300-510 Q&As

Implementing Cisco Service Provider Advanced Routing Solutions (SPRI)

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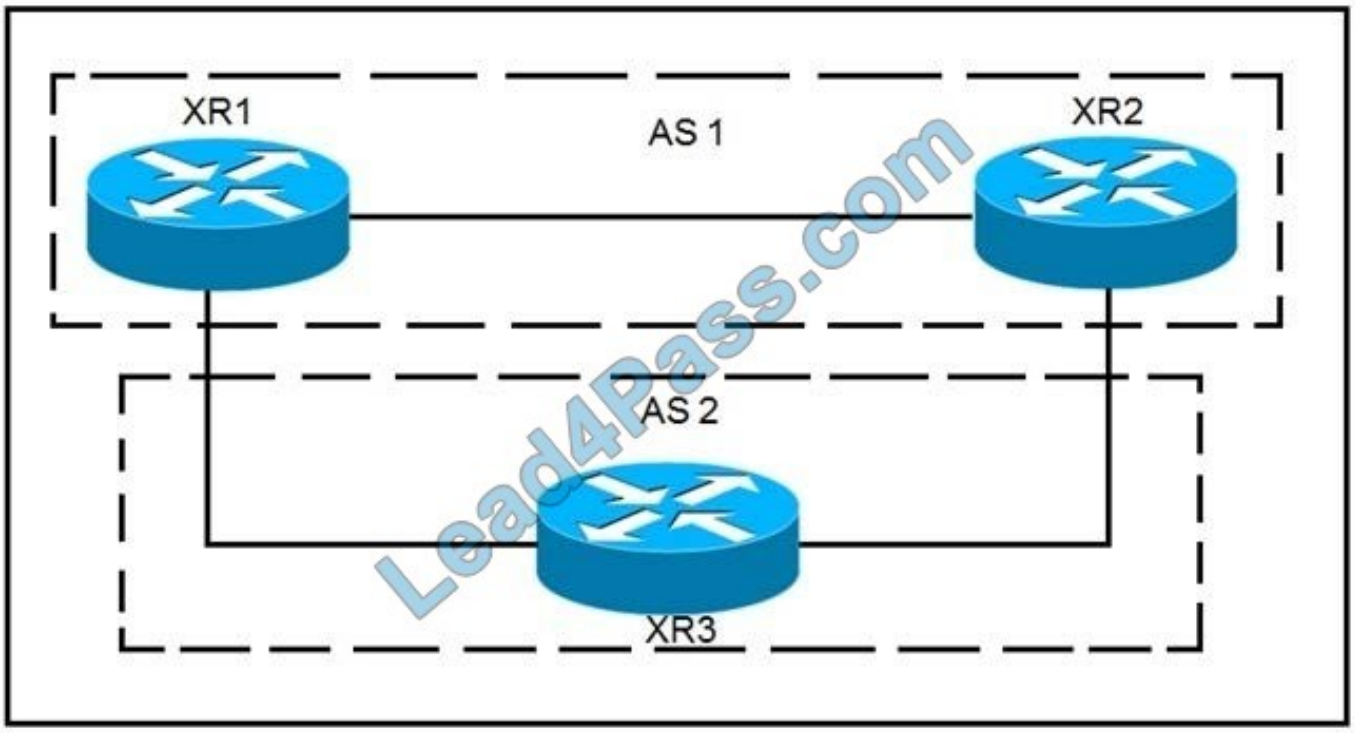
QUESTION 1



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
```

D.
```
route-policy NO_PREPEND
 if as-path passes-through '11' then
  drop
 else
  pass
 endif
end-policy
```


A. Option A

B. Option B

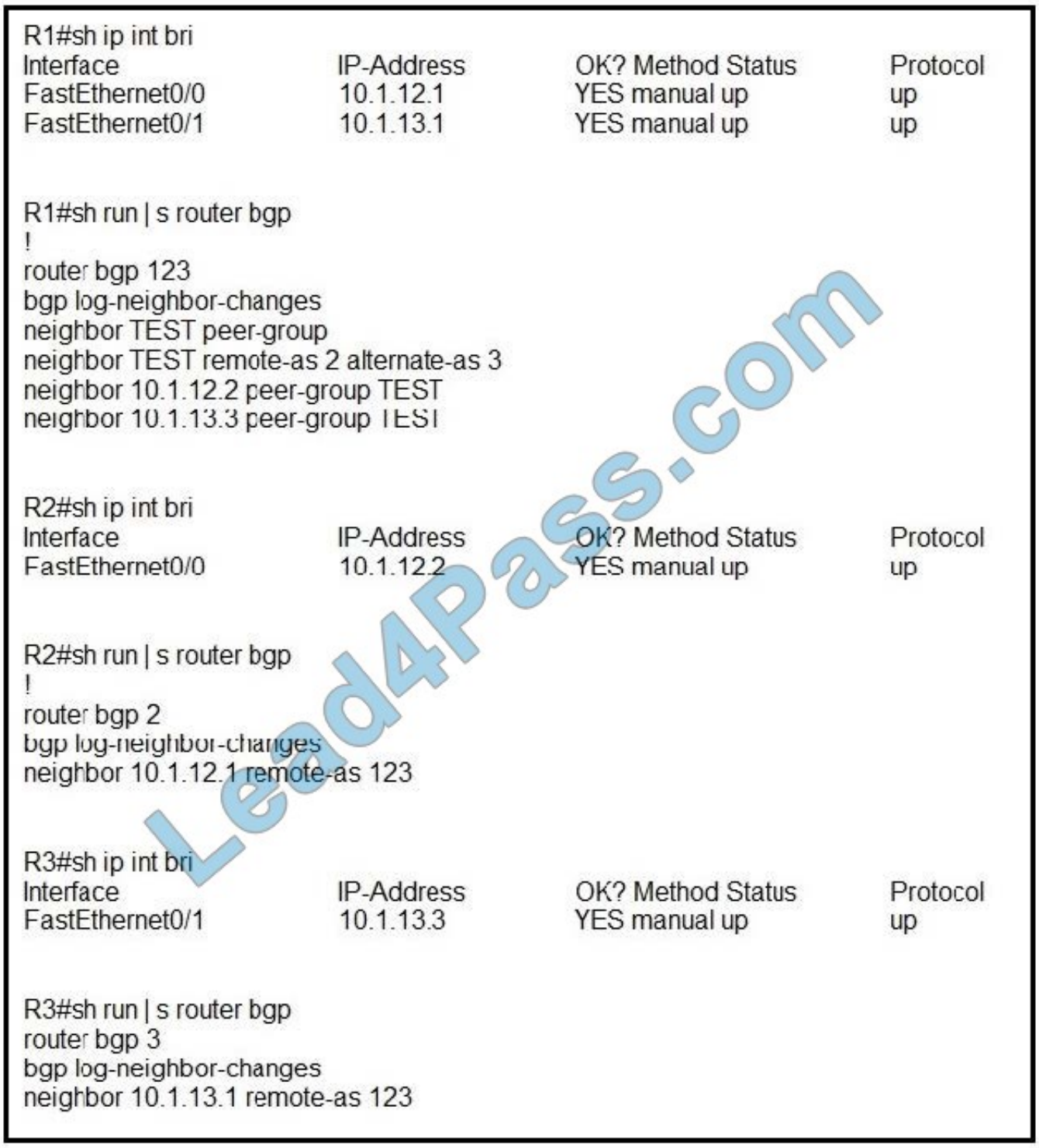
C. Option C

D. Option D

Correct Answer: D

Reference: https://www.cisco.com/c/en/us/td/docs/routers/crs/software/crs_r4-1/routing/command/reference/b_routing_cr41crs/b_routing_cr41crs_chapter_01000.html#wp3850885229

QUESTION 2



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.

Correct Answer: B

QUESTION 3

```
RP/0/0/CPU/0:P1#
!
key chain BGP
key 1
accept-lifetime 13:14:06 february 14 1993 infinitive
send-lifetime 13:14:06 february 14 1993 infinitive
key-string password cisco123
cryptographic-algorithm MD5
!
!
router bgp 1
address-family ipv4 unicast
!
neighbor 192.168.13.3
   remote-as 1
   keychain BGP
   address-family ipv4 unicast


RP/0/0/CPU/0:PE3#
!
key chain BGP
key 1
accept-lifetime 13:14:06 february 14 1993 infinitive
send-lifetime 13:14:06 february 14 1993 infinitive
key-string password cisco123
cryptographic-algorithm MD5
!
!
router bgp 1
address-family ipv4 unicast
!
neighbor 192.168.13.1
   remote-as 1
   keychain BGP
   address-family ipv4 unicast
```


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 two actions fix the issue? (Choose two.)

A. Change MD5 to HMAC-SHA1-12

B. Change MD5 to HMAC-ESP

C. Change MD5 to SHA-1

D. Change MD5 to HMAC-MD5

E. Remove the send and accept lifetime under key 1

Correct Answer: AD

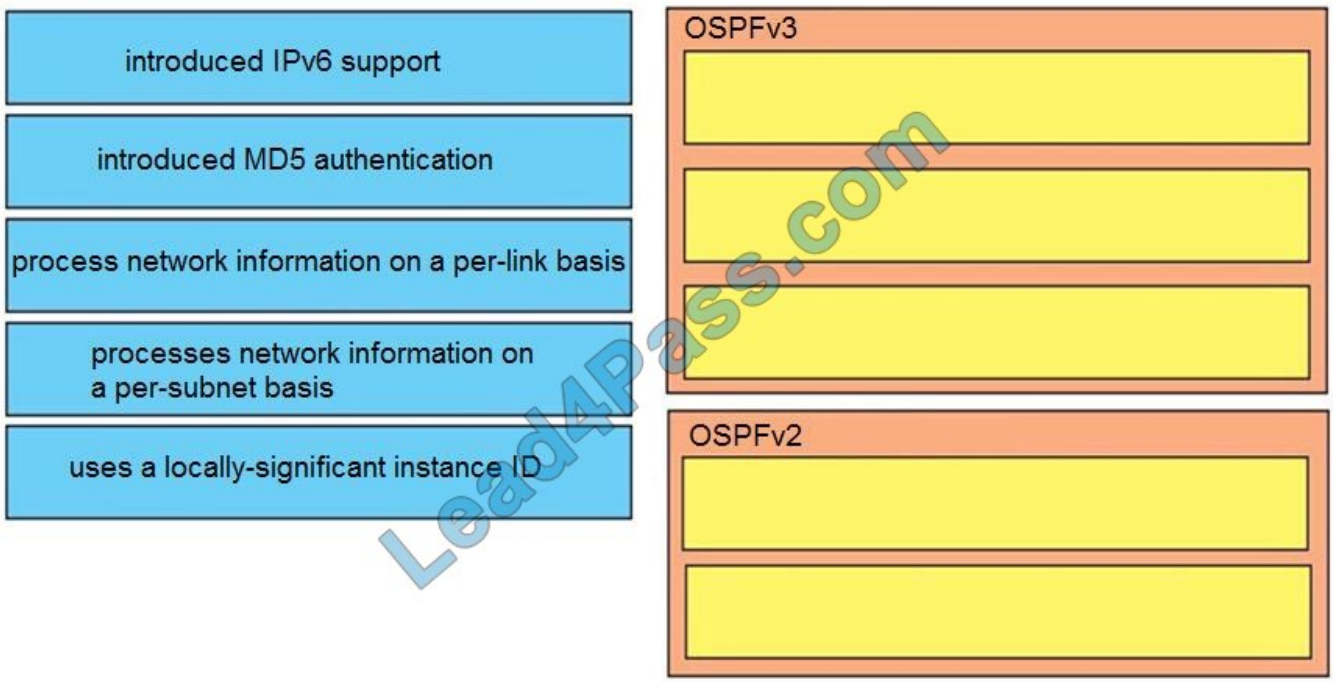
Reference: https://www.cisco.com/c/en/us/td/docs/routers/crs/software/crs_r4-0/security/configuration/guide/sc40crsbook_chapter5.html

QUESTION 4

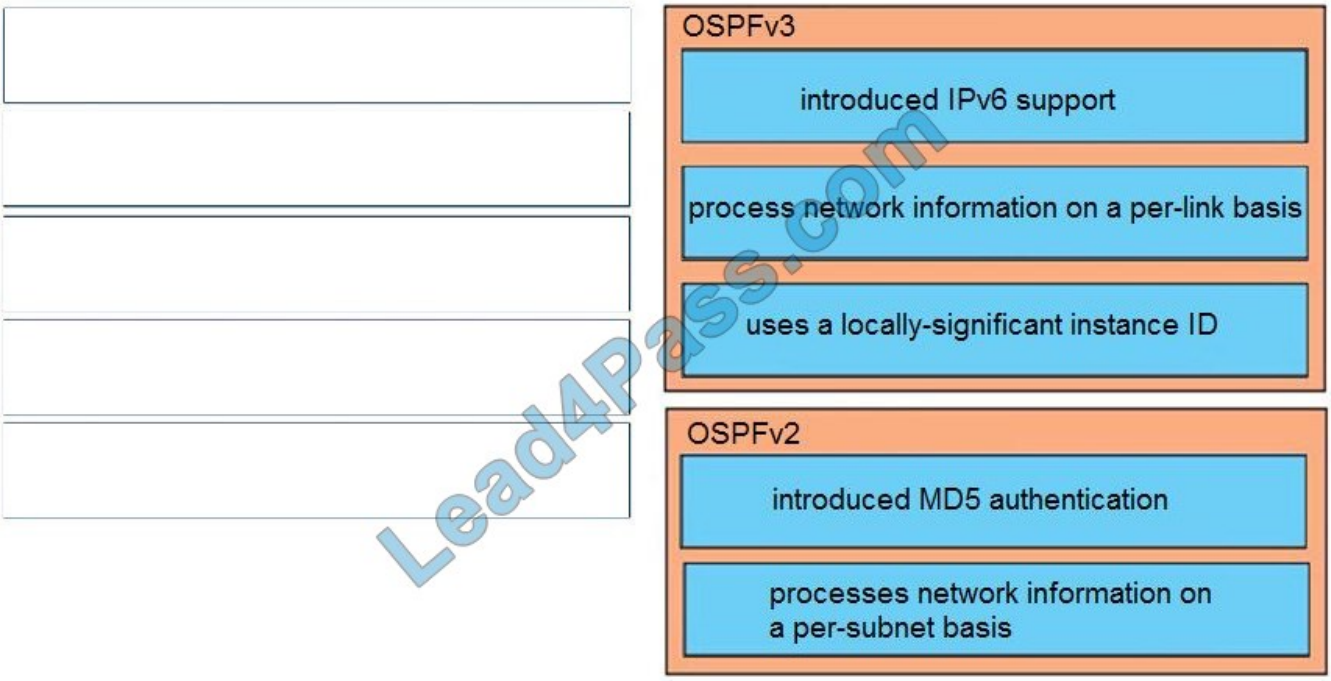
DRAG DROP

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:



Correct Answer:



QUESTION 5

Refer to the exhibit.

```
interface loopback 0
 ipv4 address 10.0.0.1/24
 no shutdown
!
interface loopback 1
 ipv4 address 10.2.0.1/24
 no shutdown
!
ipv4 access-list acl1
 10 permit 224.11.11.11 0.0.0.0 any
!
ipv4 access-list acl2
 10 permit 224.99.99.99 0.0.0.0 any
!
multicast-routing
 interface all enable
!
router pim
 auto-rp mapping-agent loopback 0 scope 15 interval 60
 auto-rp candidate-rp loopback 0 scope 15 group-list acl1 interval 60 bidir
 auto-rp candidate-rp loopback 1 scope 15 group-list acl2 interval 60
!
end
```


Which three statements are correct regarding the Cisco IOS-XR configuration? (Choose three.)

A. This router, acting as the RP mapping agent, will send RP announcement messages to the 224.0.1.40 group

B. This router, acting as the RP mapping agent, will send RP discovery messages to the 224.0.1.39 group

C. This router is the RP mapping agent only for the 224.11.11.11 and 224.99.99.99 multicast groups

D. This router is a candidate PIM-SM RP for the 224.99.99.99 multicast group

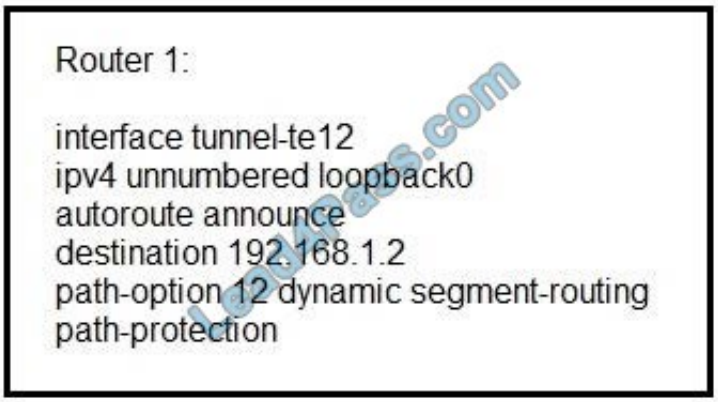
E. This router is a candidate PIM-BIDIR RP for the 224.11.11.11 multicast group

F. IGMPv3 is enabled on all interfaces

G. Other routers will recognize this router as the RP for all multicast groups with this router loopback 0 IP address

Correct Answer: DEF

QUESTION 6



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.

Correct Answer: C

QUESTION 7

After an engineer configures BGP in R1, it starts receiving this message Jun 29 13:30:50.122: %BGP-5-ADJCHANGE: neighbor 192.168.10.1 Down User reset Jun 29 13:30:52.341: %BGP-3-NOTIFICATION: sent to neighbor 192.168.10.1 2/6 (unacceptable hold time) 0 bytes Which action makes the peering come back up again?

A. Make a soft reset to the peer.

B. Set up a minimum hold-down timer higher.

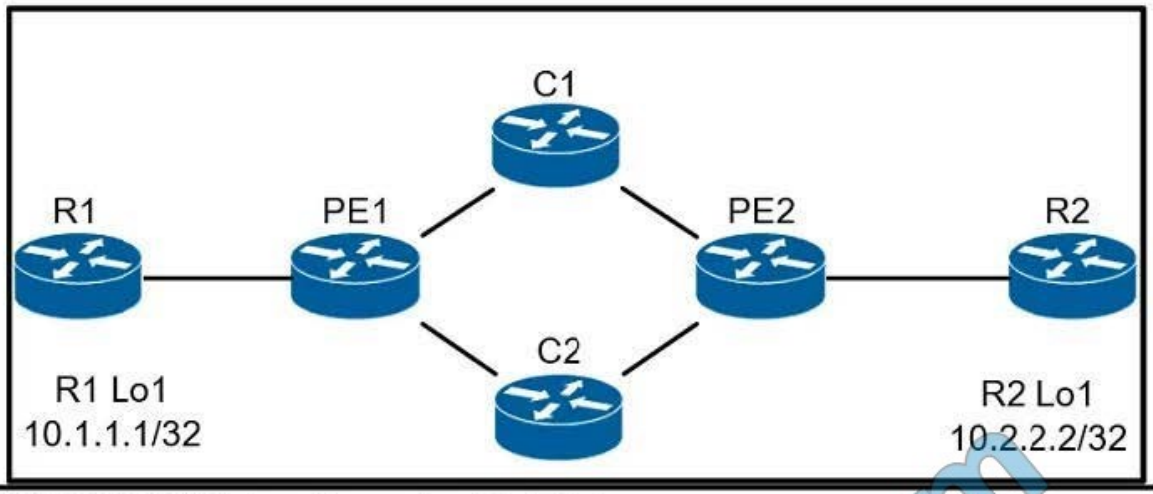
C. Set up a hello timer higher.

D. Set up a hold-down timer higher.

Correct Answer: B

QUESTION 8

Refer to the exhibits.




```
RP/0/0/CPU0:PE1#show ip route 10.2.2.2
Fri Jun 28 01:03:49.698 UTC

Routing entry for 10.2.2.2/32
  Known via "bgp 1", distance 200, metric 0, type internal
  Installed Jun 27 23:27:12.395 for 01:36:37
  Routing Descriptor Blocks
    10.0.0.33, from 192.168.0.7
      Route metric is 0
  No advertising protos.
RP/0/0/CPU0:PE1#
```

```
RP/0/0/CPU0:PE1#show mpls forwarding
Fri Jun 28 01:04:44.885 UTC
Local  Outgoing    Prefix           Outgoing     Next Hop        Bytes
Label  Label       or ID            Interface                    Switched
------ ----------- ---------------- ------------ --------------- ------------
24000  Pop         192.168.0.2/32   Gi0/0/0/3    10.0.0.5        1644
24001  24000       192.168.0.4/32   Gi0/0/0/2    10.0.0.30       24647
       24000       192.168.0.4/32   Gi0/0/0/3    10.0.0.5        0
24002  Pop         192.168.0.6/32   Gi0/0/0/2    10.0.0.30       12412
24003  24001       192.168.0.7/32   Gi0/0/0/2    10.0.0.30       22359
       24001       192.168.0.7/32   Gi0/0/0/3    10.0.0.5        1473
24004  Pop         10.0.0.20/30     Gi0/0/0/3    10.0.0.5        0
24005  Pop         10.0.0.16/30     Gi0/0/0/2    10.0.0.30       0
       Pop         10.0.0.16/30     Gi0/0/0/3    10.0.0.5        0
24006  Pop         10.0.0.40/30     Gi0/0/0/2    10.0.0.30       0
24007  24002       10.0.0.32/30     Gi0/0/0/2    10.0.0.30       0
       24002       10.0.0.32/30     Gi0/0/0/3    10.0.0.5        7045024
24009  Unlabelled  10.1.1.1/32      Gi0/0/0/0    10.0.0.9        7037648
RP/0/0/CPU0:PE1#
```

A network operator is troubleshooting packet loss seen from the R1 loopback interface to the R2 loopback interface over the core network. The operator is attempting to identify the next leg in the path from PE1. Which interface and label path should the operator investigate next?

A. PE1 - Gi0/0/0/3 - forwarding label 24002

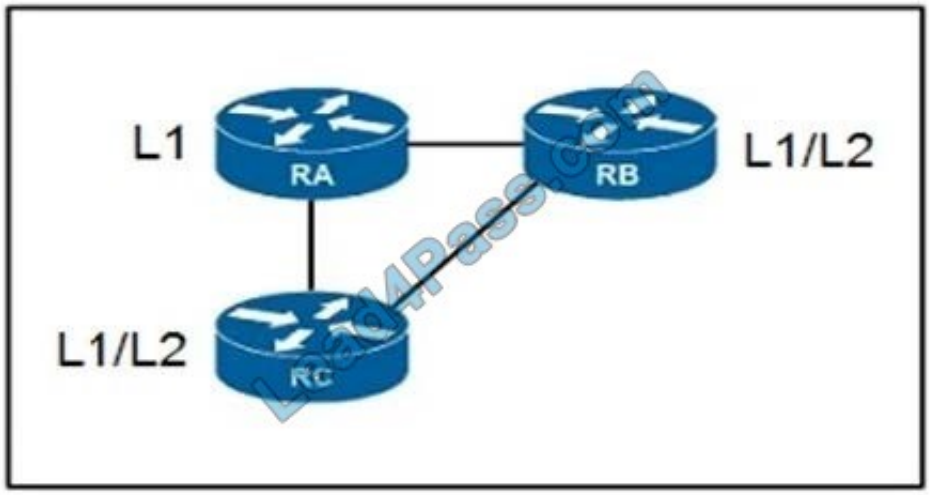
B. PE1 - Gi0/0/0/2 - forwarding label 24002

C. PE1 - Gi0/0/0/3 - forwarding label 24001

D. PE1 - Gi0/0/0/2 - forwarding label 24001

Correct Answer: C

QUESTION 9



Refer to the exhibit. Routers RA and RB are IS-IS peers configured for NSF, but router RC is an IS-IS peer without NSF capability. If RA undergoes processor switchover, what is the effect on the network environment?

A. If RC is operating without the Cisco configuration option, only 2 routers tear down their peering relationships and re-establish peering

B. All peer relationships remain up, but the link-state database is rebuild on each device

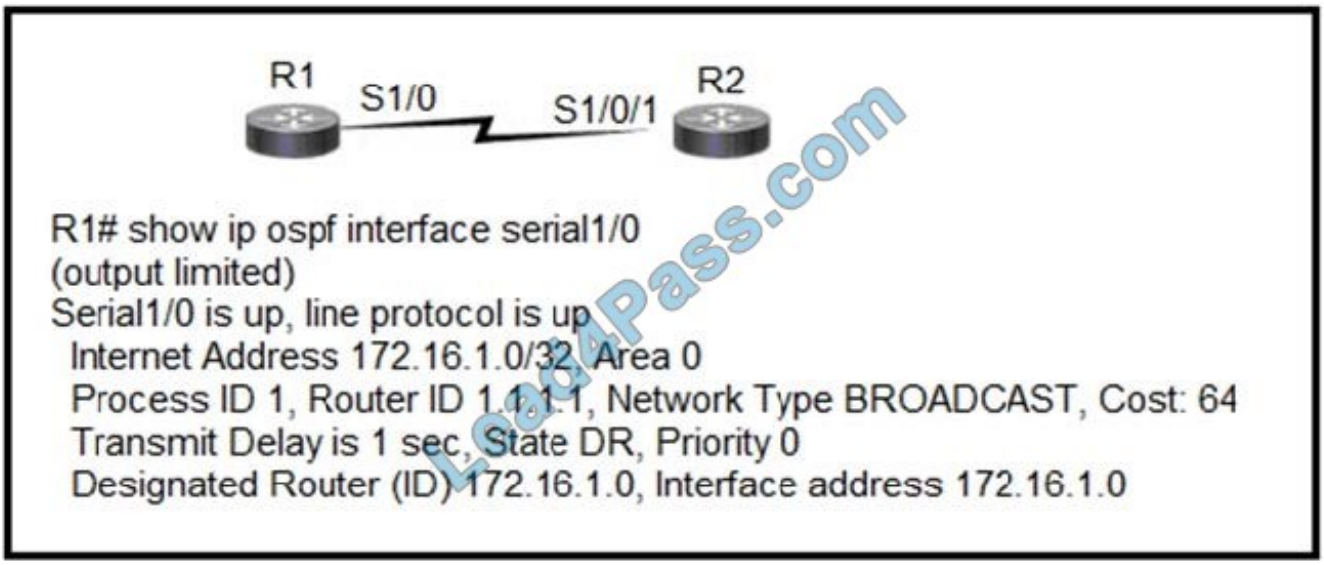
C. If RC is operating without the Cisco configuration option, all three routers tear down their peering relationships and re-establish peering

D. All peer relationships remain up and the link-state database is unchanged

Correct Answer: B

QUESTION 10

Refer to the exhibit.



While configuring router 2 with all the default values, a network engineer cannot see any route received in router 1. How should the engineer solve the issue?

A. Set up a priority different than 0 in the interface.

B. Modify the router ID to be the interface IP on the serial.

C. Modify the IP address or mask of the interface to a valid one.

D. Set the network type in S1/0 to point-to-point.

Correct Answer: C

QUESTION 11

What is the purpose of a BGP confederation?

A. It limits the number of routes a device receives from its peers, which reduces CPU load.

B. It improves service by increasing the number of simultaneous iBGP peering sessions.

C. It redirects traffic away from route reflectors, which reduces their operating load.

D. It reduces the number of iBGP peers and increases stability.

Correct Answer: D

QUESTION 12

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.

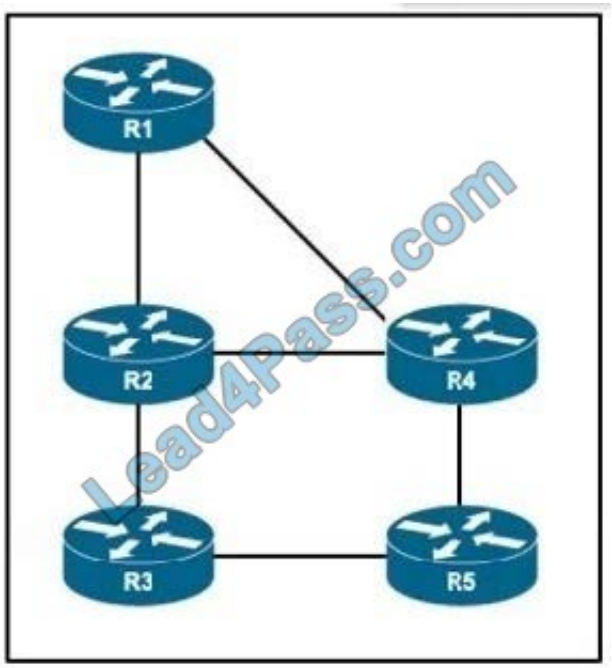
C. The RP on the shared tree floods traffic out of all PIM configured interfaces.

D. The receiver explicitly requests traffic from each desired source, which responds by sending all traffic.

Correct Answer: D

QUESTION 13

Refer to the exhibit.



An engineer has configured all routers in the environment to run IS-IS Level 1 and Level 2 routing. The engineer wants traffic from R1 to R5 to pass via R2. but IS-IS routing has calculated the best path via R4. Which action corrects the problem?

A. Configure routers R1, R4, and R5 for Level 2 routing only.

B. Set the link metric for the link from router R1 to router R4 to 30 or more.

C. Set the link metric on R2 for the links from router R2 to routers R3 and R4 to 30 or more.

D. Configure routers R1, R2, and R5 for Level 1 routing only.

Correct Answer: B

QUESTION 14

An engineer is working to implement segment routing protocol on the customer\\'s core network. Which step should the engineer take before the segment routing is enabled and is running with BGP?

A. Segment routing must be configured with ISIS.

B. Segment routing must be configured with EIGRP.

C. Explicit-null must be configured for all neighbors.

D. MPLS must be configured.

Correct Answer: D

QUESTION 15

In which four ways does DHCPv6 differ from DHCPv4? (Choose four.)

A. DHCPv6 uses the same message types as DHCPv4.

B. DHCPv4 functions without external protocols.

C. A host discovers a DHCPv6 server by using a DHCP Discover packet.

D. A hosts discovers a DHCPv6 server by using a DHCP Solicit packet.

E. A DHCPv6 server replies with a DHCP Offer packet.

F. A DHCP server replies with a DHCP Advertise message.

G. An IPv6 host can request multiple addresses at the same time from a DHCPv6 server.

H. An IPv6 host can request only one IP address at a time from a DHCPv6 server.

Correct Answer: BDFG