

Cisco

Exam Questions 300-510

Implementing Cisco Service Provider Advanced Routing Solutions (SPRI)



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

```
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 4

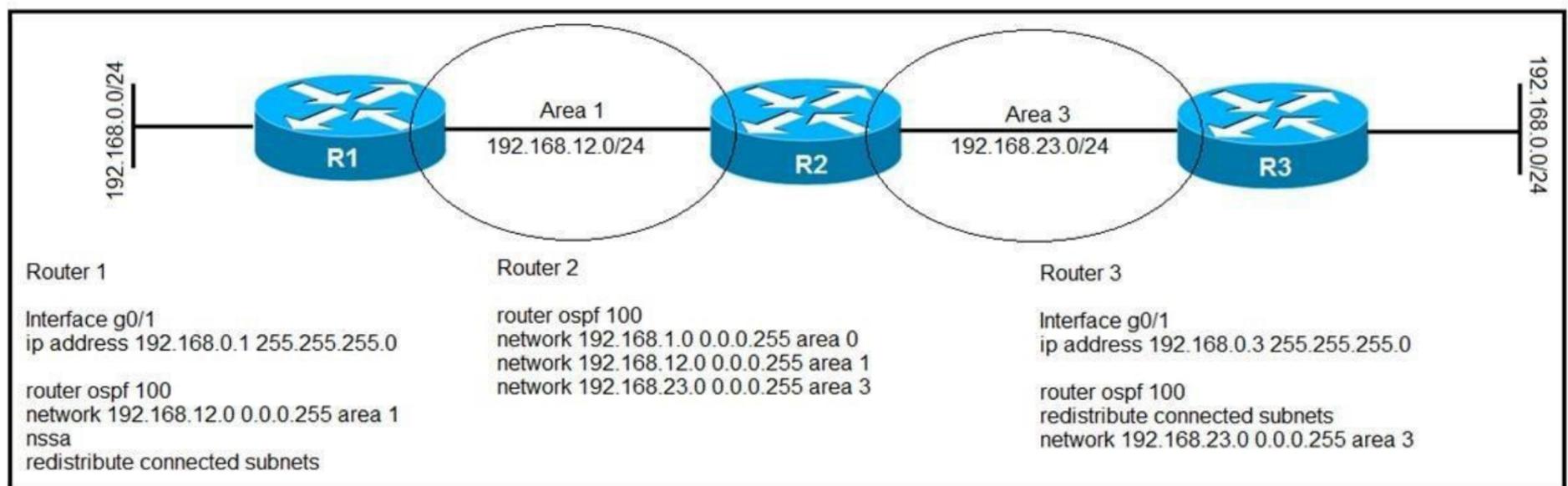
```
RP/0/0/CPU0:XR3#show bgp 10.11.11.0
Thu Jun 20 20:44:15.749 UTC
BGP routing table entry for 10.11.11.0/24
Versions:
  Process      bRIB/RIB    SendTblVer
  Speaker      9           9
Paths: (2 available, best #2)
  Advertised to update-groups (with more than one peer):
    0.1
  Path #1: Received by speaker 0
  Not advertised to any peer
  1
    10.0.0.9 from 10.0.0.9 (192.168.0.1)
      Origin IGP, metric 0, localpref 100, valid, external
      Received Path ID 0, Local Path ID 0, version 0
      Origin-AS validity: not-found
  Path #2: Received by speaker 0
  Advertised to update-groups (with more than one peer):
    0.1
  1
    10.0.0.13 from 10.0.0.13 (192.168.0.2)
      Origin IGP, metric 0, localpref 100, weight 651, valid, external, best, group-best
      Received Path ID 0, Local Path ID 0, version 9
```

Refer to the exhibit. A network operator is getting the route for 10.11.11 0/24 from two upstream providers on #XR3. The network operator must configure #XR3 to force the 10.11.11.0/24 prefix to route via next hop of 10.0.0.9 as primary when available. Which of these can the operator use the routing policy language for, to enforce this traffic forwarding path?

- A. weight of 0 on the prefix coming from 192.168.0.2
- B. lower local preference on the prefix coming from 192.168.0.2
- C. higher local preference on the prefix coming from 192.168.0.1
- D. weight of 100 on the prefix coming from 192.168.0.1

Answer: C

NEW QUESTION 5



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 6

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 7

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 8

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 9

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

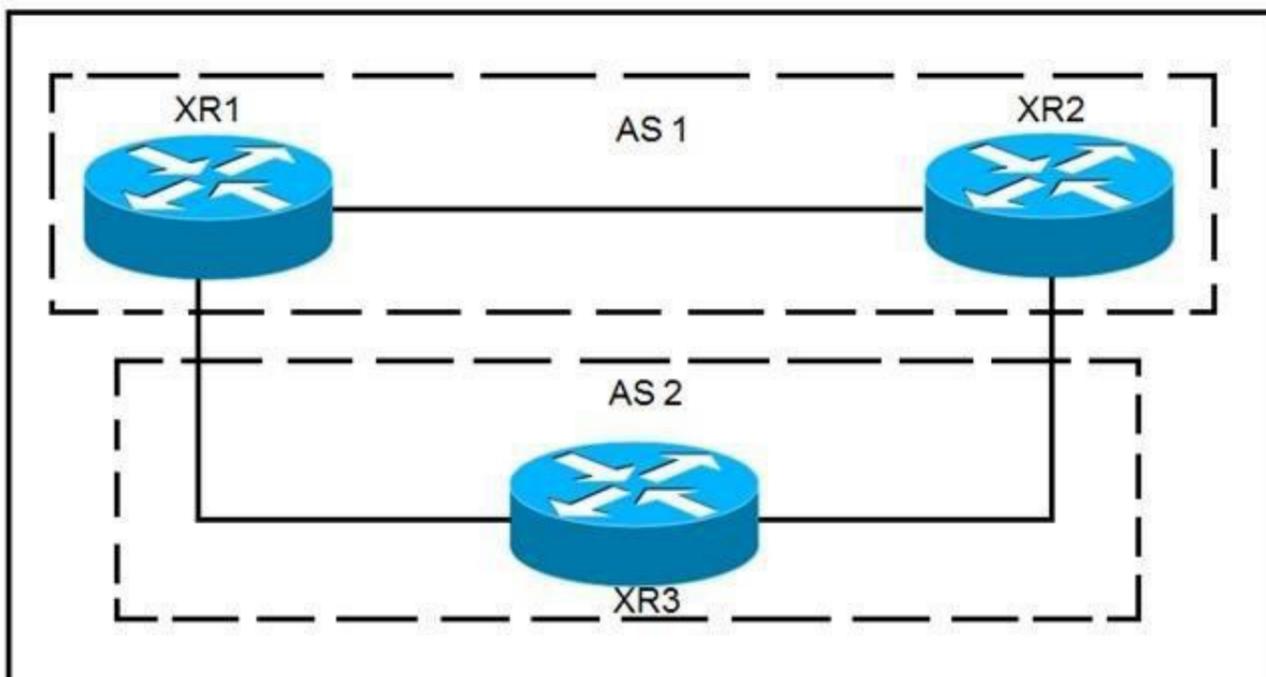
NEW QUESTION 10

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 10



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 15

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 18

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 20

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 23

For which reason do you deploy BGP confederations within a BGP transit backbone?

- A. to support a larger number of eBGP peer sessions
- B. to increase the number of routes that can be redistributed between the running IGP and BGP
- C. to reduce the number of eBGP routes that must be shared between autonomous systems
- D. to reduce the number of iBGP peering sessions

Answer: D

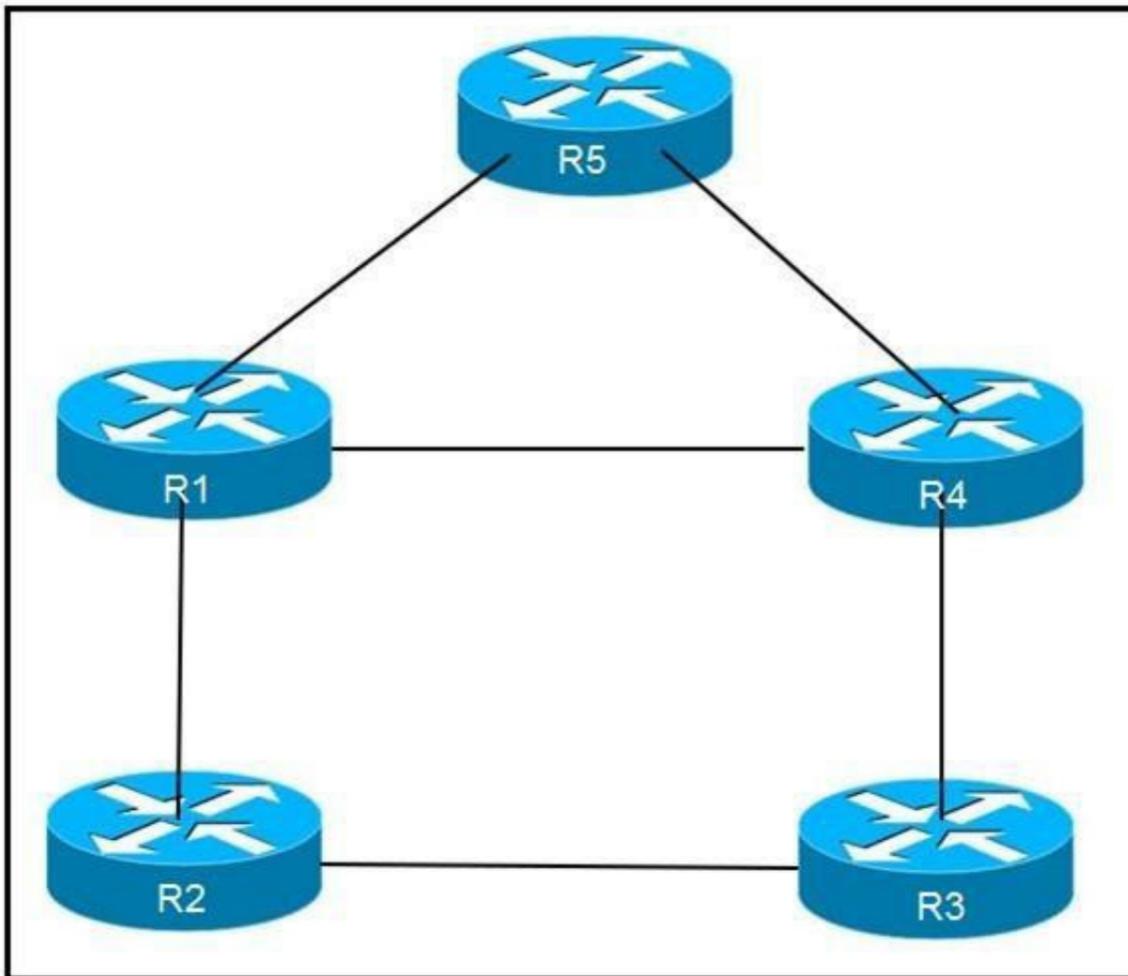
NEW QUESTION 27

Which feature is used in multicast routing to prevent loops?

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

Answer: C

NEW QUESTION 28



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 32

```
"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 35

Which two statements about route reflectors are true? (Choose two.)

- A. Routes received from nonclient peers are reflected to route reflector clients as well as nonclient peers.
- B. Routes received from nonclient peers are reflected to route reflector cluster as well as OSPF peers.
- C. If a router received an iBGP route with the originator-ID attribute set to its own router ID, the route is discarded.
- D. Routes received from a route reflector client is reflected to other clients and nonclient peers.
- E. If a route reflector receives a route with a cluster-list attribute containing a different cluster ID, the route is discarded.

Answer: CD

NEW QUESTION 38

You have configured routing policies on a Cisco IOS XR device with routing policy language. Which two statements about the routing policies are true? (Choose two.)

- A. The routing policies affect BGP-related routes only.
- B. If you make edits to an existing routing policy without pasting the full policy into the CLI, the previous policy is overwritten.
- C. You can change an existing routing policy by editing individual statements.
- D. The routing policies are implemented in a sequential manner.
- E. The routing policies are implemented using route maps.

Answer: CD

NEW QUESTION 39

```
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 42

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

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

Answer: B

NEW QUESTION 43

```
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

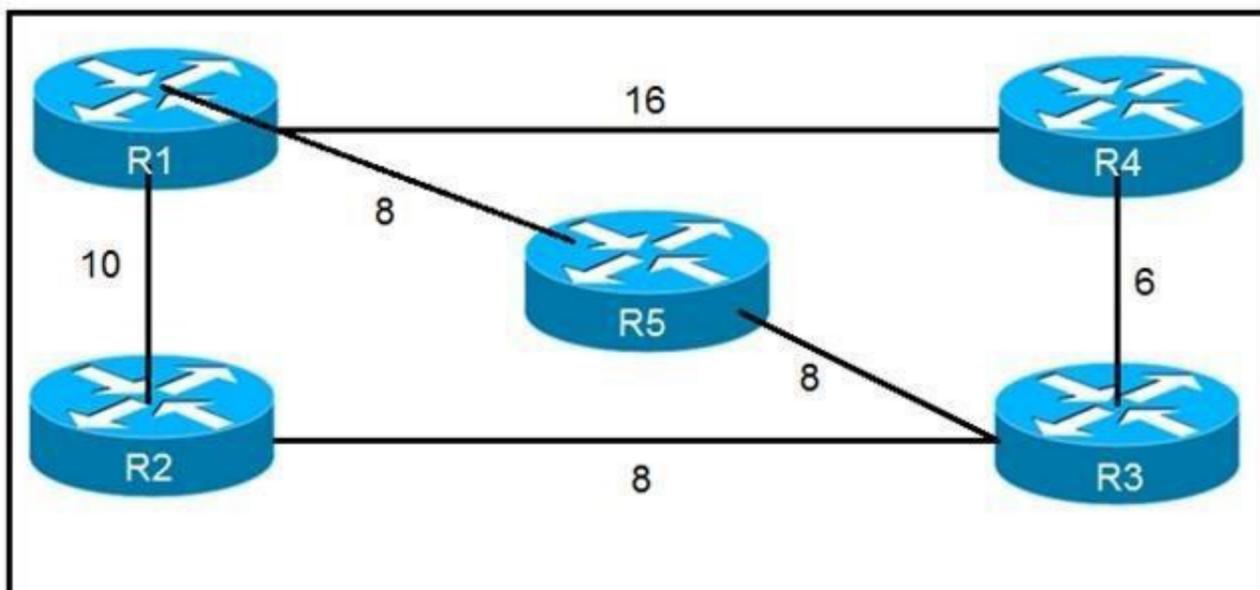
NEW QUESTION 44

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 IGP's 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 48



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 49

Refer to the exhibit. Routers R1 and R2 cannot form a neighbor relationship, but the network is otherwise configured correctly and operating normally. Which two statements describe the problem? (Choose two.)

- A. The two routers are in the same area
- B. The two routers are in different subnets
- C. The two routers have password mismatch issues
- D. The two routers have the same network ID
- E. The two routers are in different areas

Answer: BE

NEW QUESTION 50

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 53

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 56

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

segment-routing
  global-block 18000 24999
!

RP/0/0/CPUO: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 59

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 62

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