

➤ **Vendor: Cisco**

➤ **Exam Code: 300-510**

➤ **Exam Name: Implementing Cisco Service Provider Advanced Routing Solutions (SPRI)**

➤ **New Updated Questions from [Braindump2go](#) (Updated in [May/2021](#))**

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**QUESTION 42**

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**

**Explanation:**

[https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/seg\\_routing/configuration/xr-16-6/segxr-16-6-book/sr-ospfv2-node-sid.html](https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/seg_routing/configuration/xr-16-6/segxr-16-6-book/sr-ospfv2-node-sid.html)

**QUESTION 43**

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**

**QUESTION 44**

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**

**QUESTION 45**

You have configured MSDP peering between two autonomous systems that pass traffic between two sites, but the

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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**

**QUESTION 46**

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

```
R2#sh ip ospf neighbor
```

Neighbor	ID	Pri	State	Dead Time	Address	Interface
10.1.3.3	1	FULL/BDR	00:00:37	10.1.234.3	Ethernet0/0.234	
10.1.4.4	1	FULL/DR	00:00:35	10.1.234.4	Ethernet0/0.234	
10.1.5.5	1	2WAY/DROTHER	00:00:35	10.1.234.5	Ethernet0/0.234	

- 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**

**Explanation:**

<https://www.cisco.com/c/en/us/support/docs/ip/open-shortest-path-first-ospf/13683-11.html>

**QUESTION 47**

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?

```
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#
```

- 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

**QUESTION 48**

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?

```

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    SendTb/Ver
  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
  
```

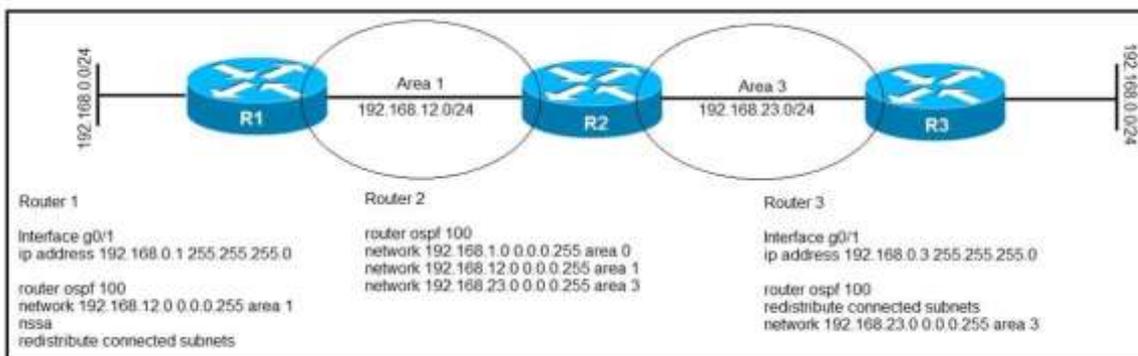
- A. weight of 0 on the prefix coming from 192.168.0.2
- B. lower local preference on the prefix coming from 192.168.0.2
- C. higher local preference on the prefix coming from 192.168.0.1
- D. weight of 100 on the prefix coming from 192.168.0.1

**Answer: C**

**QUESTION 49**

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**

**QUESTION 50**

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

**Explanation:**

[https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/iproute\\_isis/configuration/xr-3s/irs-xr-3s-book/irs-instance-vrf.html](https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/iproute_isis/configuration/xr-3s/irs-xr-3s-book/irs-instance-vrf.html)

**QUESTION 51**

What is used by SR-TE to steer traffic through the network?

- A. shortest path calculated by IGP
- B. dynamic rules
- C. path policy
- D. explicit maps

**Answer:** C

**Explanation:**

[https://www.cisco.com/c/en/us/td/docs/routers/asr9000/software/segment-routing/configuration/guide/b-seg-routing-cg-asr9k/b-seg-routing-cg-asr9k\\_chapter\\_0100.html](https://www.cisco.com/c/en/us/td/docs/routers/asr9000/software/segment-routing/configuration/guide/b-seg-routing-cg-asr9k/b-seg-routing-cg-asr9k_chapter_0100.html)

**QUESTION 52**

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

**QUESTION 53**

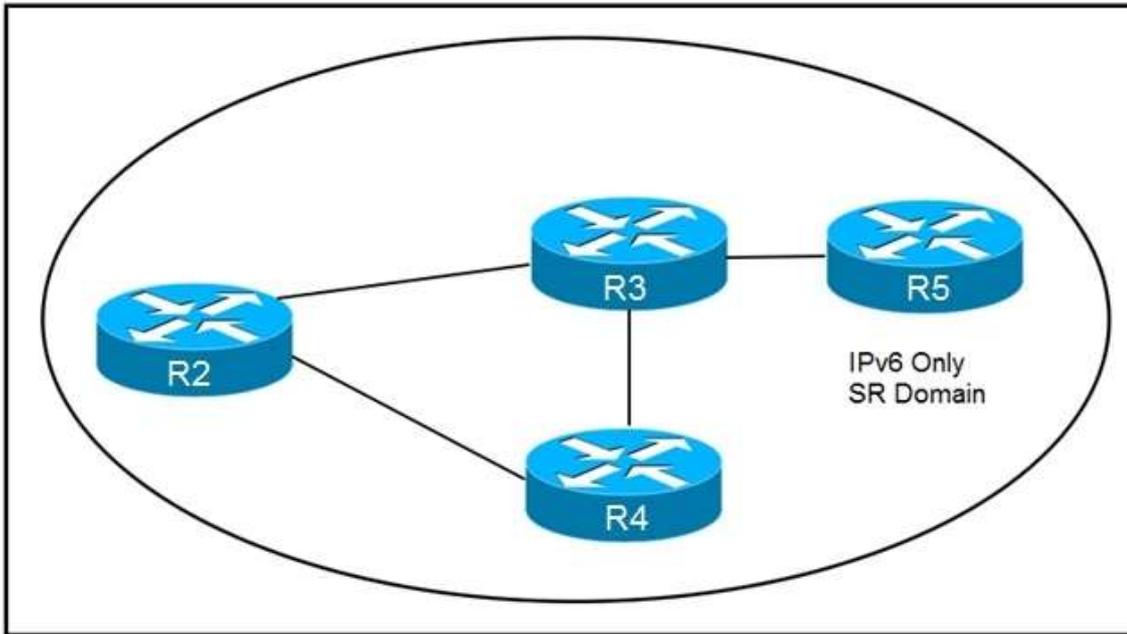
Which feature is used in multicast routing to prevent loops?

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

**Answer:** C

**QUESTION 54**

Refer to the exhibit. How are packets directed through the data plane when SRv6 is implemented?



- A. An ordered list of segments is encoded in a routing extension header
- B. The MPLS data plane is used to push labels onto IGP routes
- C. A stack of labels represents an ordered list of segments
- D. The packet is encapsulated with a header and trailer encoding the ordered list of segments

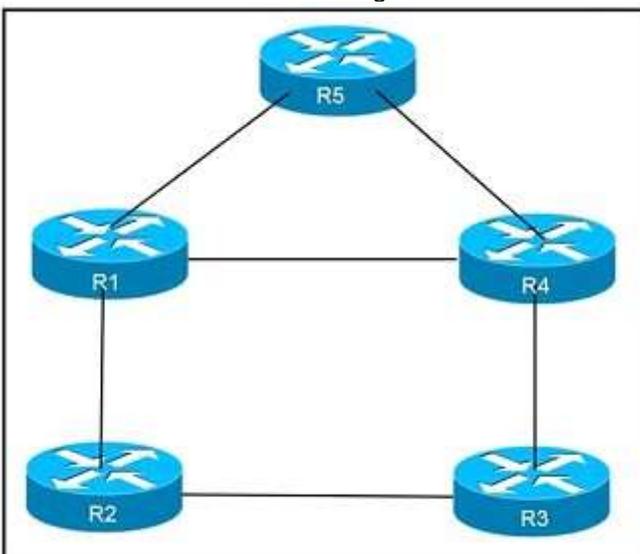
**Answer: A**

**Explanation:**

<https://www.ciscolive.com/c/dam/r/ciscolive/emea/docs/2019/pdf/BRKIPM-2249.pdf>

**QUESTION 55**

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**

**QUESTION 56**

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?

```
"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"
```

- 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**

**QUESTION 57**

Refer to the exhibit. P1 and PE3 Cisco IOS XR routers are directly connected and have this configuration applied. The BGP session is not coming up. Assume that there is no IP reachability problem and both routers can open tcp port 179 to each other. Which action fixes the issue?

<pre>RP/0/0/CPU/0:P1# ! key chain BGP key 1 key-string password cisco123 cryptographic-algorithm HMAC-MD5 ! router bgp 1 address-family ipv4 unicast ! neighbor 192.168.13.3 remote-as 1 keychain BGP address-family ipv4 unicast</pre>	<pre>RP/0/0/CPU/0:PE3# ! key chain BGP key 1 key-string password cisco123 cryptographic-algorithm HMAC-MD5 ! router bgp 1 address-family ipv4 unicast ! neighbor 192.168.13.1 remote-as 1 keychain BGP address-family ipv4 unicast</pre>
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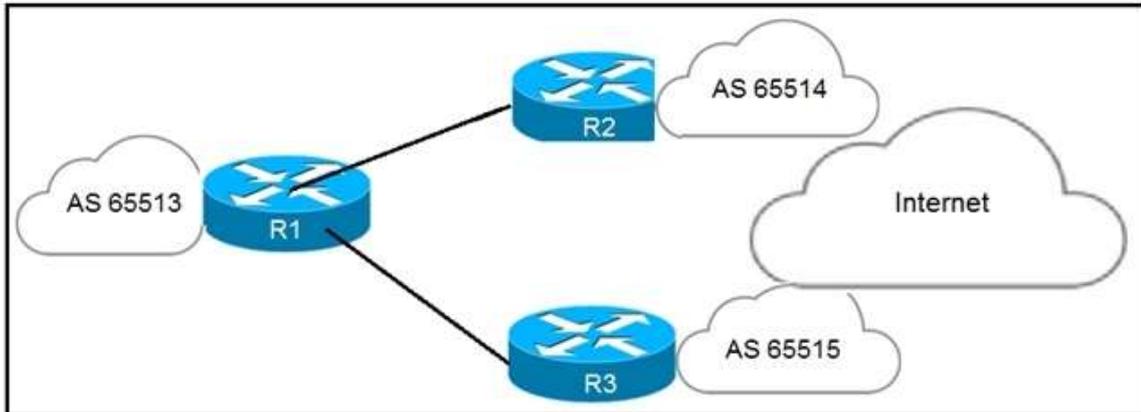
- A. Change HMAC-MD5 to HMAC-SHA1-20
- B. Configure the send and accept lifetime under key 1
- C. Change HMAC-MD5 to MD5
- D. Change HMAC-MD5 to HMAC-SHA1-12

**Answer: B**

**QUESTION 58**

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**

**QUESTION 59**

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?

```
Router1# show ip bgp

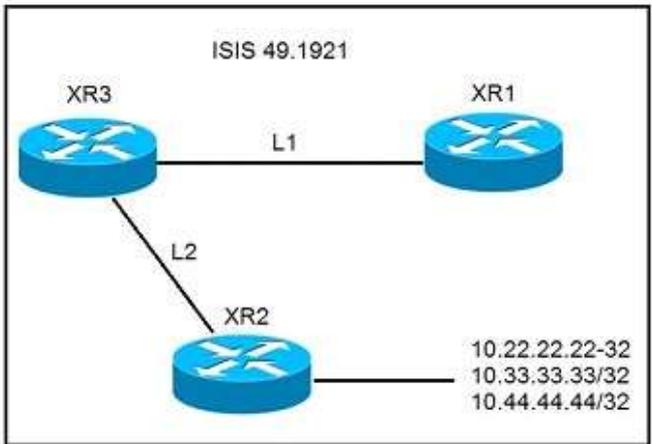
BGP table version is 4, local router ID is 192.168.1.1
Status codes: s suppressed, d damped, h history, * valid, > best, i - internal,
               r RIB-failure, S Stale
Origin codes: i - IGP, e - EGP, ? - incomplete
   Network        Next Hop        Metric LocPrf  Weight    Path
*> 192.168.10.0/24 192.168.1.2      0         0         0        65525 i
*> 192.168.3.0/24 192.168.2.2      0         0         0        65535 i
* 192.168.3.0/24 192.168.4.2      0         0         0        65545 i
*> 192.168.20.0/24 0.0.0.0          0        32768        0        i
```

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

**Answer:** A

**QUESTION 60**

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

- A. Option A
- B. Option B
- C. Option C
- D. Option D

**Answer: C**

**QUESTION 61**

You noticed a recent change to the BGP configuration on a PE router, the bgp scan time has been changed from the default value to 30s.

Which three effects will this change have? (Choose three.)

- A. The BGP table will be examined and verified more frequently
- B. The BGP keepalive messages will be sent to the BGP peers at a faster rate
- C. The BGP table will be modified more quickly in the event that a next-hop address becomes unreachable
- D. The CPU load of the router will increase
- E. The minimum time interval between sending EBGP and IBGP routing updates will decrease

F. The BGP convergence time will increase

**Answer:** ACD

**QUESTION 62**

A CRS router that runs Cisco IOS XR has dual routing processors installed.

Which solution should be implemented to prevent OSPF adjacency flapping if the primary routing processor fails?

- A. NSR
- B. OSPF Fast Timers
- C. OSPF RE Sync
- D. router msdp
- E. NSF

**Answer:** A