

## Exam Questions 300-510

Implementing Cisco Service Provider Advanced Routing Solutions (SPRI)

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#### NEW QUESTION 1

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 2

```
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 3

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 4

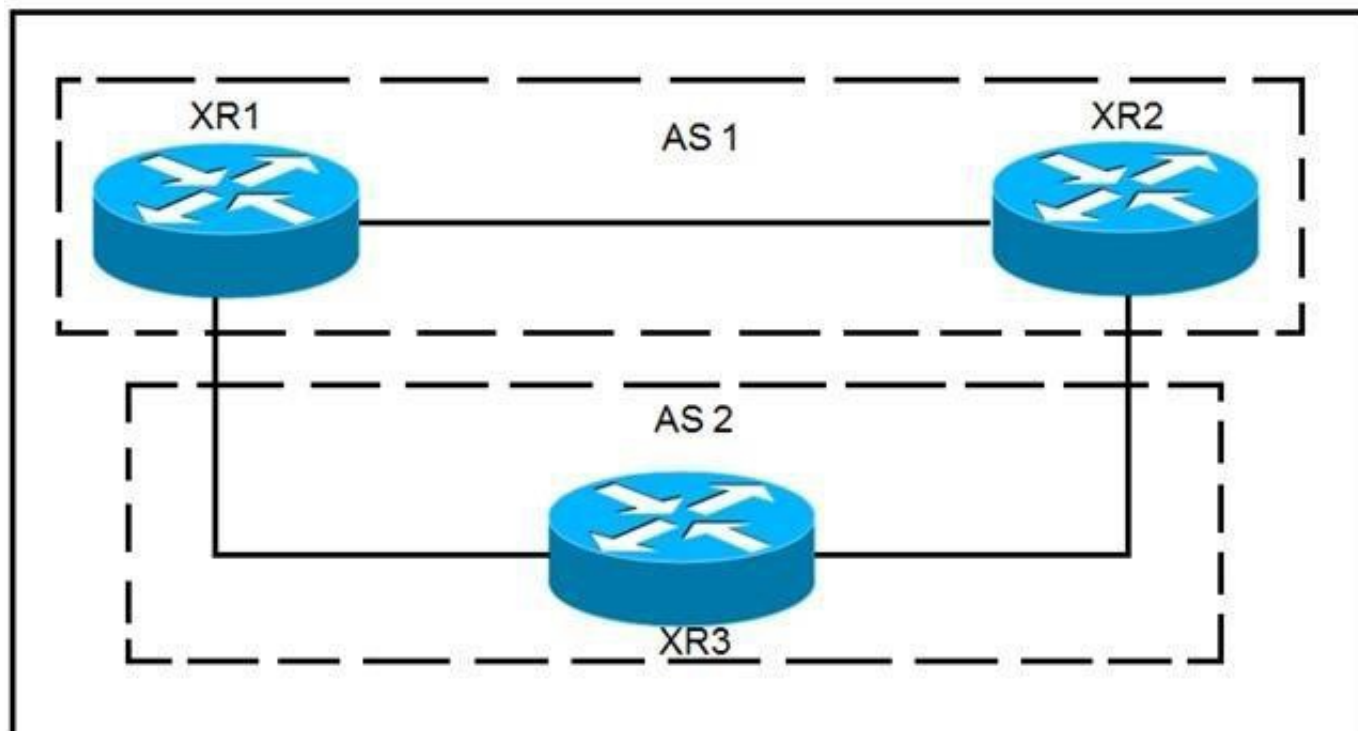
Refer to the exhibit. Which LSA type is indicated by this router output?

```
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 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. 

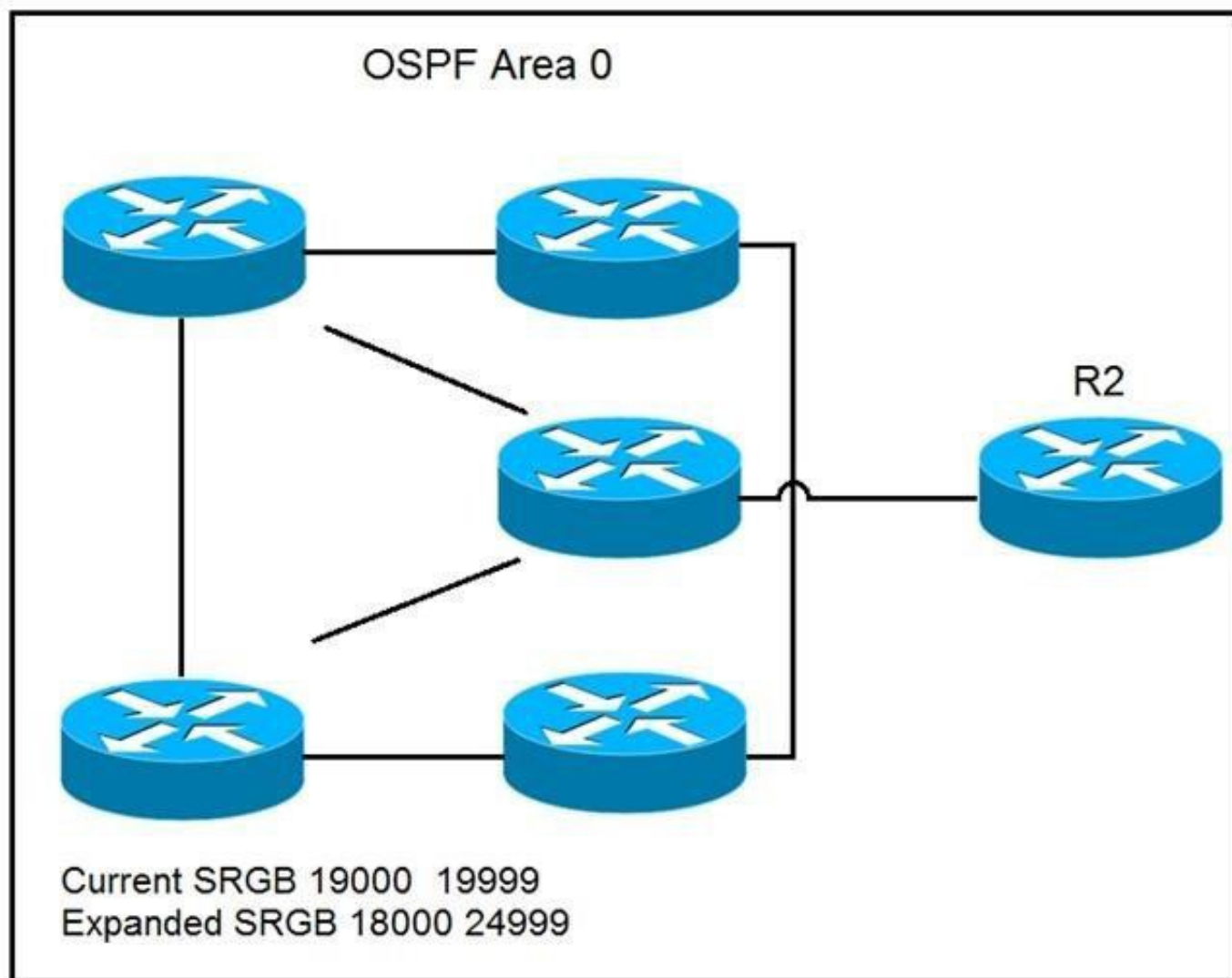
```
route-policy NO_PREPEND
  if as-path prepends
    drop
  else
    pass
  endif
end-policy
```
- C. 

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

```
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. 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

What can be used to determine a path from the head-end to a tail-end router when implementing SR-TE with a head-end, with little information on the network topology?

- A. traffic controller
- B. path computation engine
- C. tail-end router
- D. SNMP server

Answer: B

#### NEW QUESTION 8



```
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 9

```
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

An engineer is troubleshooting a connectivity issue across the MPLS network and is verifying the forwarding behavior of packets. Which table does the engineer look at to verify the forwarding behavior of an IP packet as it enters the MPLS network at the ingress LSR?

- A. LFIB
- B. LIB

- C. RIB
- D. FIB

**Answer:** A

#### NEW QUESTION 10

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

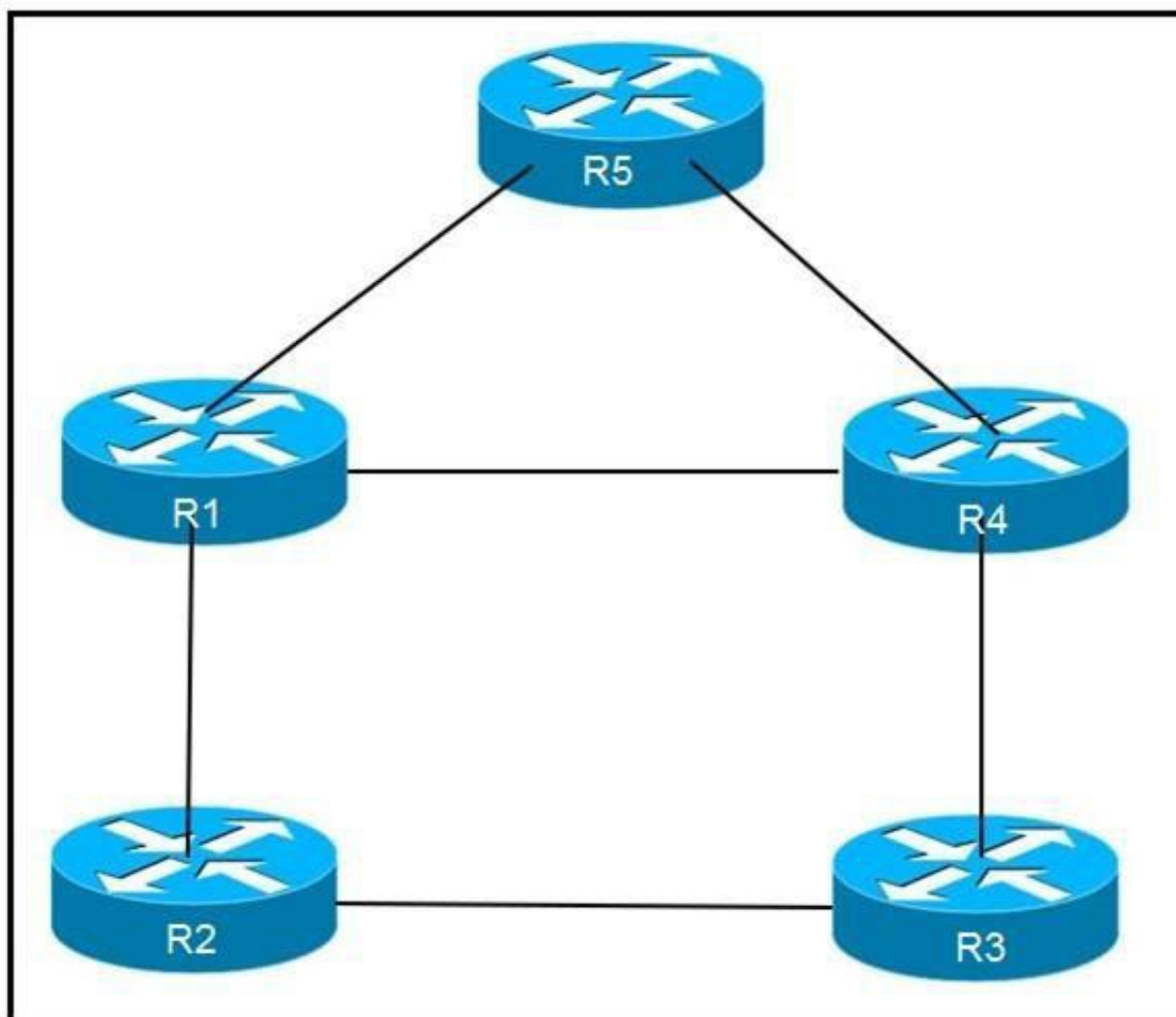
#### NEW QUESTION 15

Which feature is used in multicast routing to prevent loops?

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

**Answer:** C

#### NEW QUESTION 17



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 22

```
"PE#show ip msdp peer
MSDP Peer 10.10.10.10 (?), AS ?
  Connection status:
    State: Listen, Resets: 0, Connection source: none configured
    Uptime (Downtime): 00:00:07, Messages sent/received: 0/0
    Output messages discarded: 0
    Connection and counters cleared 00:00:7 ago
  SA Filtering:
    Input (S, G) filter: none, route-map: none
    Input RP filter: none, route-map: none
    Output (S, G) filter: none, route-map: none
    Output RP filter: none, route-map: none
  SA-Requests:
    Input filter: none
  Peer ttl threshold: 0
  SAs learned from this peer: 0
  Input queue size: 0, Output queue size: 0"
```

Refer to the exhibit. A service provider technician is working on a multicast issue for a customer. While checking the multicast table, the technician notices that no flags are present for the (1.1.1.1, 239.1.1.1) entry, yet flags are present for the (1.1.1.1, 232.1.1.1) entry. Which factor might explain this issue?

- A. Only the administratively scoped range is permitted
- B. Only ASM is permitted
- C. Only the default SSM range is permitted
- D. Only GLOP is permitted

**Answer: C**

#### NEW QUESTION 26

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 29

Which two statements about mapping multicast IP addresses to MAC addresses are true? (Choose two.)

- A. All mapped multicast MAC addresses begin with 0x0100.5E
- B. The router performs the mapping before it hands the packet off to a switch
- C. All multicast MAC addresses end with 0x0100.5E
- D. The mapping process may generate overlapping addresses, which can cause receivers to receive unwanted packets
- E. All destination MAC addresses begin with an octet of binary 1s

**Answer: AD**

#### NEW QUESTION 32

```
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 36

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 40

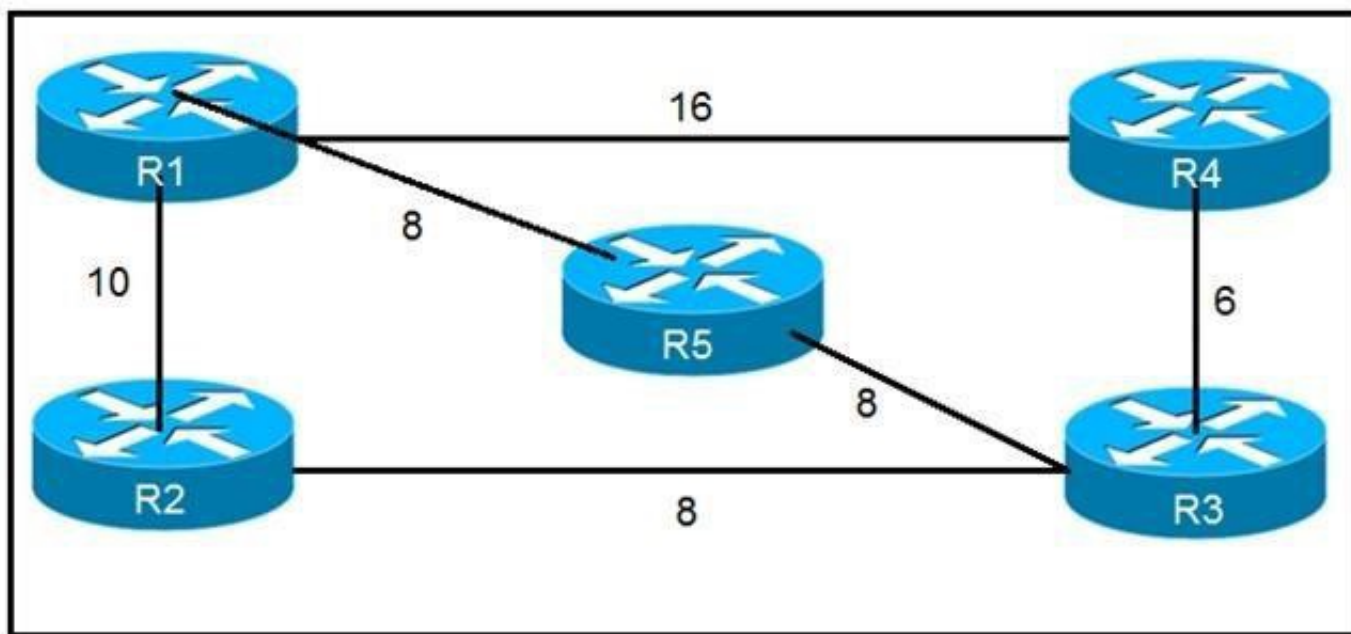
Refer to the exhibit. CE1 and CE2 cannot communicate through the service provider BGP peering is established between PE1 and PE2. IS-IS is the only routing protocol running in the service provider core. What step can be done to troubleshoot the issue?

- A. Switch the IGPs running in the core from IS-IS to OSPF to support a Cisco MPLS TE tunnel from PE1 to PE2.
- B. Configure BGP between CE and PE routers.
- C. Confirm that IS-IS is running with metric-style narrow.
- D. Verify the MPLS LSPs.

Answer: C

#### NEW QUESTION 42





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 43

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 47

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 50

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