Cisco

Exam Questions 300-510

Implementing Cisco Service Provider Advanced Routing Solutions (SPRI)

NEW QUESTION 1

```
PE-A                                    PE-B
vrf definition Customer-A               vrf definition Customer-A
  rd 65000:1111                           rd 65000:1111
  route-target export 65000:1111          route-target export 65000:1111
  route-target import 65000:1111          route-target import 65000:1111
  !                                       !
  address-family ipv4                     address-family ipv4
    mdt default 233.0.0.1                   mdt default 233.0.0.1
    mdt data 233.0.0.2 0.0.0.0 threshold 100   mdt data 233.0.0.3 0.0.0.0 threshold 100
  exit-address-family                     exit-address-family
```

Refer to the exhibit. Which tree does multicast traffic follow?

A. shared tree
B. MDT default
C. source tree
D. MDT voice

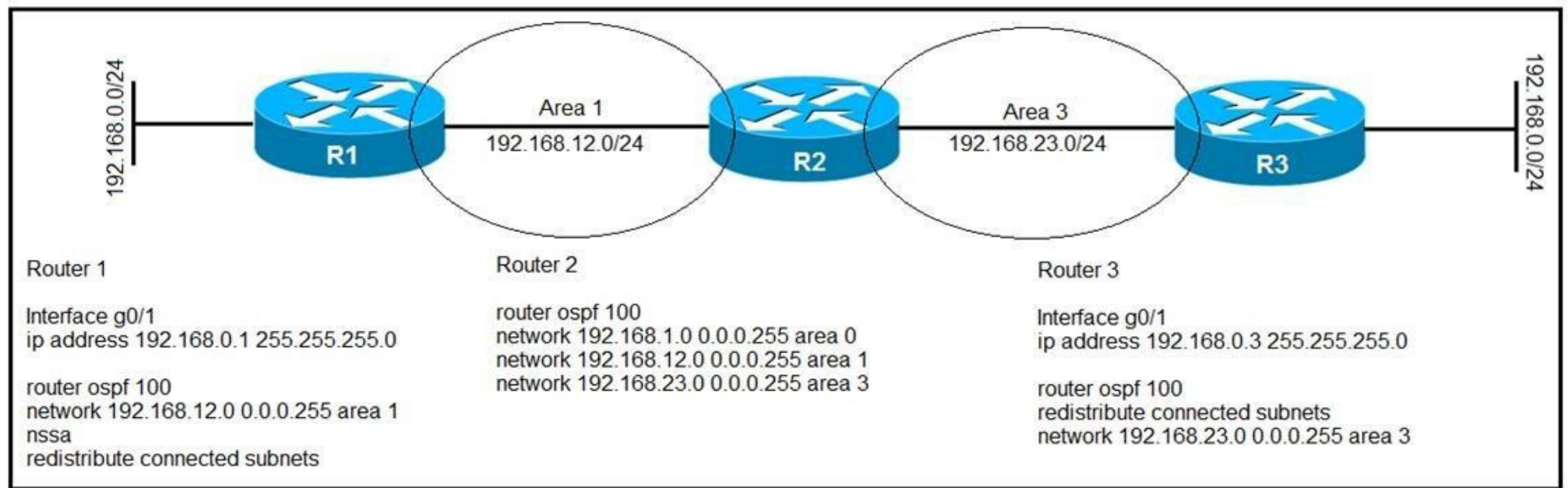**Answer:** B

NEW QUESTION 2

```
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     SendTblVer
  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
```

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?

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

NEW QUESTION 3

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

NEW 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:

A. Mastered
B. Not Mastered

Answer: A

NEW QUESTION 5
Refer to the exhibit. Which LSA type is indicated by this router output?

A. type 3 LSA
B. type 4 LSA
C. type 1 LSA
D. type 2 LSA

Answer: C

NEW 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.
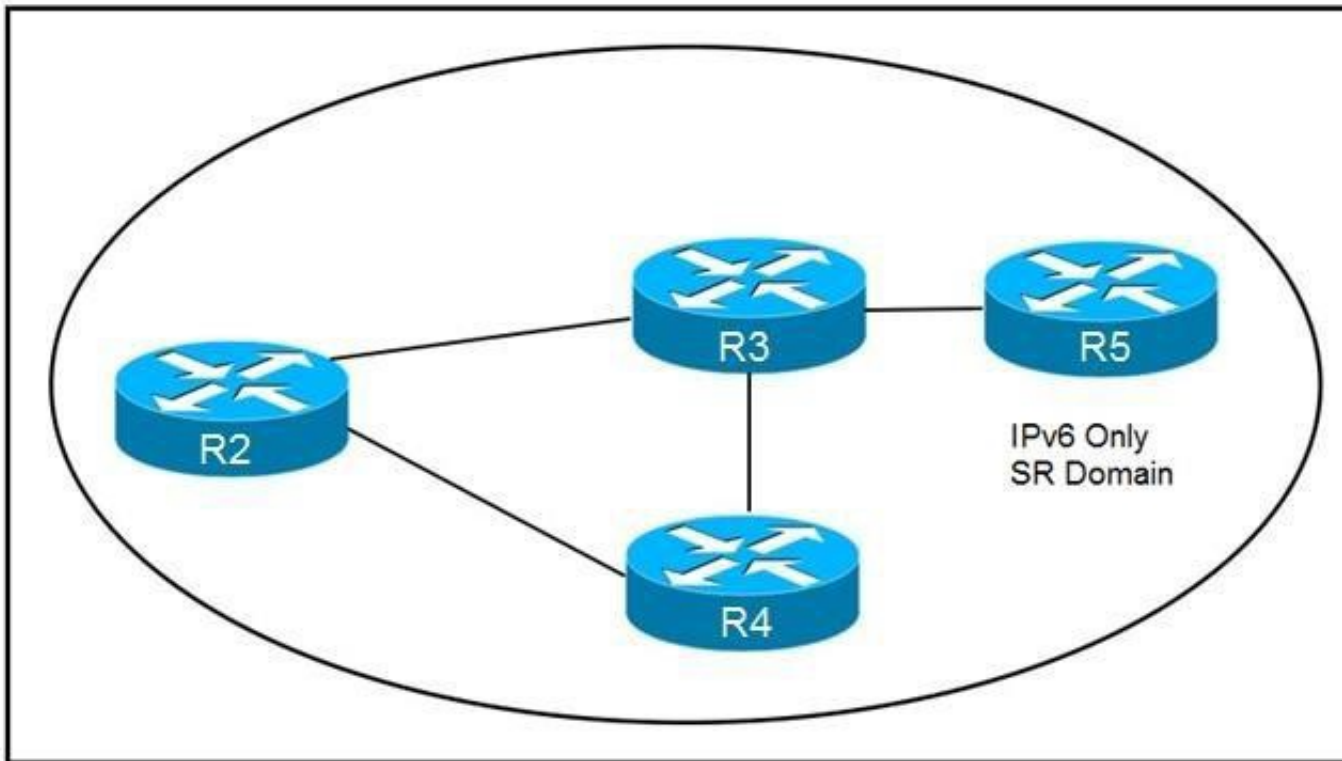
Answer: C

NEW QUESTION 7
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 8
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

NEW QUESTION 9

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 10

```
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 10
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 14
Refer to the exhibit. Router 1 has attempted to establish a Cisco MPLS TE tunnel to router 2, but the tunnel has failed. Which statement about this configuration is true?

A. Router 1 must define an explicit path to router 2
B. Router 1 and router 2 must define the RSVP bandwidth reserved on the physical interfaces
C. Router 2 must have a tunnel interface created with router 1 as the destination
D. Router 1 must have Cisco MPLS TE enabled on interface gigabitethernet0/1

Answer: D

NEW QUESTION 18

```
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

Answer: AD

NEW QUESTION 22
Which output from the show isis interface command helps an engineer troubleshoot an IS-IS adjacency problem on a Cisco IOS-XR platform?

A. metric

B. priority
C. circuit type
D. hello interval

Answer: D

NEW QUESTION 26
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 29
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 30
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 31

```
RP/0/0/CPUO:iosxr# show run segment-routing

segment-routing
    global-block 18000 24999
!

RP/0/0/CPUO:iosxr#
```

Refer to the exhibit. A network engineer implemented this segment routing configuration. Which statement about the output is true?

A. This range conflicts with the segment routing local block range.
B. The device must be reloaded for these ranges to be allocated and used.
C. The default segment routing global block range is being used on this device.
D. A nondefault segment routing global block range is being used on this device.

Answer: D

NEW QUESTION 32

```
RP/0/0/CPU/0:P1#                          RP/0/0/CPU/0:PE3#
!                                         !
key chain BGP                             key chain BGP
key 1                                     key 1
key-string password cisco123             key-string password cisco123
cryptographic-algorithm HMAC-MD5         cryptographic-algorithm HMAC-MD5
!                                         !
router bgp 1                              router bgp 1
address-family ipv4 unicast              address-family ipv4 unicast
!                                         !
neighbor 192.168.13.3                     neighbor 192.168.13.1
   remote-as 1                               remote-as 1
   keychain BGP                              keychain BGP
   address-family ipv4 unicast               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 action fixes the issue?

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

NEW QUESTION 37
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 42
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