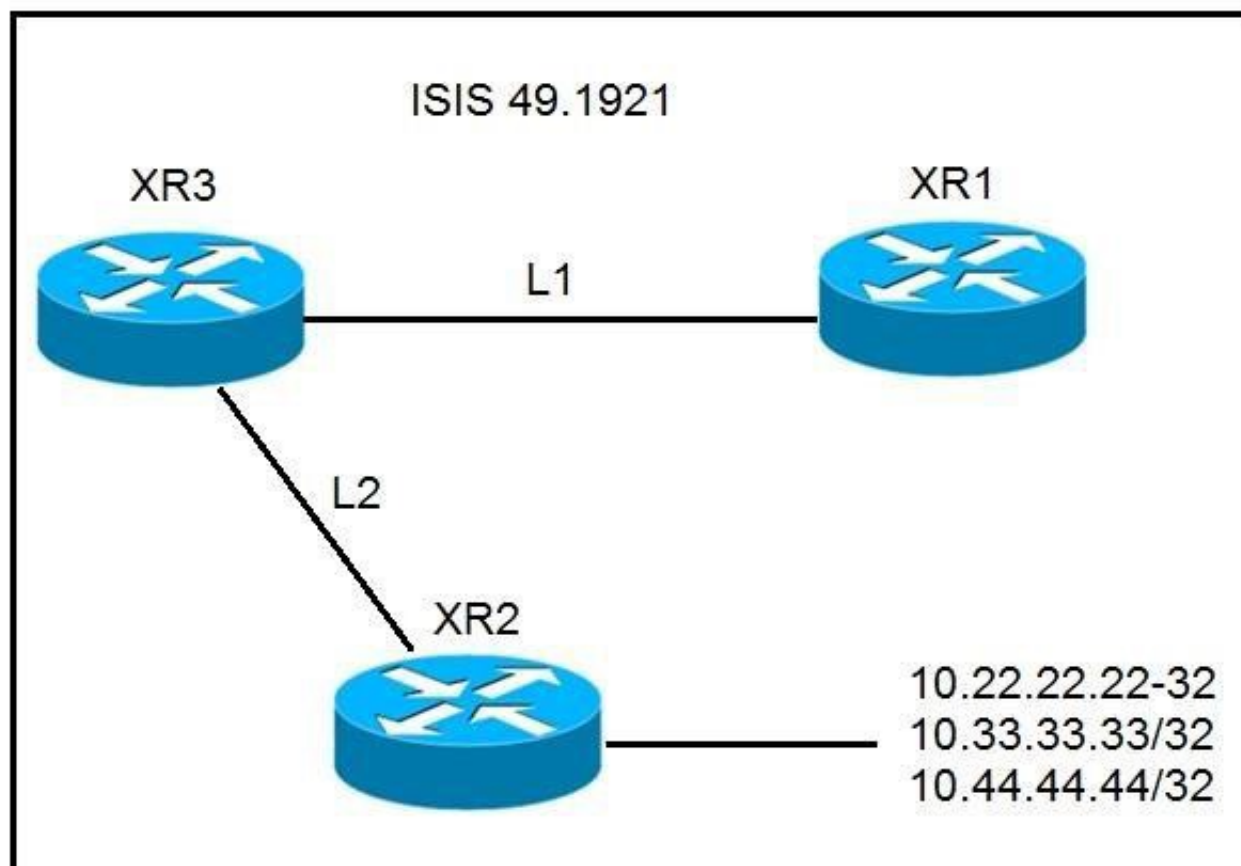
#### NEW QUESTION 48

Refer to the exhibit. An engineer has successfully fixed BGP peering issue. R1 has an established eBGP peering with R2 and R3. Which mechanism should the engineer apply in order to steer the traffic correctly?

- A. The MED attribute can be applied on R2 to influence R1 to use it as the primary path.
- B. The local preference attribute can be applied on R3 to influence AS 65513 to use AS 65515 as the secondary path.
- C. The weight attribute can be applied on R2 to influence AS 65513 to use AS 65515 as the primary path.
- D. The IGP metric can be manipulated on R1 to allow traffic to be load balanced between R2 and R3.

Answer: D

#### NEW QUESTION 49



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 54

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