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
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 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

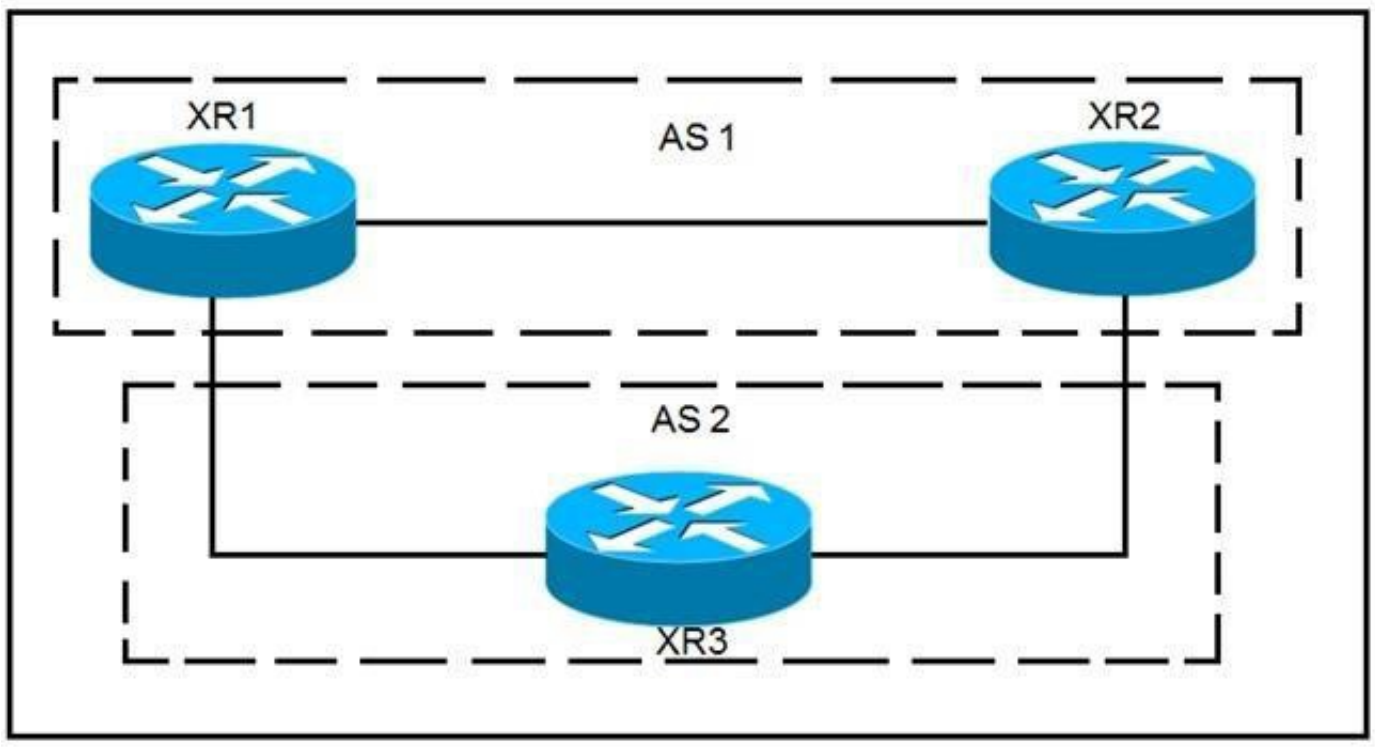
NEW QUESTION 5
Which task is performed when troubleshooting LDP?

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 6



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 7
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 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
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

```
"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 15
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 16

```
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 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 20
Which command is used to enable BIDIR-PIM under global configuration mode for Cisco IOS XE Sofware?

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

Answer: A

NEW QUESTION 24
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 25
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 27
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 31
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 33
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.

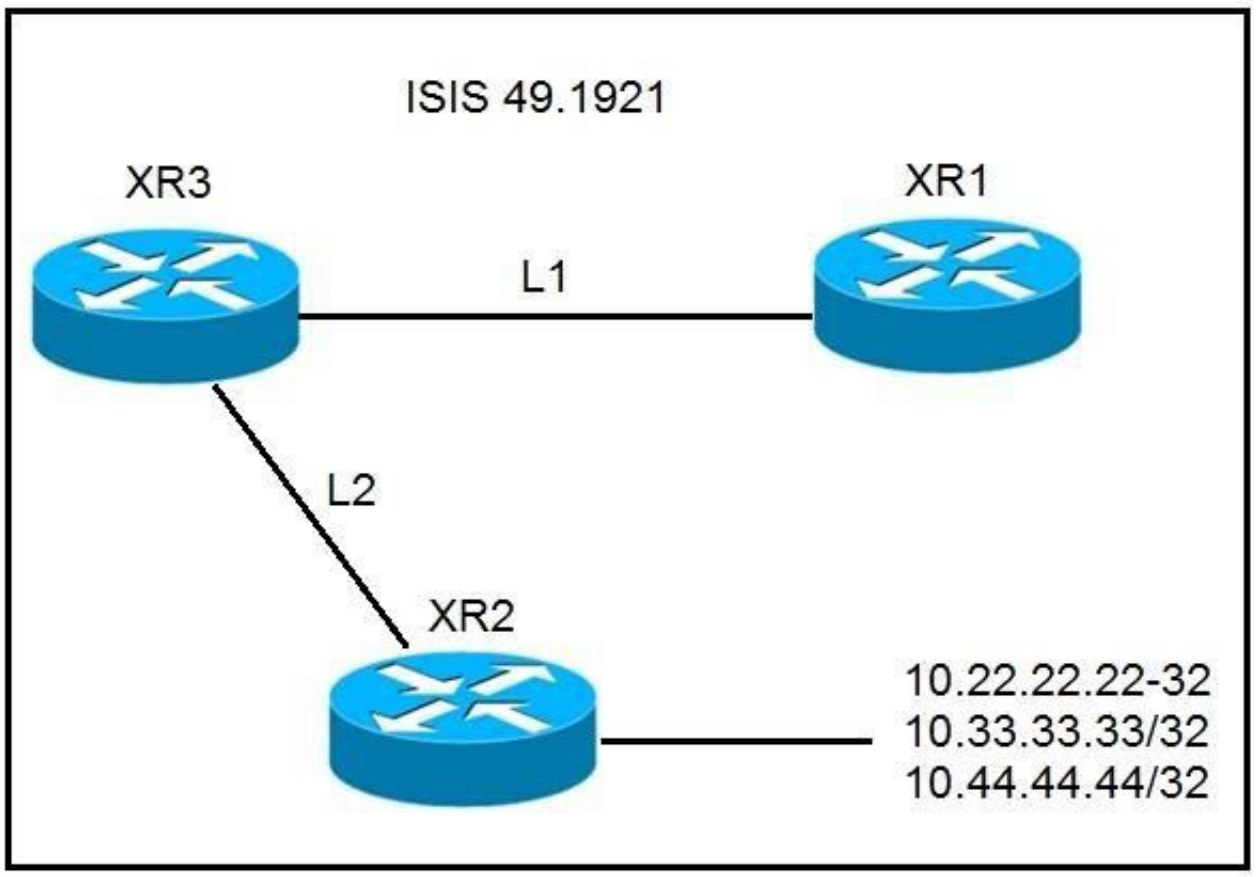
Answer: D

NEW QUESTION 36
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 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 41
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