

# Cisco

## Exam Questions 300-510

Implementing Cisco Service Provider Advanced Routing Solutions (SPRI)



#### 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

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 3

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 4

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 5

```
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 6

```
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 7

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 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

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 12

```
"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 13

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

```
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 19

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 22

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 27

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 28

```
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 31

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**

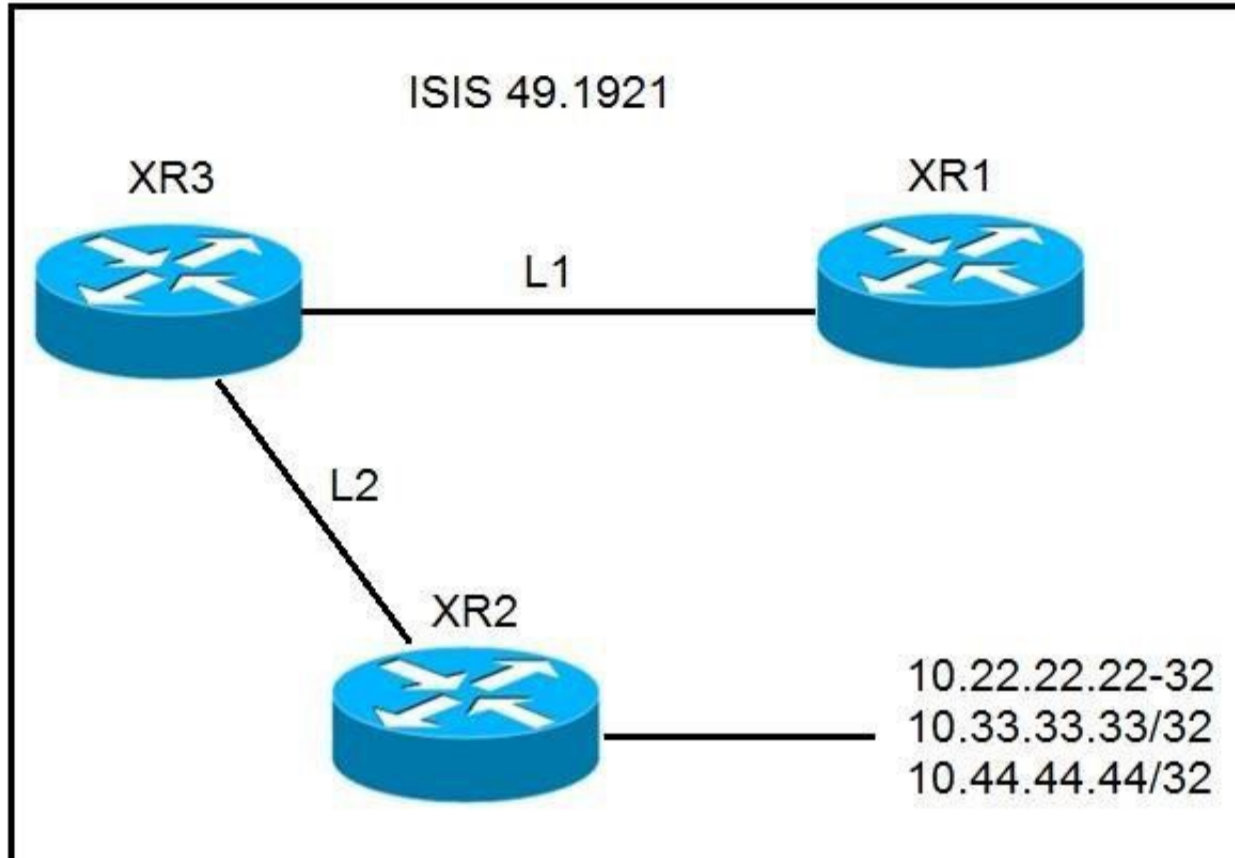
**NEW QUESTION 36**

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 40**



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 43

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