# 300-510 Q&As

Implementing Cisco Service Provider Advanced Routing Solutions (SPRI)

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**QUESTION 1**

Refer to the exhibit.

```
ip pim ssm
interface g1/0/0
ip pim sparse-mode
```

Which task must you perform on interface g1/0/0 to complete the SSM implementation?

A. configure OSPFv3

B. enable CDP

C. disable IGMP

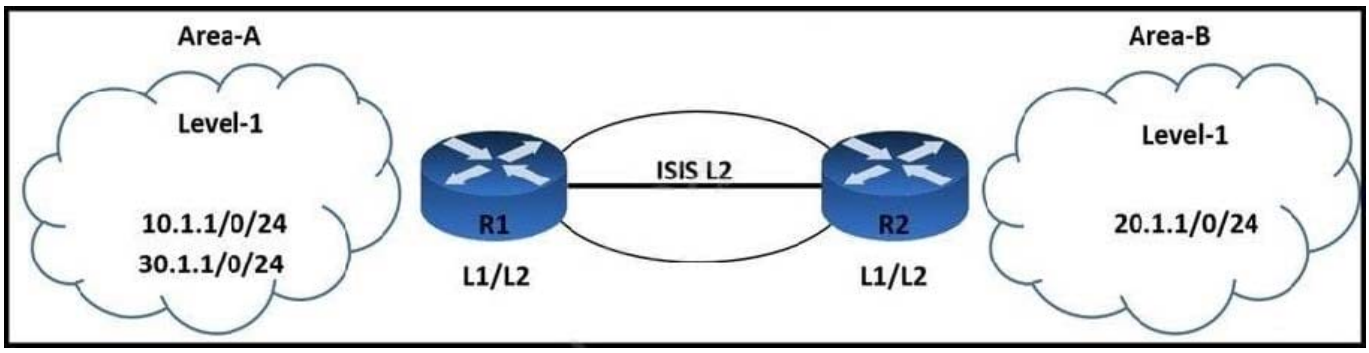
D. configure IGMPv3

Correct Answer: D

Reference: https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/ipmulti_pim/configuration/xe-16/imc-pim-xe-16-book/imc-ssm.html

**QUESTION 2**

Refer to the exhibit.




An engineer is troubleshooting IS-IS configuration between two areas. IS-IS Area-A network 30.1.1.0/24 is leaked into IS-IS Area-. R2 is failing to filter the route updates from network 10.1.1.0/24. Which configuration must the engineer apply to resolve the issue?

A. R2(config)# ip prefix-list List2 seq 5 deny 10.1.1.0/24 R2(config)# interface fastethernet 0/0 R2(config-if)# ip router isis 100 R2(config-if)# router isis 100 R2(config-router)# distribute-list gateway List2 in

B. R2(config)# ip prefix-list List1 seq 3 deny 10.1.1.0/24 R2(config)# ip prefix-list List1 seq 5 permit 30.1.1.0/24 ge 25 1e R2(config)# ip prefix-list List1 seq 10 permit 0.0.0.0/le 32 R2(config)# interface fastethernet 0/0 R2(config-if)# ip router isis 122 R2(config-if)# router isis 122 R2(config-router)# distribute-list prefix List1 in

C. R1(config)# ip prefix-list List2 seq 5 deny 10.1.1.0/24 R1(config)# interface fastethernet 0/0 R1(config-if)# ip router

isis 100 R1(config-if)# router isis 100 R1(config-router)# distribute-list gateway List2 in R (config-if)# router isis 150 R1(config-router)# distribute-list route-map Map1 in

D. R2(config)# access-list 101 deny ip any 10.1.1.0 0.0.0.127 R2(config)# access-list 101 permit ip any 30.1.1.0 0.0.0.63 R2(config)# access-list 101 deny ip any 0.0.0.0 0.0.0.0 R2(config)# interface fastethernet 0/0 R2(config-if)# ip router isis 121 R2(config-if)# router isis 121 R2(config-router)# distribute-list 101 in

Correct Answer: C

Reference: https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/iproute_isis/configuration/15-mt/irs-15-mt-book/isis-inbound-filtering.html

**QUESTION 3**

What is the purpose of ACL type prefix set entries in RPL prefix sets?

A. They hold IPv4 or IPv6 prefixes that do not match specifications.

B. They hold IPv4 or IPv6 prefix match specifications.

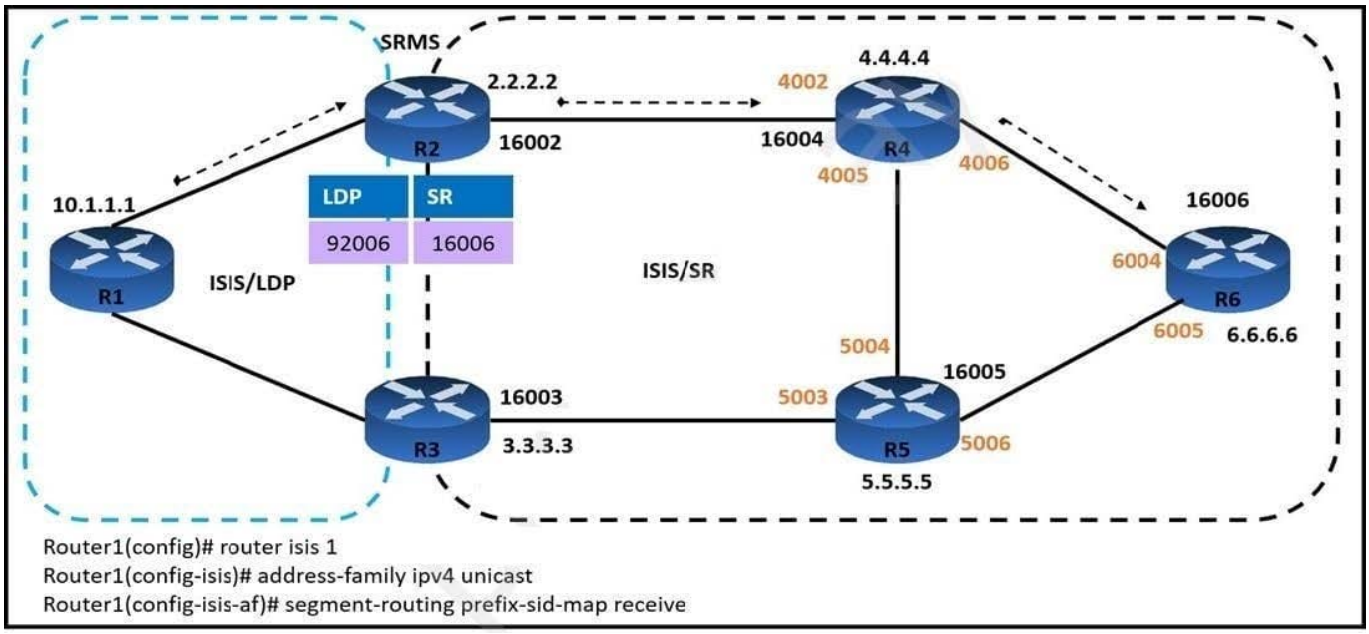
C. They hold IPv6 prefix match specifications.

D. They hold IPv4 prefixes that do not match specifications.

Correct Answer: B

**QUESTION 4**

Refer to the exhibit




An engineer is configuring service traffic from router R1 to R6 as shown. Which additional configuration must the engineer implement so that the LDP and SR domains will participate and interwork with each other?

A. Router2(config)# segment-routing Router2(config-sr)# ldp mapping-server Router2(config-sr-ms)# prefix-sid-map Router2(config-sr-ms-map)# Router2(config-sr-ms-map-af)# 2.2.2.2/32 500 range 4

B. Router2(config)# segment-routing Router2(config-sr)# sr mapping-server Router2(config-sr-ms)# ldp-sid-map Router2(config-sr-ms-map)# address-family ipv4 Router2(config-sr-ms-map-af)# 10.1.1.1/32 500 range 50

C. Router2(config)# segment-routing Router2(config-sr)# mapping-server Router2(config-sr-ms)# prefix-sid-map Router2(config-sr-ms-map)# address-family ipv4 Router2(config-sr-ms-map-af)# 10.1.1.1/32 500 range 50

D. Router2(config)# segment-routing Router2(config-sr)# ldp mapping-server Router2(config-sr-ms)# prefix-sid-map Router2(config-sr-ms-map)# address-family ipv4 Router2(config-sr-ms-map-af)# 2.2.2.2/32 500 range 40

Correct Answer: C

Reference: 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_01001.html

**QUESTION 5**

Refer to the exhibit.

```
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
```

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

Correct Answer: C

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

**QUESTION 6**

Refer to the exhibit.

```
ip route 0.0.0.0 0.0.0.0 192.168.0.1
router isis
redistribute static
```

An administrator is troubleshooting Internet access issues on a customer\\'s network. After applying this ISIS configuration to R1, the administrator notices that it fails to redistribute the default route into IS-IS. After checking the connectivity between the ISIS router and the ISP router the engineer confirmed there is Layer 3 connectivity between them. Which action should be taken to correct the problem?

A. Configure R1 as a Layer 1 router

B. Add the default-information originate command to the configuration

C. onfigure the default route under any routing protocol other than IS-IS

D. Associate the default route with a VRF

Correct Answer: B

**QUESTION 7**

Refer to the exhibit.

```
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
```

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

Correct Answer: A

**QUESTION 8**

Refer to the exhibit.

```
Router(config-router)#no bgp client-to-client reflection intra-cluster cluster-id 192.168.1.1
```

Routers within the cluster are not receiving the desired prefixes. What must be done to fix the issue?

A. Clients in that cluster must have full mesh connectivity between eBGP peers.

B. No client-to-client must be disabled.

C. Clients in that cluster must have full mesh connectivity between iBGP peers.

D. No client-to-client reflection must be enabled.

Correct Answer: C

**QUESTION 9**

Which two conditions must be met before separate ISPs can provide interdomain multicast routing? (Choose two.)

A. Each ISP must configure MSDP to connect its individual multicast administrative domain to the domains at other ISPs.

B. Each ISP must dedicate a single router to handle multicast traffic between providers.

C. Each ISP must replace its RP assignment with a global RP.

D. Each ISP must configure its network to use PIM-DM.

E. Each ISP must support intradomain multicast routing.

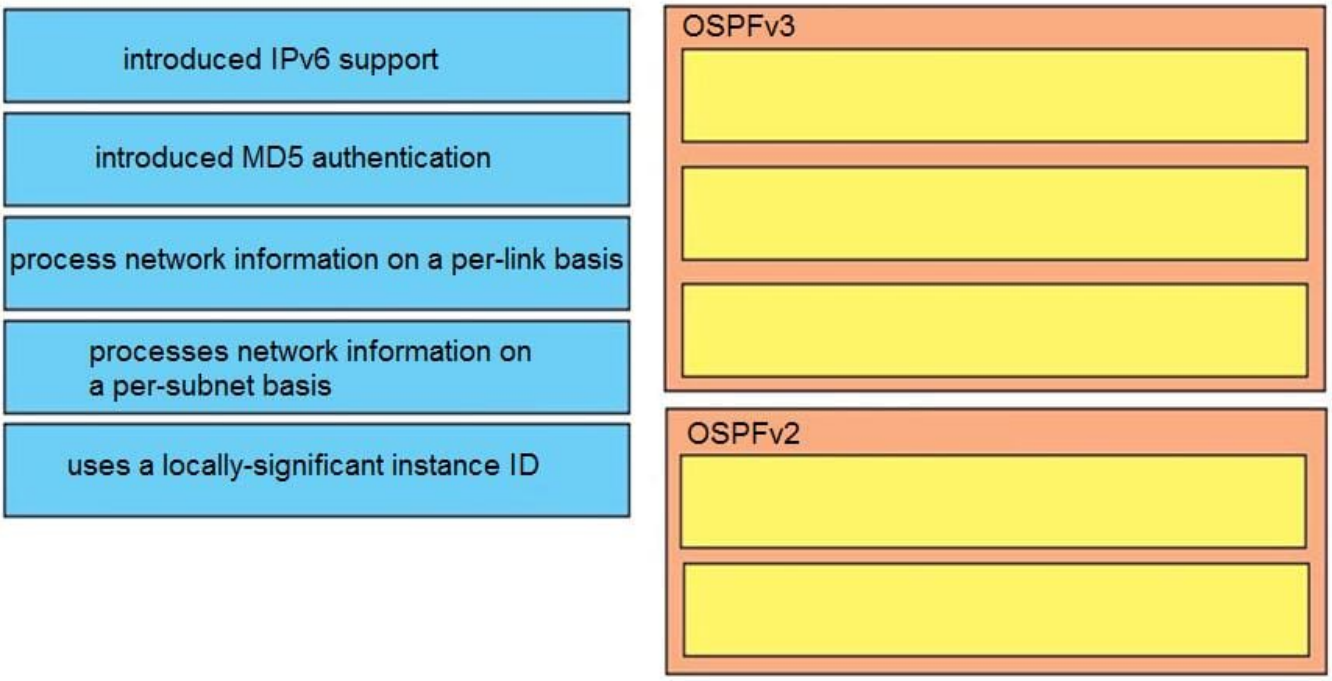
Correct Answer: AE

**QUESTION 10**

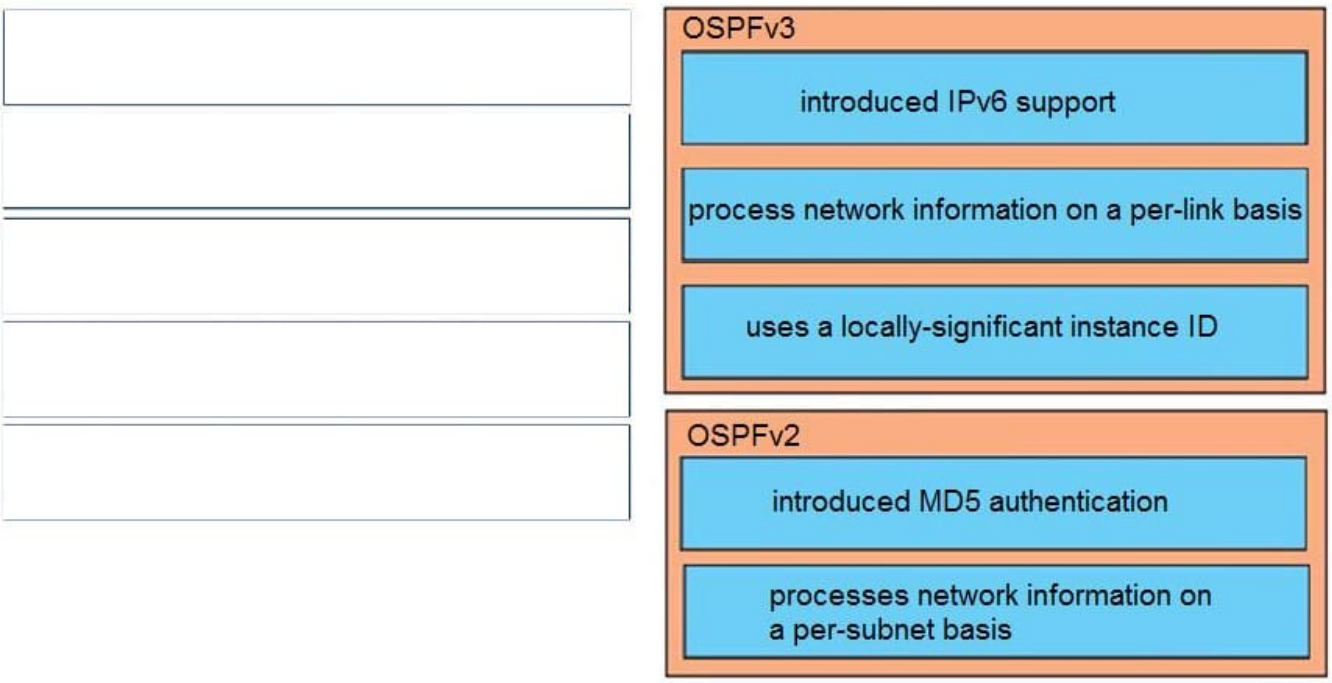
DRAG DROP

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:

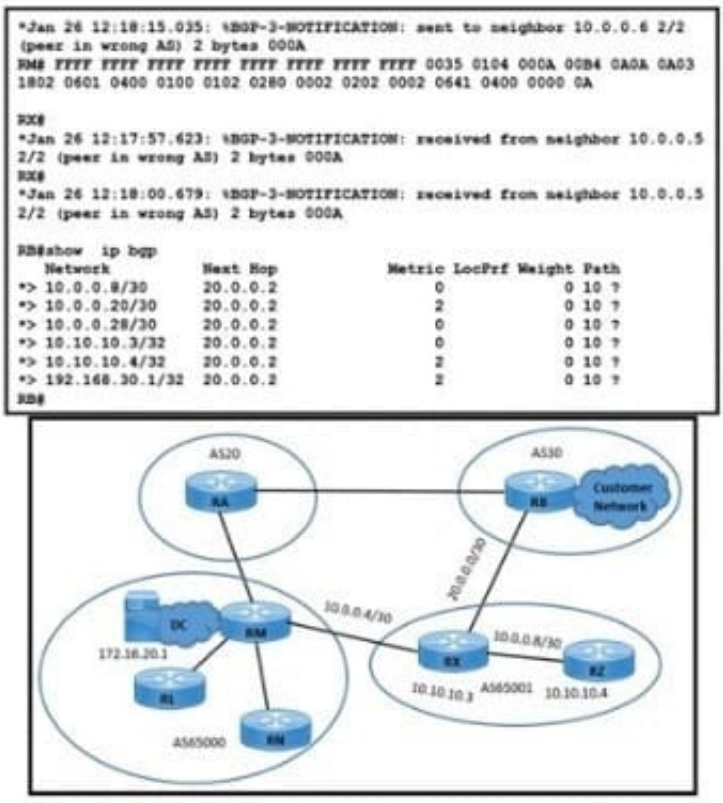



Correct Answer:




**QUESTION 11**

Refer to the exhibit.




An engineer working for a private telecommunication company with an employee id: 4233:46:364 notices that the customer network going through AS30-AS65001-AS65000 is experiencing packet drops when it accesses an application at

172.16.20.1/32 In the DC cloud.

The BGP link between AS20 and AS30 is inaccessible because of a fiber cut. Routers RL, RN, and RZ are configured with confederation identifier 10.

Which action resolves this Issue?

RX(config)#router bgp 65001
RX(config-router)# no synchronization
RX(config-router)# bgp confederation identifier 10

RB(config)#router bgp 30
RB(config-router)# neighbor 10.10.10.3 remote-as 65001

RX(config)#router bgp 65001
RX(config-router)# bgp confederation peers 65000

RM(config)#router bgp 65000
RM(config-router)# bgp confederation peers 65001

A. Option A

B. Option B

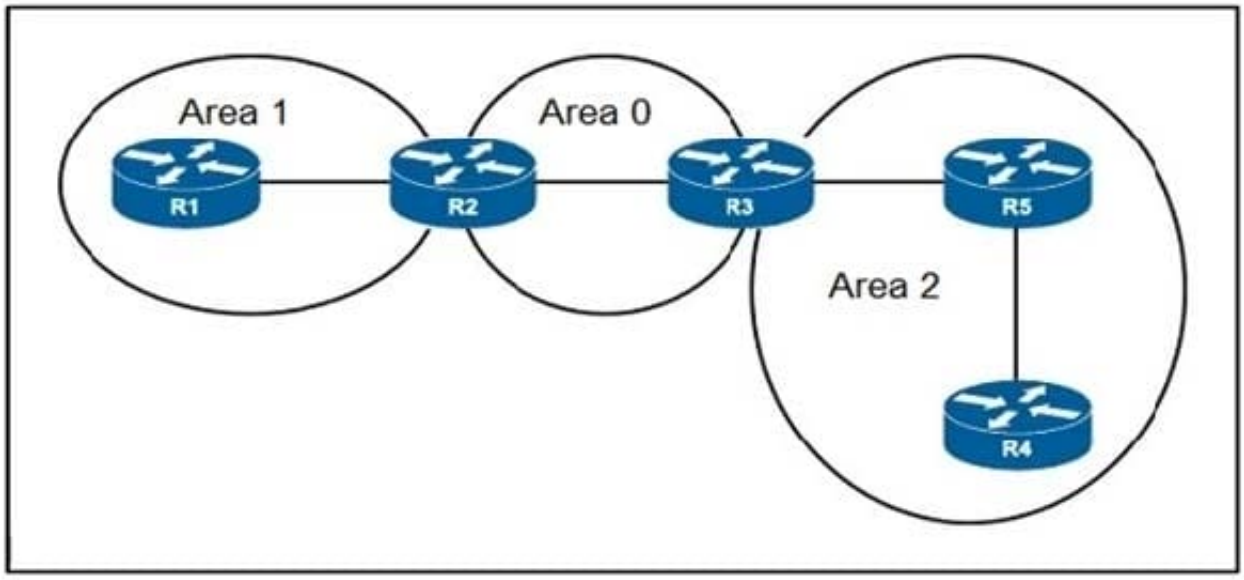
C. Option C

D. Option D

Correct Answer: A

**QUESTION 12**

Refer to the exhibit.




A network engineer applied configuration on R5 to summarize all OSPF routes, but R4 is still receiving specific routes from R5. The engineer has confirmed that both R5 and R4 routers are configured with correct summarization configuration, but R5 is not sending the summary routes. What action must the engineer take to fix the problem?

A. Remove summarization configuration on R5 and configure it on R4

B. Clear link-state database on both R4 and R5 routers for summarization to work

C. Configure a sham link between R4 and R5 to support summarization within Area 2

D. Move R4 and R5 in separate areas as now they maintain the same link-state database

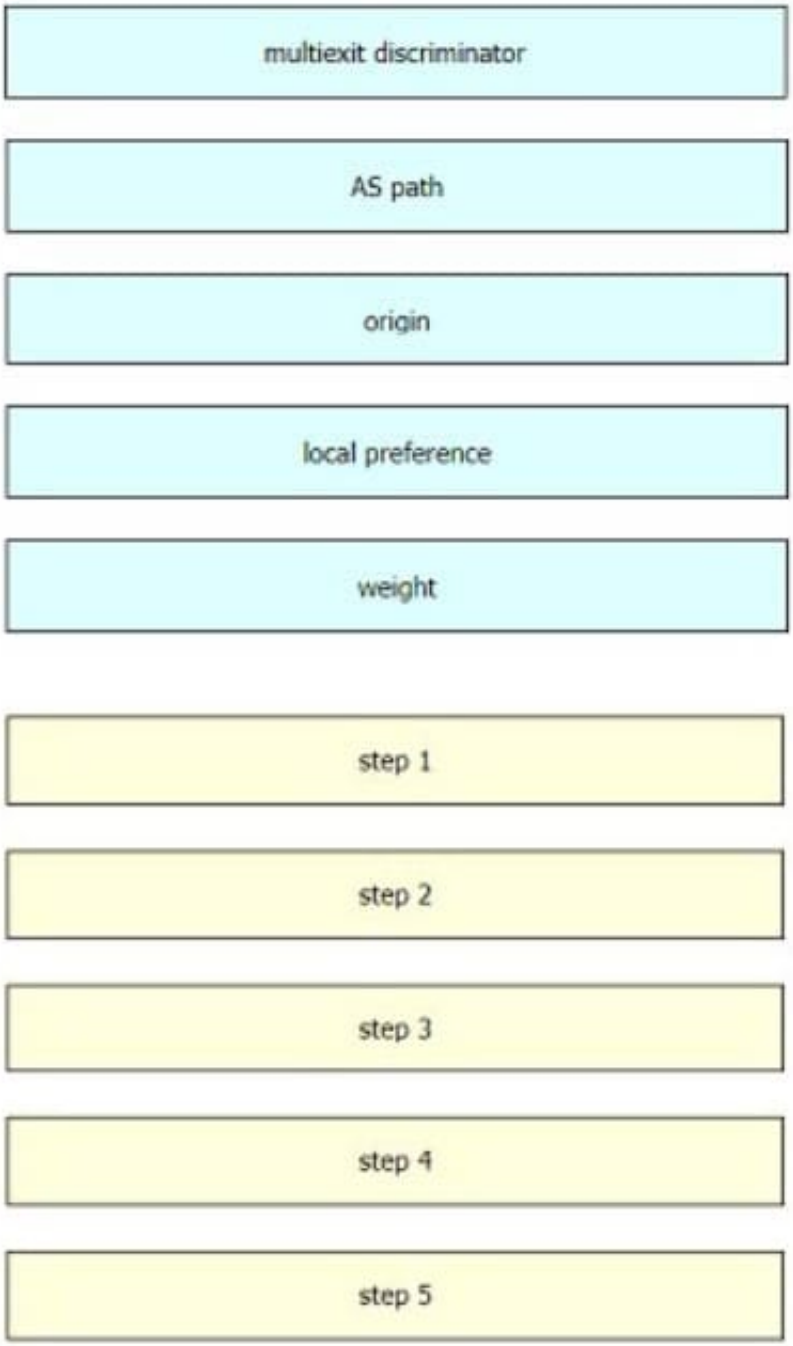
Correct Answer: D

**QUESTION 13**

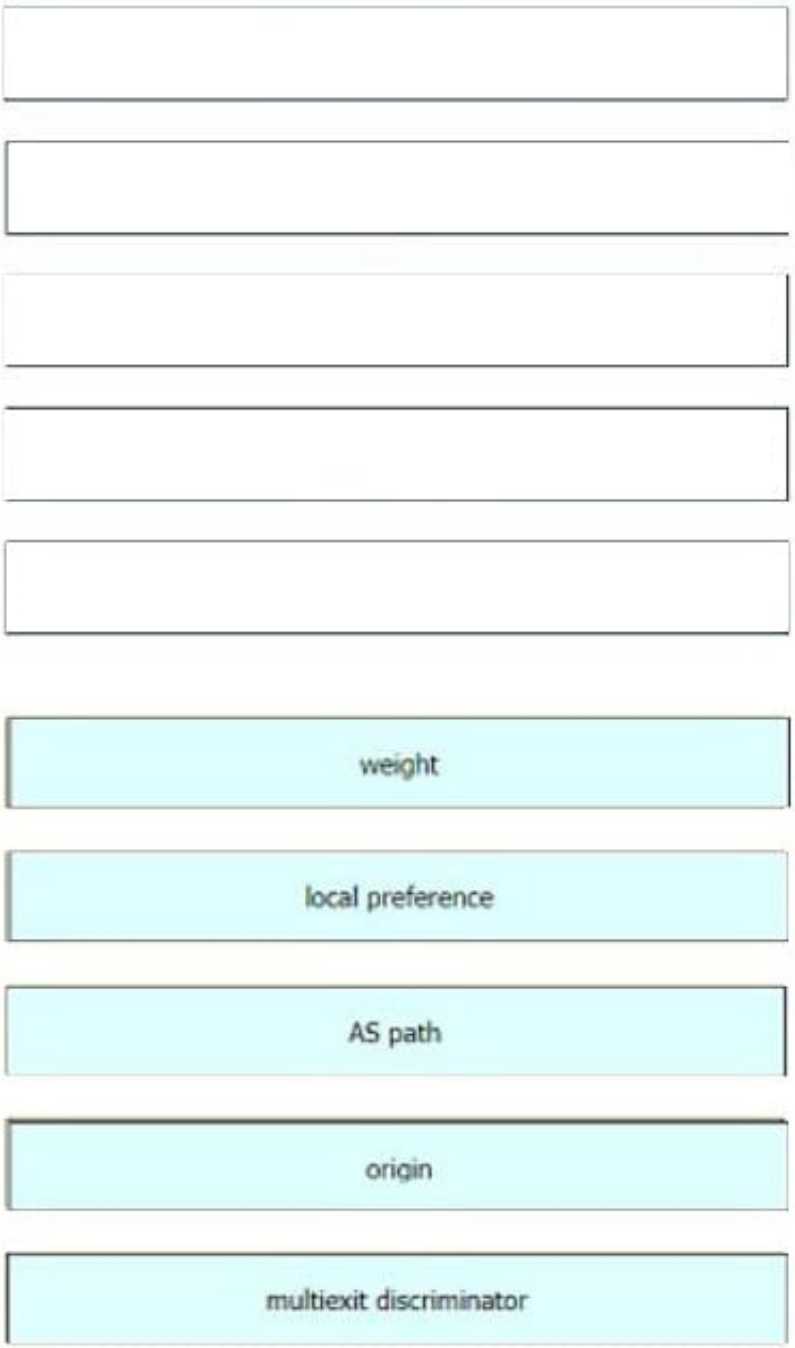
DRAG DROP

Drag and drop the BGP attributes from the left into the order of route selection preference on the right.

Select and Place:




Correct Answer:




**QUESTION 14**

Which two methods represent IPv6 tunneling implementations? (Choose two.)

A. IPv6 over GRE tunneling

B. manually configured tunnels

C. automatic tunnels

D. 6to4 tunneling

E. IPv6 over an IPv4 tunnel over MPLS

Correct Answer: BC

**QUESTION 15**

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.

Correct Answer: CD

Reference: http://www.networkers-online.com/blog/2009/02/bgp-route-reflector-basics/