



## **Cisco**

### **Exam Questions 300-510**

Implementing Cisco Service Provider Advanced Routing Solutions (SPRI)

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**NEW QUESTION 1**

```

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

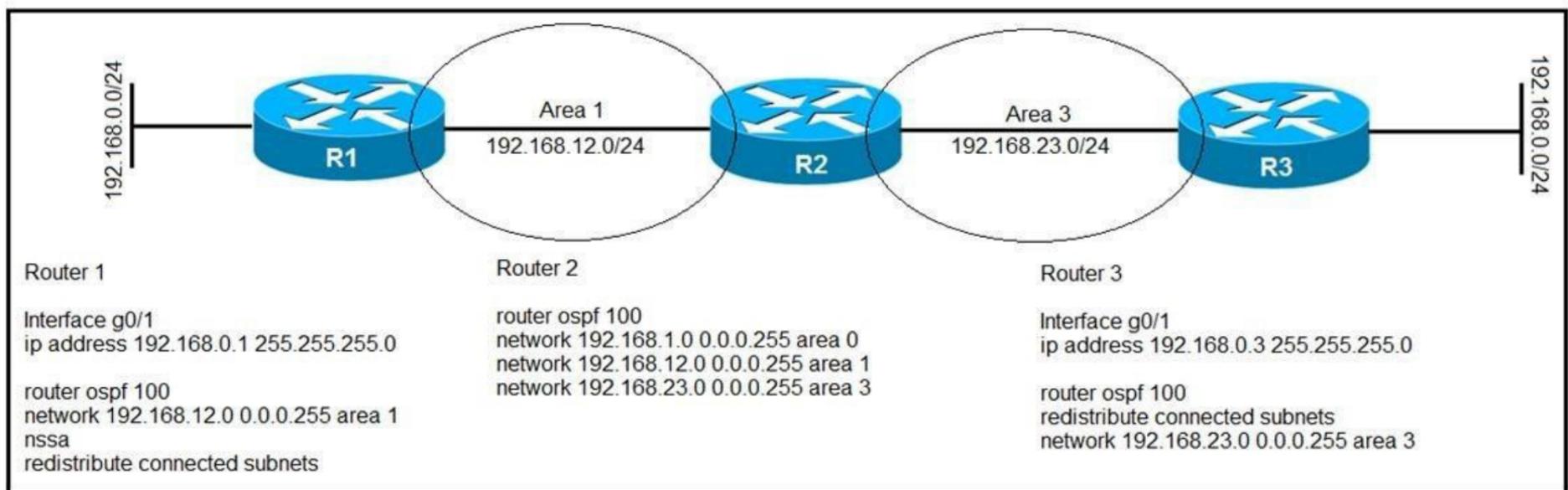
**NEW QUESTION 2**

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 3**



Refer to the exhibit. After troubleshooting an OSPF adjacency issue, routers 1, 2, and 3 have formed OSPF neighbor relationships. Which statement about the configuration is true?

- A. Router 2 receives a Type 5 LSAs from router 1 for its connected subnets
- B. Router 2 uses router 3 as the next hop for 192.168.0.0/24
- C. Router 2 uses router 1 as the next hop for 192.168.0.0/24
- D. Router 2 receives a Type 7 LSAs from router 3 for its connected subnets

**Answer:** A

**NEW QUESTION 4**

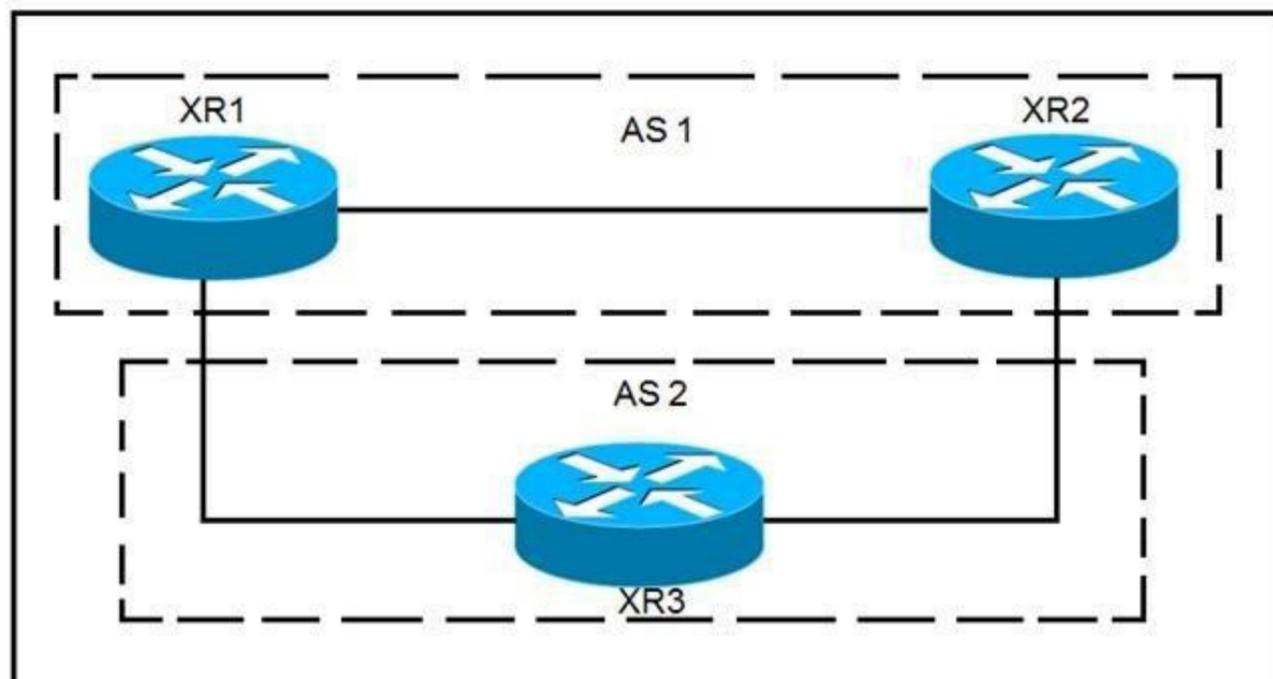
DRAG DROP

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 5

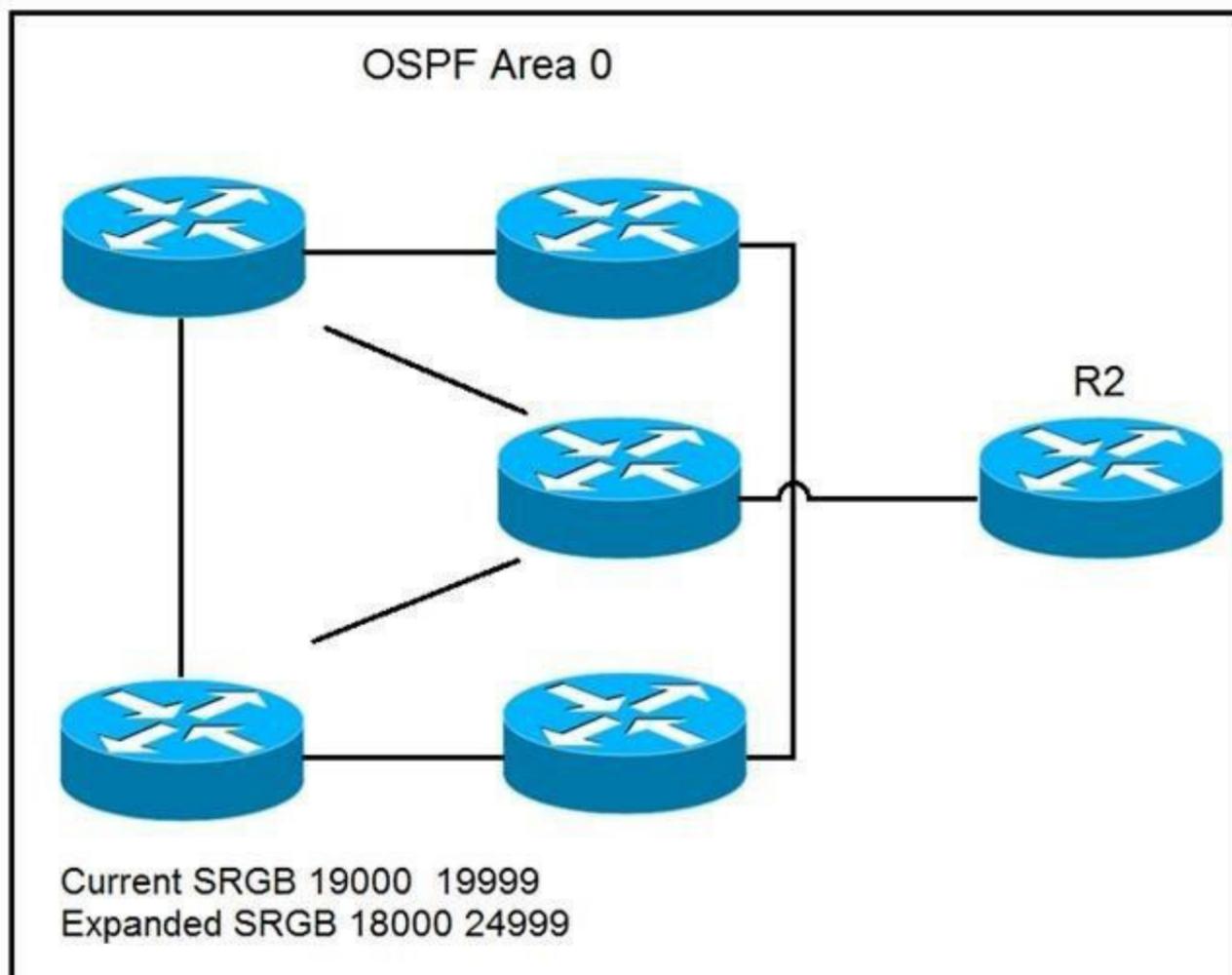


Refer to the exhibit. XR1 and XR2 are sending the prefix 10.11.11.0/24 to XR3. A configured policy on XR1 is incorrectly prepending AS path 11 11 12 12 onto this prefix. A network operator wants to add a policy onto XR3 that will not allow the falsely prepending prefix from being installed. Which policy configuration applied to the XR3 neighbor configuration for XR1 can accomplish this requirement without impact to other or future received routes?

- A. `route-policy NO_PREPEND`  
`if as-path passes-through '11' then`  
`pass`  
`else`  
`drop`  
`endif`  
`end-policy`
- B. `route-policy NO_PREPEND`  
`if as-path prepends`  
`drop`  
`else`  
`pass`  
`endif`  
`end-policy`
- C. `route-policy NO_PREPEND`  
`if as-path passes-through '1' then`  
`pass`  
`else`  
`drop`  
`endif`  
`end-policy`
- D. `route-policy NO_PREPEND`  
`if as-path passes-through '11' then`  
`drop`  
`else`  
`pass`  
`endif`  
`end-policy`

Answer: D

NEW QUESTION 6



Refer to the exhibit. A network operator wants to expand the segment routing global block in upcoming maintenance. The operator must ensure that the changes to the segment routing global block have no adverse impacts on the prefix-sid associated with the loopback0 interface used within the OSPF domain. Which command can the operator use to enforce R2 to have a strict prefix-sid assignment to loopback0? A.

- A. `router ospf 1`  
`area 0`  
`interface Loopback0`  
`prefix-sid index 19002 explicit-null`
- B. `router ospf 1`  
`area 0`  
`interface Loopback0`  
`prefix-sid absolute 13002`
- B. `router ospf 1`  
`area 0`  
`interface Loopback0`  
`prefix-sid absolute 19002`
- C. `router ospf 1`  
`area 0`  
`interface Loopback0`  
`prefix-sid index 19002`

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**

DRAG DROP

An engineer is troubleshooting end-to-end customer traffic across an MPLS VPN service provider network. Which tasks should the engineer use to solve the routing issues? Drag and drop the table types from the left onto the most useful troubleshooting tasks/router types on the right. (Not all options are used.) Select and Place:

- A. Mastered
- B. Not Mastered

**Answer: A**

**NEW QUESTION 9**

You have configured MSDP peering between two autonomous systems that pass traffic between two sites, but the peering has failed to come up. Which task do you perform to begin troubleshooting the problem?

- A. Verify that multicast has been disabled globally
- B. Verify that PIM-DM is configured on the source interface
- C. Verify that both source interfaces are reachable from both peers
- D. Verify that the two MSDP peers allow asymmetric routing

**Answer: C**

**NEW QUESTION 10**

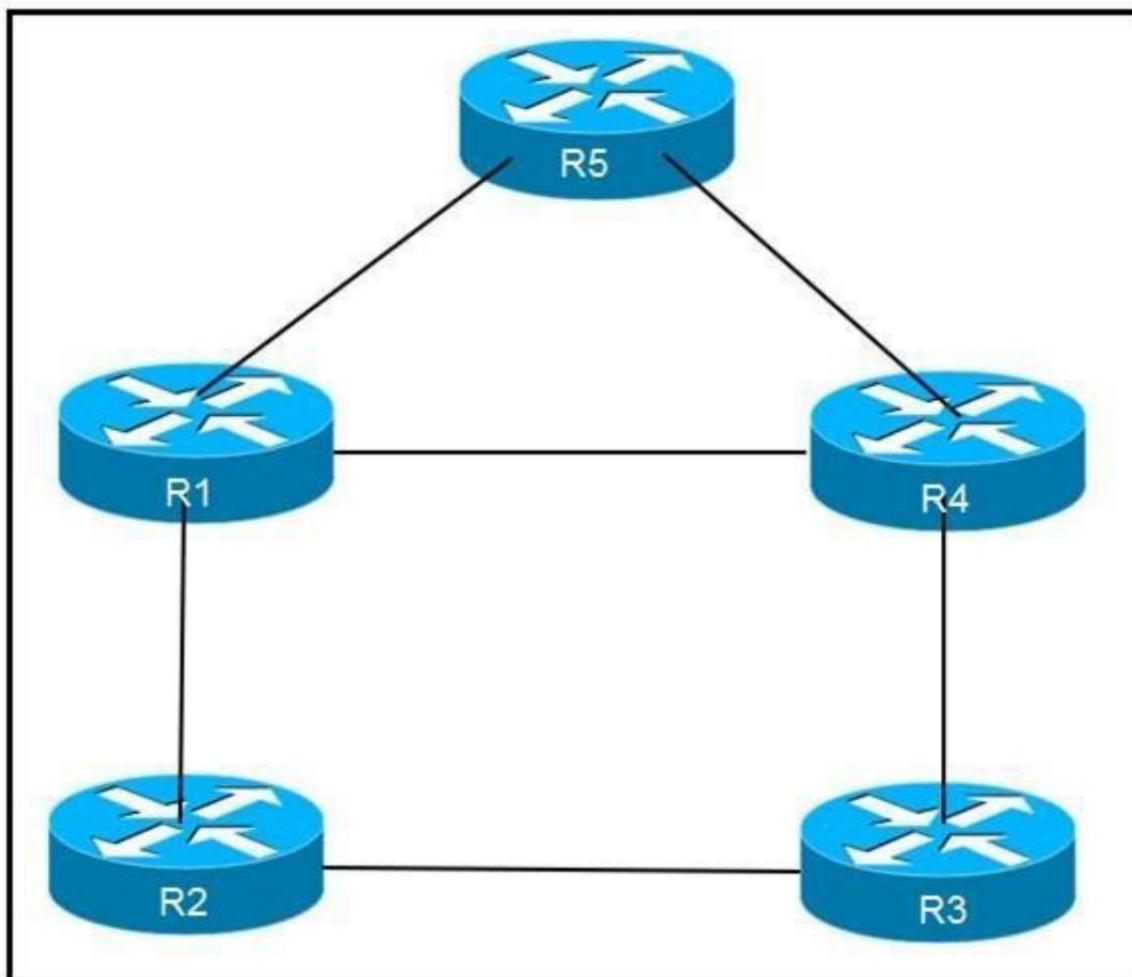
Refer to the exhibit. Why is neighbor 10.1.5.5 stuck in "2WAY" state?

- 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 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 11**

After you change the IP address on an IOS XR router, you cannot ping the new address. Which step did you forget to complete?

- A. commit the configuration
- B. roll back the configuration
- C. merge the configuration
- D. save the running configuration

Answer: A

**NEW QUESTION 14**

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 18**

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

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

Answer: B

**NEW QUESTION 20**

```
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 23**

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 27

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 29

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 32

```
router bgp 65515
  neighbor 192.168.1.1 route-map ciscotest in
  neighbor 192.168.1.1 remote-as 65516

ip as-path access-list 1 permit _65517_

route-map ciscotest permit 10
  match as-path 1
  set local-preference 150
```

Refer to the exhibit. After troubleshooting BGP traffic steering issue, which action did the network operator take to achieve the correct effect of this configuration?

- A. Routes that have passed through AS 65517 have the local preference set to 150.
- B. Routes that have originated through AS 65517 have the local preference set to 150.
- C. Routes directly attached to AS 65517 have the local preference set to 150.
- D. Routes that have passed through AS 65517 have the local preference set to 150 and the traffic is denied.

Answer: A

#### NEW QUESTION 33

Which two routing protocols have extensions capable of running SRv6? (Choose two.)

- A. OSPF
- B. BGP
- C. RIP
- D. IGRP
- E. EIGRP

Answer: AB

#### NEW QUESTION 34

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

segment-routing
  global-block 18000 24999
!

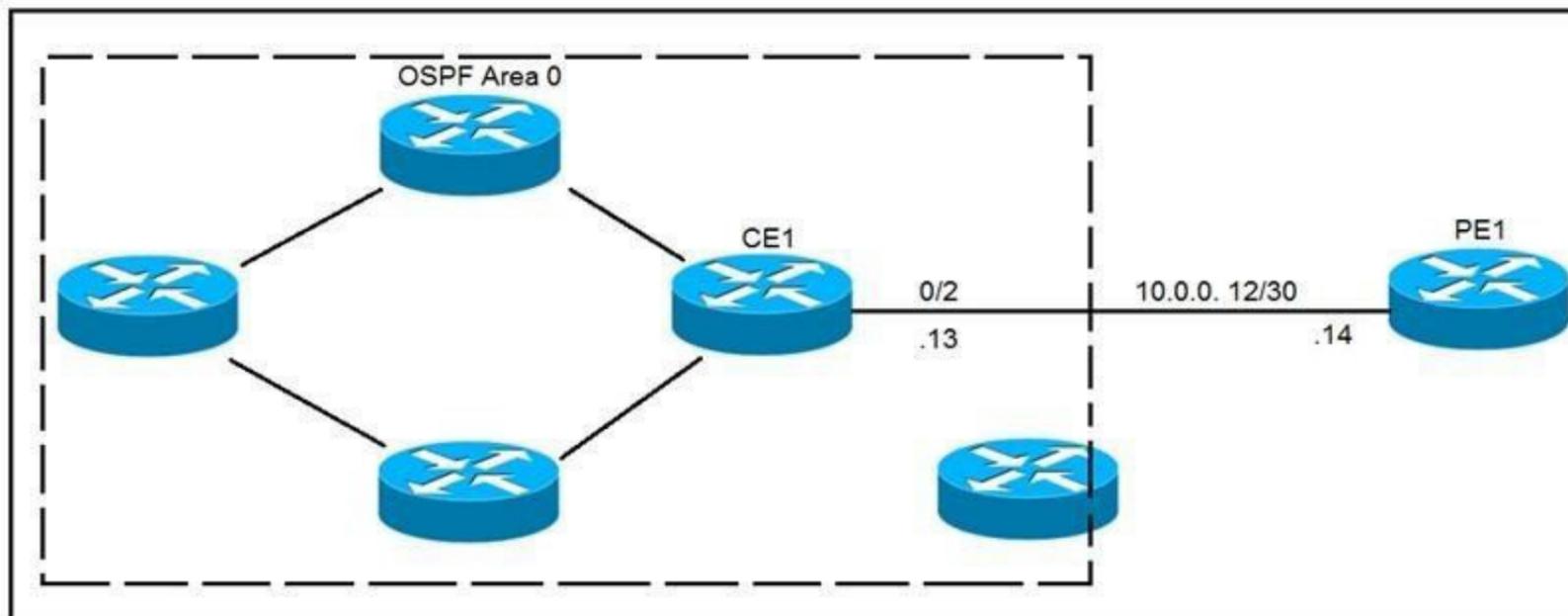
RP/0/0/CPU0:iosxr#
```

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 39



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 40

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 43

Refer to the exhibit. Which attribute can router 1 alter so that only other iBGP peers prefer to use 192.168.4.2 as the next hop for route 192.168.3.0/24?

- A. MED
- B. local preference
- C. origin
- D. weight

Answer: A

NEW QUESTION 47

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