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

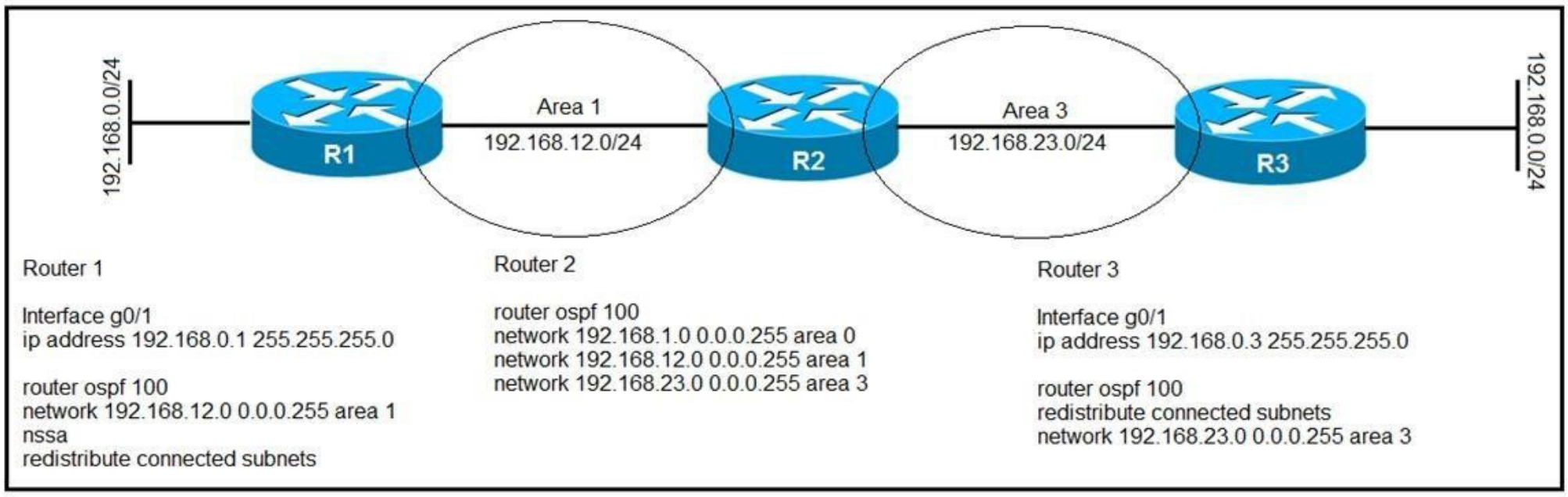
```
RP/0/0/CPU0:XR1#show run

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#
```

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?

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

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

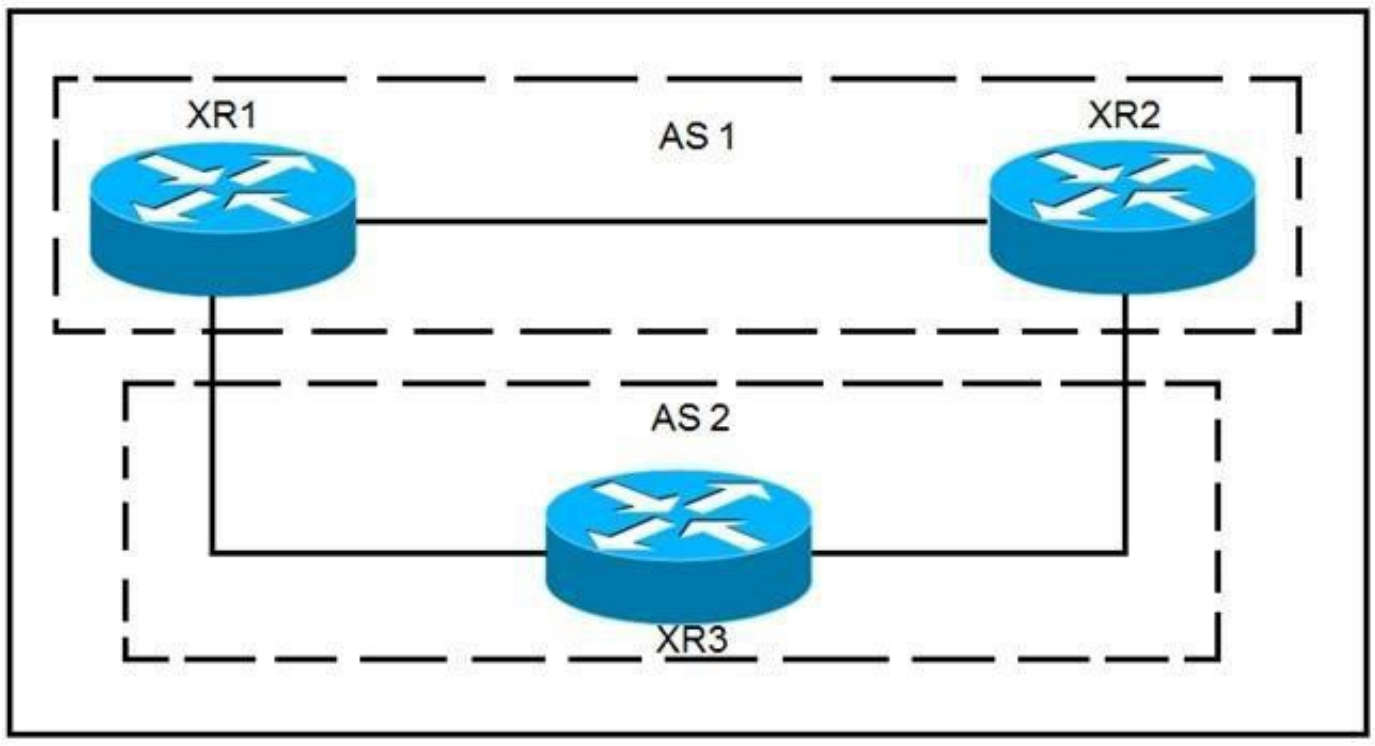
Answer: A

NEW QUESTION 4
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 5



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 6

```
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 7
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.

Answer: AE

NEW QUESTION 8
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

NEW QUESTION 9
DRAG DROP
An engineer is troubleshooting end-to-end customer traffic across an MPLS VPN service provider network. Which tasks should the engineer use to solve the routing issues? Drag and drop the table types from the left onto the most useful troubleshooting tasks/router types on the right. (Not all options are used.)
Select and Place:

A. Mastered
B. Not Mastered

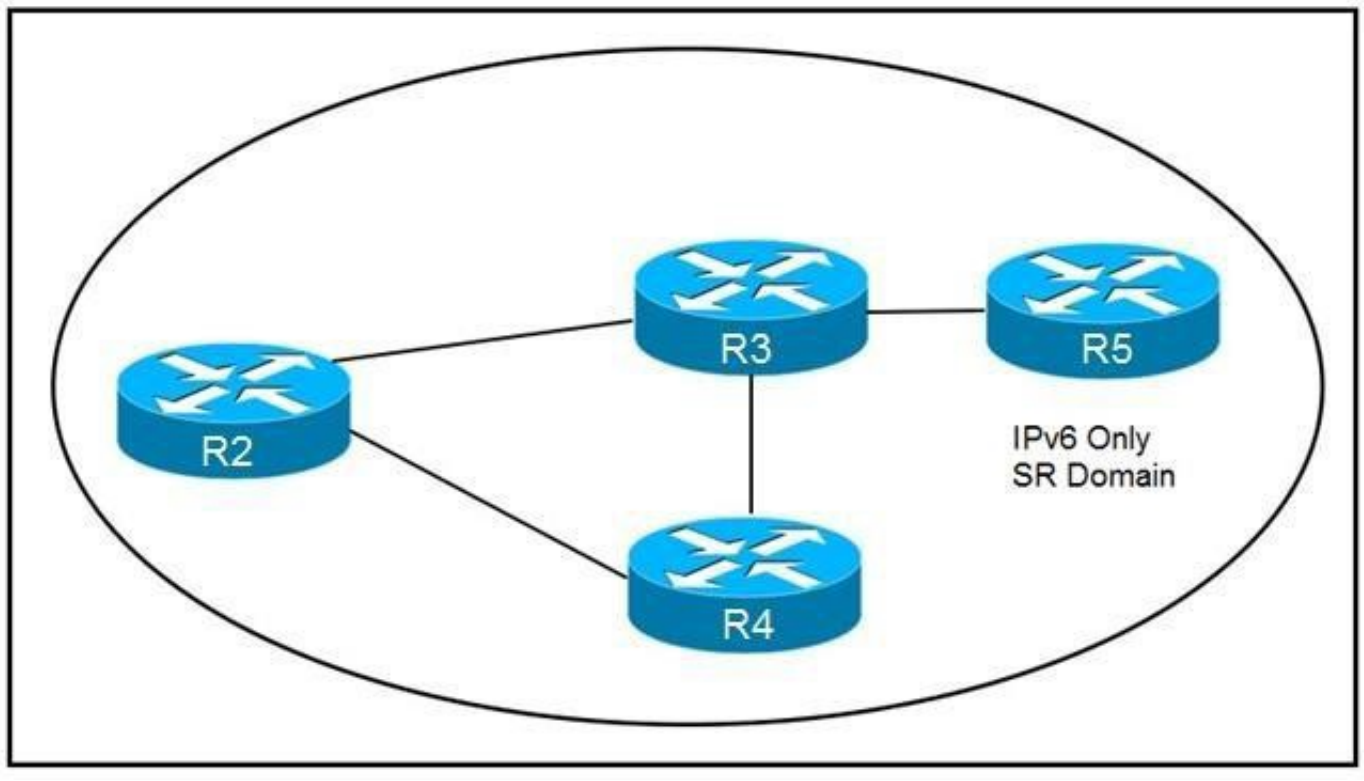
Answer: A

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

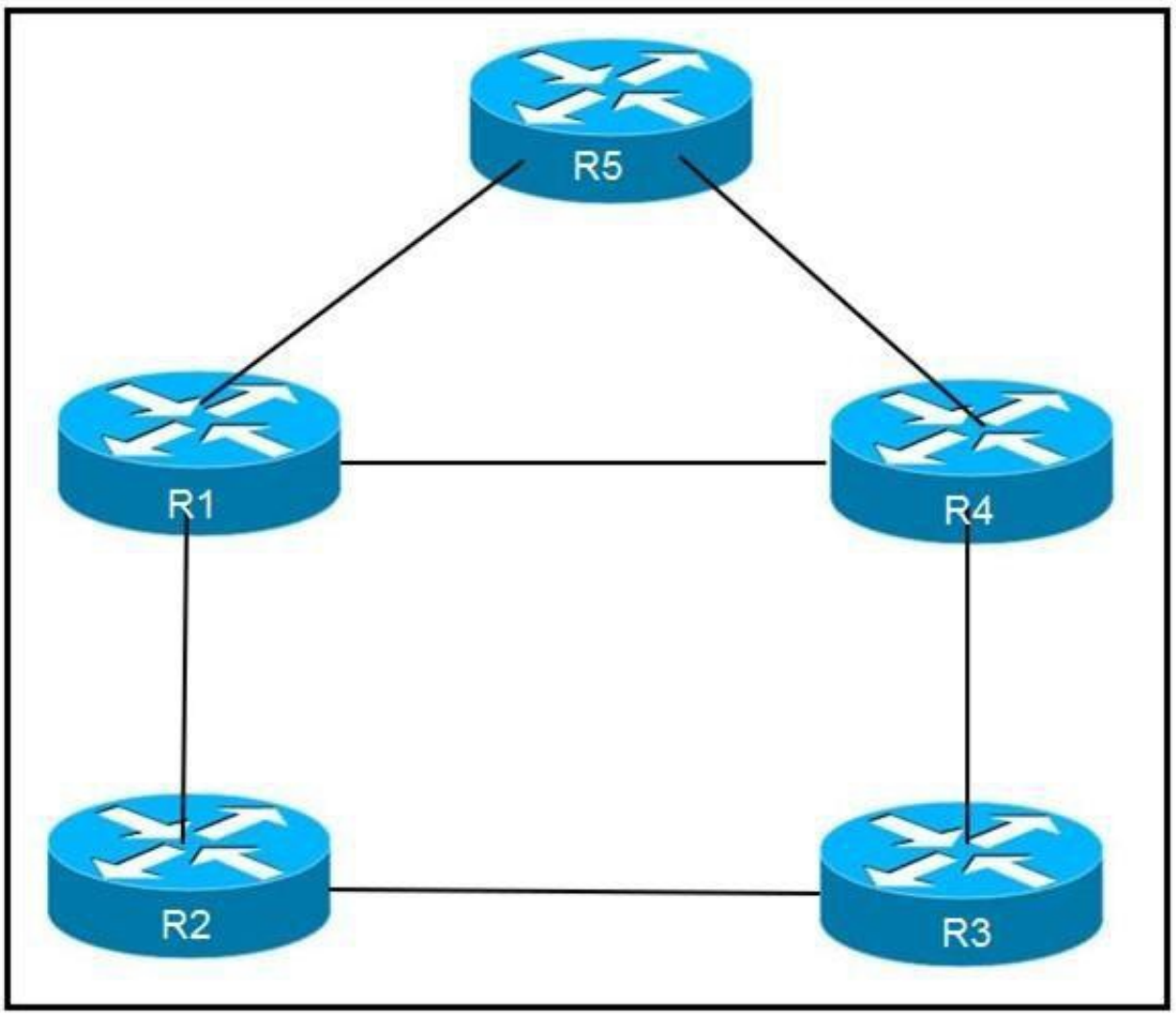
NEW QUESTION 10
Refer to the exhibit. How are packets directed through the data plane when SRv6 is implemented?



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 13



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

NEW QUESTION 17
After you change the IP address on an IOS XR router, you cannot ping the new address.
Which step did you forget to complete?

A. commit the configuration
B. roll back the configuration
C. merge the configuration
D. save the running configuration

Answer: A

NEW QUESTION 18
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 22
You have configured routing policies on a Cisco IOS XR device with routing policy language. Which two statements about the routing policies are true? (Choose two.)

A. The routing policies affect BGP-related routes only.
B. If you make edits to an existing routing policy without pasting the full policy into the CLI, the previous policy is overwritten.
C. You can change an existing routing policy by editing individual statements.
D. The routing policies are implemented in a sequential manner.
E. The routing policies are implemented using route maps.

Answer: CD

NEW QUESTION 27
Refer to the exhibit. 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

Answer: D

NEW QUESTION 29

```
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 33
Refer to the exhibit. CE1 and CE2 cannot communicate through the service provider BGP peering is established between PE1 and PE2. IS-IS is the only routing protocol running in the service provider core. What step can be done to troubleshoot the issue?

A. Switch the IGPs running in the core from IS-IS to OSPF to support a Cisco MPLS TE tunnel from PE1 to PE2.
B. Configure BGP between CE and PE routers.
C. Confirm that IS-IS is running with metric-style narrow.
D. Verify the MPLS LSPs.

Answer: C

NEW QUESTION 35

```
router bgp 65515
 neighbor 192.168.1.1 route-map ciscotest in
 neighbor 192.168.1.1 remote-as 65516

ip as-path access-list 1 permit_65517_

route-map ciscotest permit 10
 match as-path 1
 set local-preference 150
```

Refer to the exhibit. After troubleshooting BGP traffic steering issue, which action did the network operator take to achieve the correct effect of this configuration?

A. Routes that have passed through AS 65517 have the local preference set to 150.
B. Routes that have originated through AS 65517 have the local preference set to 150.
C. Routes directly attached to AS 65517 have the local preference set to 150.
D. Routes that have passed through AS 65517 have the local preference set to 150 and the traffic is denied.

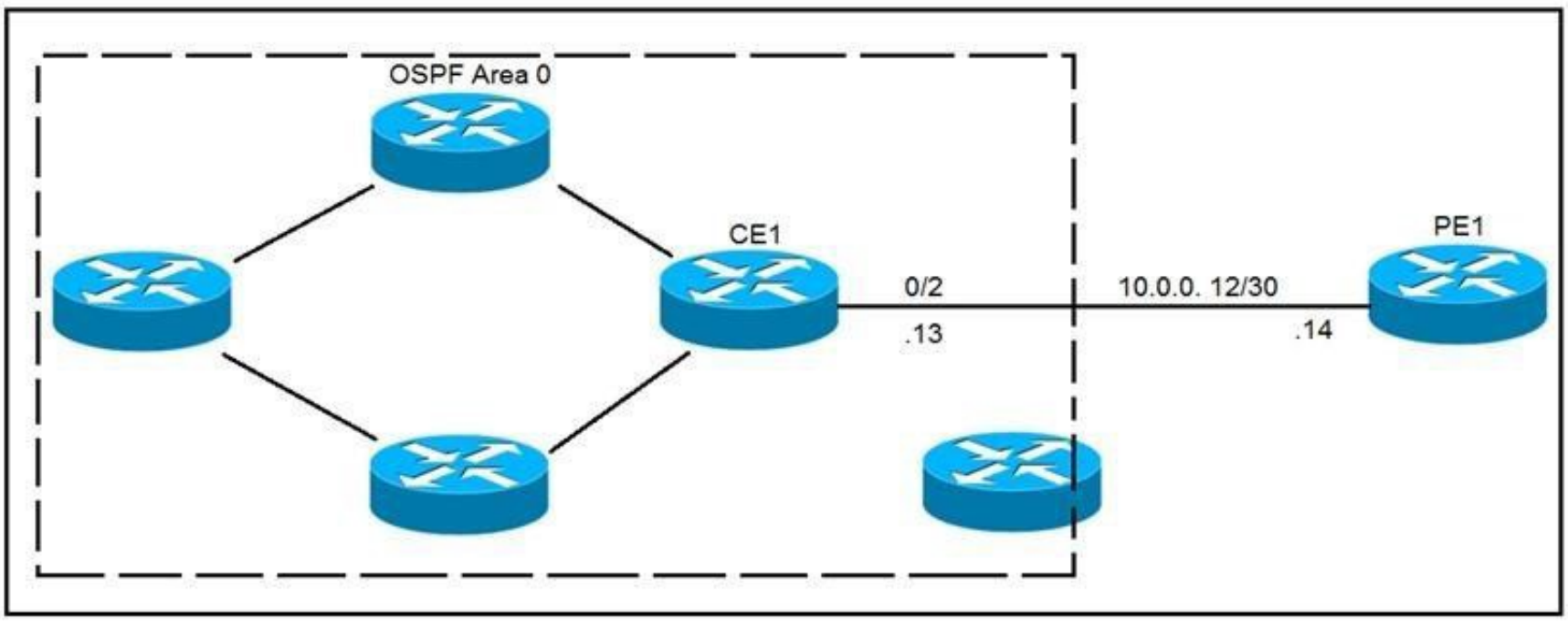
Answer: A

NEW QUESTION 36
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 38



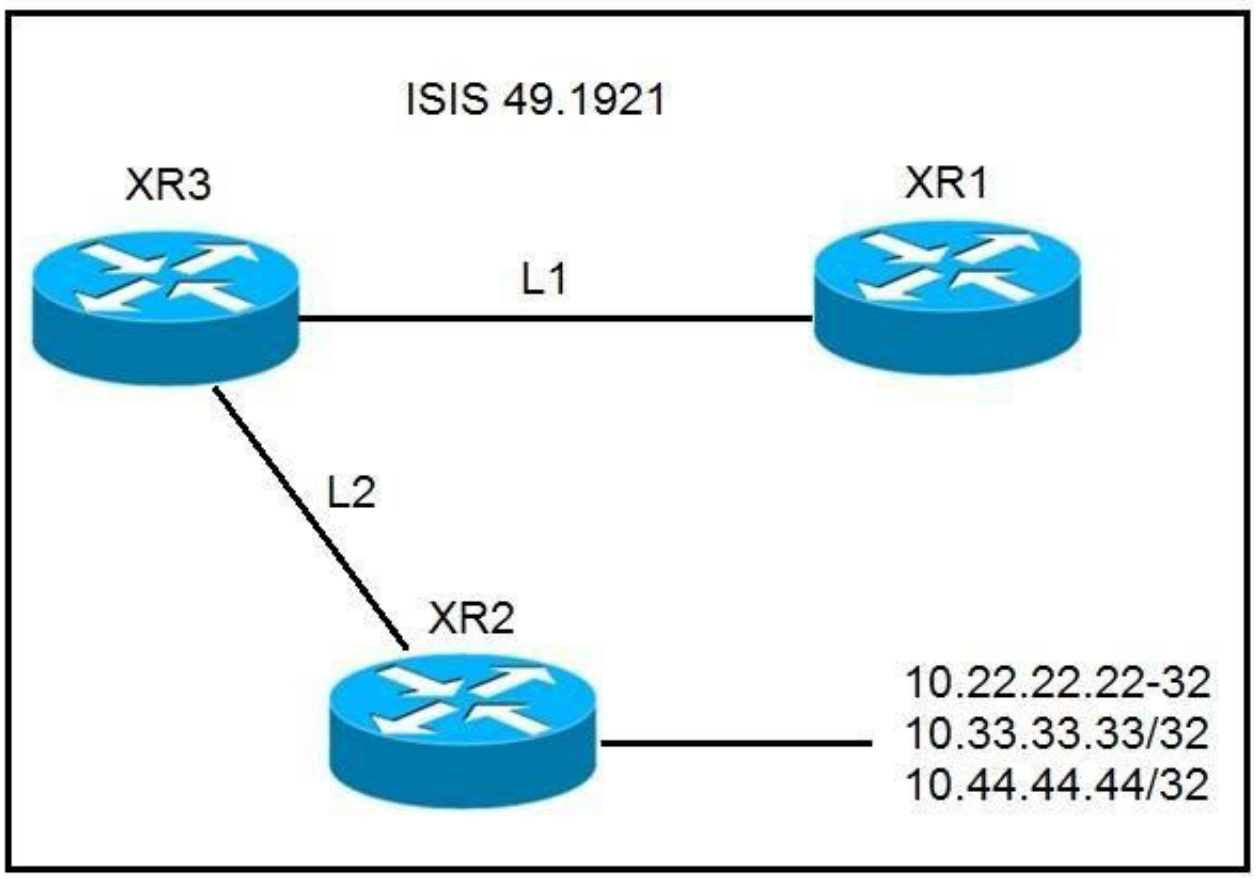
Refer to the exhibit. CE1 is the gateway router into the provider network via PE1. A network operator must inject a default route into OSPF area 0. All devices inside area 0 must be able to reach PE1. Which configuration achieves this goal?

A.
```
#CE1
router ospf 1
default-information originate always
```

B.
```
#CE1
ip route 0.0.0.0 0.0.0.0 GigabitEthernet0/2 10.0.0.14
!
router ospf 1
 default-information originate
```

Answer: B

NEW QUESTION 41



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 44

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