



Free Questions for 300-510 by certsdeals

Shared by Castro on 20-10-2022

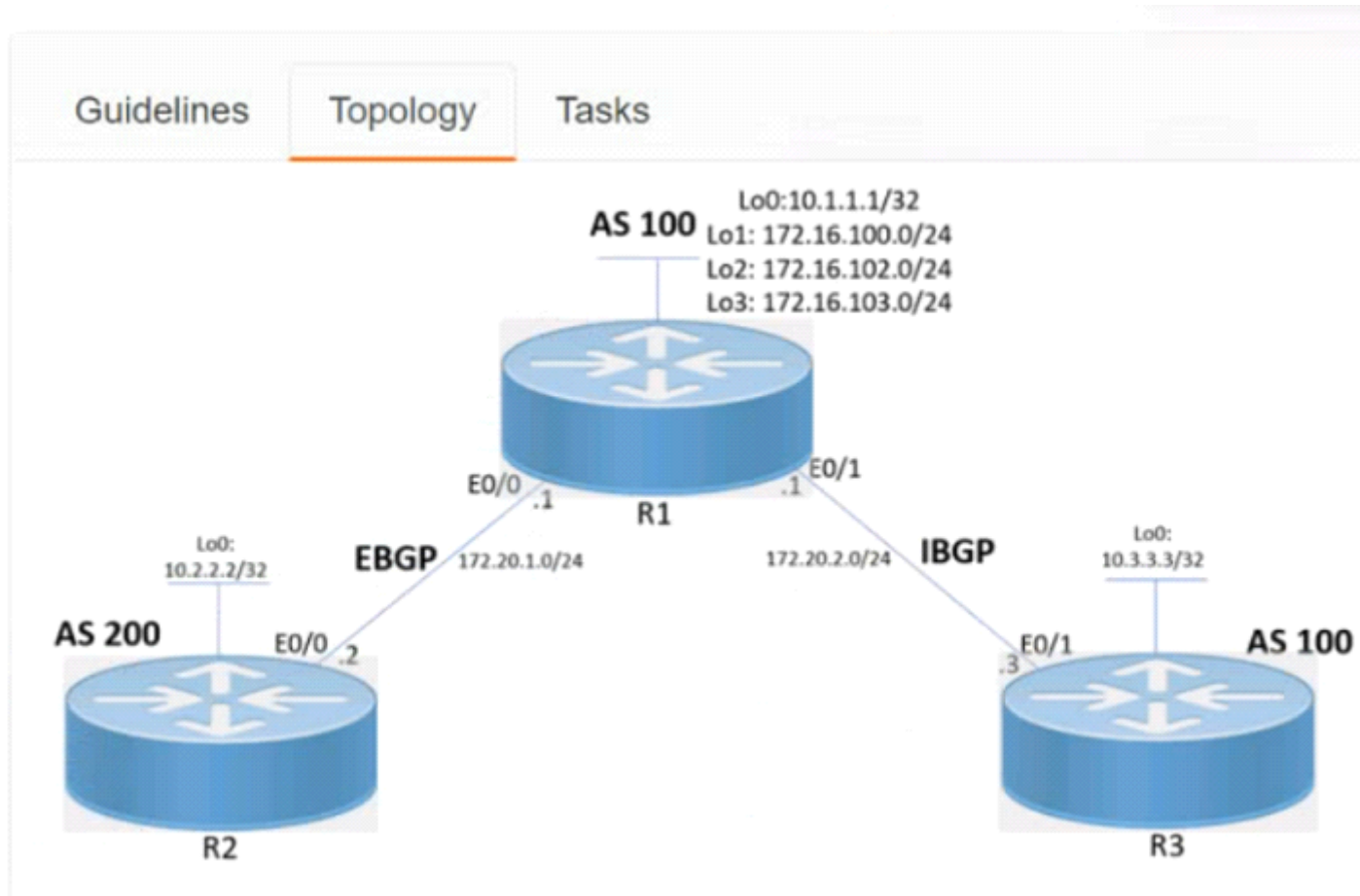
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Question 1

Question Type: MultipleChoice

Refer to the exhibit.



Troubleshoot and configure BGP according to the topology to achieve these goals:

1. R1 and R3 establishes IBGP connectivity using Loopback addresses. The updates should come from Loopback0.
2. R3 should be able to ping loopback0 interface of R2. These changes must be accomplished through BGP.
3. R1 advertises only the summary route of 172.16.100.0/22 to R2 and R3.

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Options:

A- Explanation:

Solution :-

R1

Router bgp 100

Neigh 10.3.3.3 remote-as 100

Neigh 10.3.3.3 update-source loopback0

Address-family ipv4

Neigh 10.3.3.3 next-hop-self

Aggregate-address 172.16.100.0 255.255.252.0 summary-only

Copy run start

R3

Router bgp 100

Neigh 10.1.1.1 remote-as 100

Neigh 10.1.1.1 update-source loopback 0

Copy run start

Verification:-

```
R3#ping 10.2.2.2
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.2.2.2, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1
/1/1 ms
R3#
```

```
R3#show ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2
       i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
       ia - IS-IS inter area, * - candidate default, U - per-user static route
       o - ODR, P - periodic downloaded static route, H - NHRP, l - LISP
       a - application route
       + - replicated route, % - next hop override, p - overrides from PfR
```

```
Gateway of last resort is not set
```

```
    10.0.0.0/32 is subnetted, 3 subnets
S       10.1.1.1 [1/0] via 172.20.2.1
B       10.2.2.2 [200/0] via 10.1.1.1, 00:00:19
C       10.3.3.3 is directly connected, Loopback0
    172.16.0.0/22 is subnetted, 1 subnets
B       172.16.100.0 [200/0] via 10.1.1.1, 00:00:02
    172.20.0.0/16 is variably subnetted, 3 subnets, 2 masks
B       172.20.1.0/24 [200/0] via 10.1.1.1, 00:00:19
C       172.20.2.0/24 is directly connected, Ethernet0/1
L       172.20.2.3/32 is directly connected, Ethernet0/1
```

```
R3#
```

Answer:

A

Question 2

Question Type: MultipleChoice

Refer to the exhibit.

Guidelines

Topology

Tasks

R1

R2

Configure and verify an OSPF neighbor adjacency between R1 and R2 in OSPF area 0 according to the topology to achieve these goals:

1. R1 pings the Loopback0 interface of R2. Use interface-level configuration to complete this task.
2. R2 pings the Loopback0 interface of R1. Use interface-level configuration to complete this task.
3. R2 receives a single summary route 172.16.100.0/22 for networks 172.16.100.0/24, 172.16.101.0/24, and 172.16.103.0/24.

 Submit feedback about this item.

R1>

Guidelines

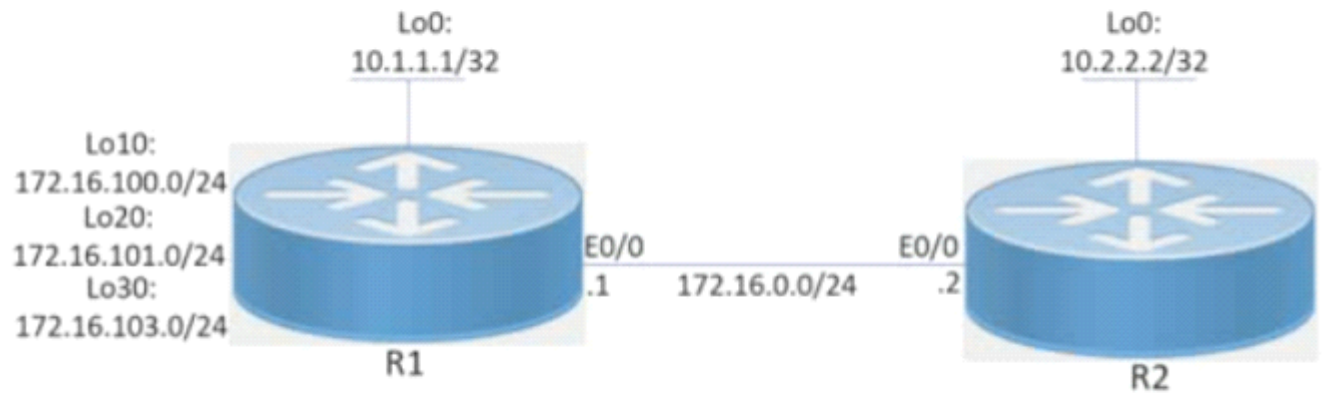
Topology

Tasks

R1

R2

OSPF Process ID 10 Area 0



R1>

R1

R2

```
R1>en
R1#sh run
Building configuration...

Current configuration : 1302 bytes
!
version 15.8
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname R1
!
boot-start-marker
boot-end-marker
!
!
!
no aaa new-model
!
!
!
clock timezone PST -8 0
mmi polling-interval 60
no mmi auto-configure
no mmi pvc
--More-- █
```

```
!  
interface Loopback0  
 ip address 10.1.1.1 255.255.255.255  
!  
interface Loopback10  
 ip address 172.16.100.1 255.255.255.0  
 ip ospf 10 area 1  
!  
interface Loopback20  
 ip address 172.16.101.1 255.255.255.0  
 ip ospf 10 area 1  
!  
interface Loopback30  
 ip address 172.16.103.1 255.255.255.0  
 ip ospf 10 area 1  
!
```

R1

R2

```
interface Loopback10
 ip address 172.16.100.1 255.255.255.0
 ip ospf 10 area 1
!
interface Loopback20
 ip address 172.16.101.1 255.255.255.0
 ip ospf 10 area 1
!
interface Loopback30
 ip address 172.16.103.1 255.255.255.0
 ip ospf 10 area 1
!
interface Ethernet0/0
 ip address 172.16.0.1 255.255.255.0
 ip ospf 10 area 0
 duplex auto
!
interface Ethernet0/1
 no ip address
 shutdown
 duplex auto
!
interface Ethernet0/2
 no ip address
 shutdown
 duplex auto
!
interface Ethernet0/3
 no ip address
 shutdown
 duplex auto
!
router ospf 10
 router-id 10.1.1.1
!
```

R2

R1

R2

```
R2>
R2>
R2>
R2>
R2>en
R2#sh run
Building configuration...

Current configuration : 1059 bytes
!
version 15.8
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname R2
!
boot-start-marker
boot-end-marker
!
!
!
no aaa new-model
!
!
!
clock timezone PST -8 0
mmi polling-interval 60
no mmi auto-configure
no mmi pvc
--More-- █
```

```
!  
!  
!  
!  
interface Loopback0  
 ip address 10.2.2.2 255.255.255.255  
!  
interface Ethernet0/0  
 ip address 172.16.0.2 255.255.255.0  
 ip ospf 10 area 0  
 duplex auto  
!  
interface Ethernet0/1  
 no ip address  
 shutdown  
 duplex auto  
!  
interface Ethernet0/2  
 no ip address
```

R1

R2

```
interface Ethernet0/0
 ip address 172.16.0.2 255.255.255.0
 ip ospf 10 area 0
 duplex auto
!
interface Ethernet0/1
 no ip address
 shutdown
 duplex auto
!
interface Ethernet0/2
 no ip address
 shutdown
 duplex auto
!
interface Ethernet0/3
 no ip address
 shutdown
 duplex auto
!
router ospf 10
 router-id 10.2.2.2
!
ip forward-protocol nd
!
!
no ip http server
no ip http secure-server
!
ipv6 ioam timestamp
!
!
!
control-plane
!
```


Options:

A- Explanation:

Solution:-

R1

Int loopback0

Ip ospf 10 area 0

Int loopback10

Ip ospf network point-to-point

Int loopback20

Ip ospf network point-to-point

Int loopback30

Ip ospf network point-to-point

Router ospf 10

Area 1 range 172.16.100.0 255.255.252.0

Copy run start

Verification: -

```

R2#
R2#sh ip route ospf
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BG
P
D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
E1 - OSPF external type 1, E2 - OSPF external type 2
i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS lev
el-2
ia - IS-IS inter area, * - candidate default, U - per-user static
route
o - ODR, P - periodic downloaded static route, H - NHRP, l - LISP
a - application route
+ - replicated route, % - next hop override, p - overrides from P
fR
Gateway of last resort is not set

10.0.0.0/32 is subnetted, 2 subnets
O      10.1.1.1 [110/11] via 172.16.0.1, 00:02:25, Ethernet0/0
172.16.0.0/16 is variably subnetted, 3 subnets, 3 masks
O IA   172.16.100.0/22 [110/11] via 172.16.0.1, 00:00:50, Ethernet0/0
R2#

```

Answer:

A

Question 3

Question Type: MultipleChoice

Which type of BGP attribute does a route reflector attach to routes learned from iBGP peers that allows them to be accepted by other iBGP peers, thereby eliminating the need for a full-mesh BGP topology?

Options:

- A- well-known mandatory
- B- optional transitive
- C- well-known discretionary
- D- optional non transitive

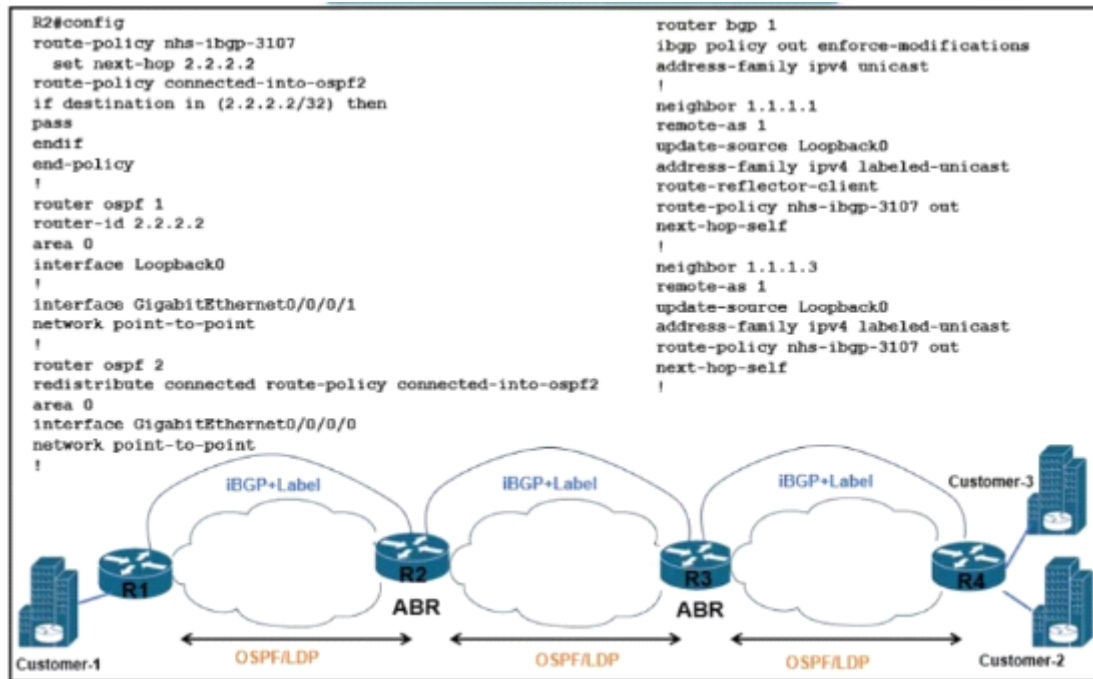
Answer:

D

Question 4

Question Type: MultipleChoice

Refer to the exhibit.



There is a connectivity issue between Customer-1 and Customer-2 File servers between the customers cannot send critical data R3 routes are missing from the routing table on the Customer-1 router All interlaces on Customer-1 are up Which configuration must be applied to router R2 to correct the problem?

- router bgp 1
address-family vpnv4 unicast
allocate-label all
- router bgp 1
vrf one
rd 1:1
address-family ipv4 unicast
allocate-label all
- router bgp 1
neighbor
remote-as 1
update-source Loopback0
address-family ipv4 labeled-unicast
allocate-label all
- router bgp 1
address-family ipv4 unicast
allocate-label all

Options:

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

Answer:

D

Question 5

Question Type: MultipleChoice

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?

Options:

- A-** Associate the default route with a VRF
- B-** Add the default-information originate command to the configuration
- C-** Configure the default route under any routing protocol other than IS-IS
- D-** Configure R1 as a Layer 1 router

Answer:

B

Question 6

Question Type: MultipleChoice

Refer to the exhibit.

```
R1
interface FastEthernet0/0
 ip address 192.168.1.1
 255.255.255.0
 ip ospf authentication
 ip ospf authentication-key Cisco
 ip ospf 1 area 0
 speed auto
 duplex auto

router ospf 1
 log-adjacency-changes
 area 0 authentication
 message-digest
```

```
R2
interface FastEthernet0/0
 ip address 192.168.1.2
 255.255.255.0
 ip ospf authentication-key Cisco
 ip ospf 1 area 0
 speed auto
 duplex auto

router ospf 1
 log-adjacency-changes
 area 0 authentication
 message-digest
```

While applying the configurations on two routers an engineer notices that OSPF adjacency Between them remains down Through the ping test the engineer confirmed that both me routers have Layer 3 reachability between them Which action should me engineer take to make the adjacencies to full?

Options:

- A- Enter the command ip ospf authentication in R2 interface
- B- Enable OSPF just inside the router OSPF process not in the interfaces of any router
- C- Delete the area 0 authentication message-digest command from the OSPF process in R1
- D- Delete the area 0 authentication message-digest command from the OSPF process in R2

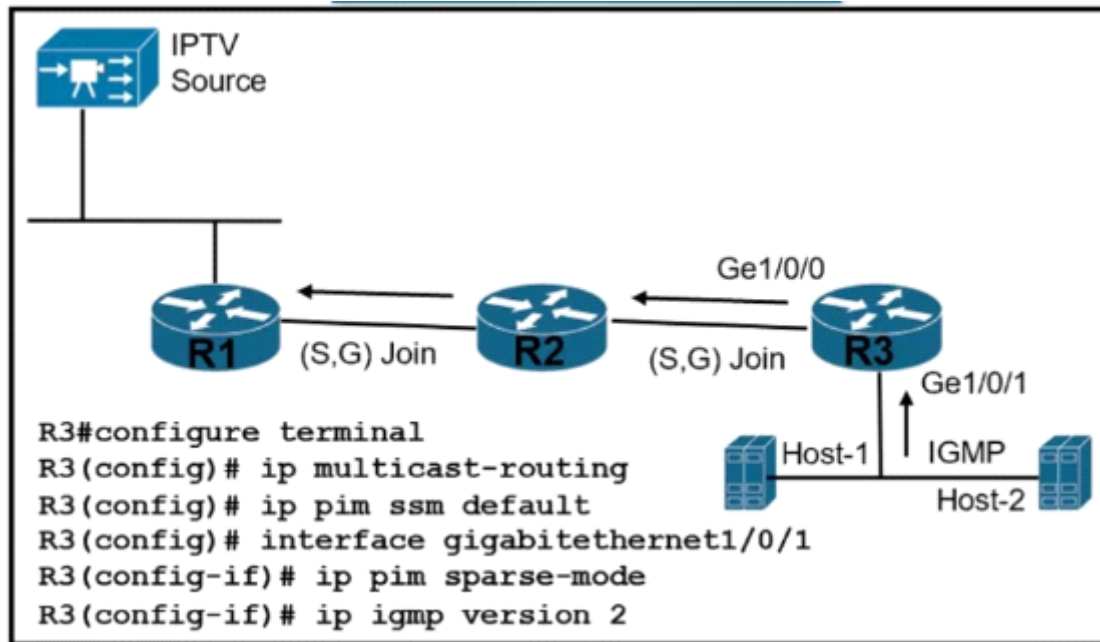
Answer:

A

Question 7

Question Type: MultipleChoice

Refer to the exhibit.



A customer reports that Host-1 is failing to receive streaming traffic from the IPTV source. The engineer has confirmed that hosts on router R2 are receiving traffic normally and that Host-1 is correctly sending subscription messages to join the IPTV stream. Which action must the engineer take to correct the problem?

Options:

- A- Configure IP PIM SSM and IGMP version 2 under interface GigatxEthernet 1/0/1 on R3
- B- Configure IGMP version 3 under interface GigabitEthernet 1/(V1 on R3
- C- Remove IP PIM SSM and IGMP from interface GigaEthernet 1/0/1 on R3 and configure under global configuration

D- Remove IP PIM SSM from the global configuration on R3 and configure it under the GigabitEthernet 1/0/1 interface

Answer:

B

Question 8

Question Type: MultipleChoice

An engineer is troubleshooting slow performance issues on a customer's network after the last multicast configuration change was applied on it. While checking the running configuration on the router, the engineer notices there are many `ip igmp join-group` commands applied on several interfaces of the router, which caused the high CPU utilization usage. What action must the engineer take to solve this issue?

Options:

- A-** Configure `ip igmp static-group` command on all interfaces
- B-** Remove `ip igmp join-group` command on all unnecessary interfaces
- C-** Configure all router interfaces to be process-switched by increasing the query interval

D- Remove unnecessary members from the IGMP group

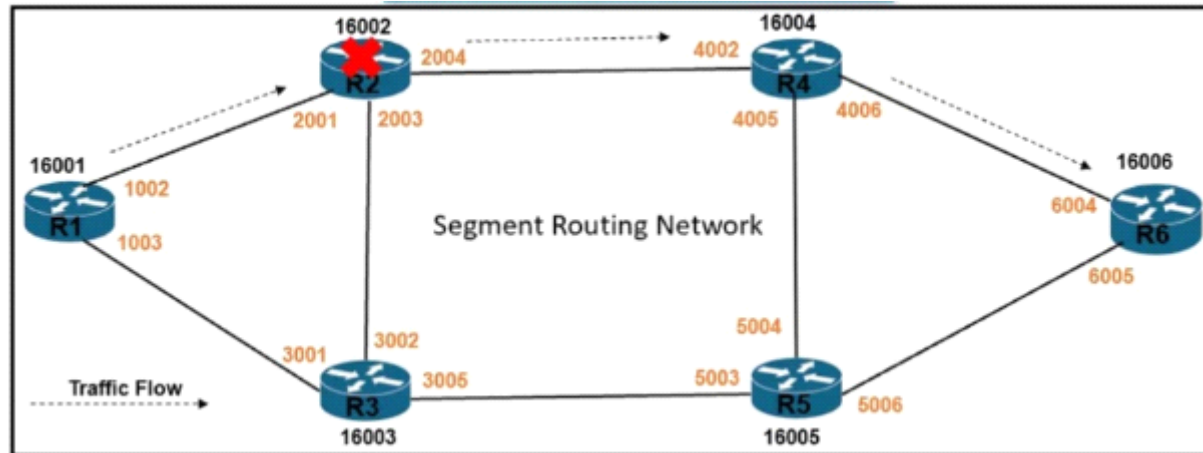
Answer:

B

Question 9

Question Type: MultipleChoice

Refer to the exhibit.



Traffic flow from router R1 to router R6 is delay-sensitive. It must consider potential link-failure and node-failure conditions. Which configuration must an engineer apply to router R1 to route traffic to router R6 if router R2 fails?

- ```
router ospf 1
 area 1
 interface GigabitEthernet0/0/1
 fast-reroute per-prefix
 fast-reroute per-prefix tiebreaker node-protecting index 100
 fast-reroute per-prefix tiebreaker srlg-disjoint index 200
```
- ```
router ospf 1
  area 1
  interface GigabitEthernet0/0/1
  fast-reroute per-prefix
  fast-reroute per-prefix ti-lfa
  fast-reroute per-prefix tiebreaker node-protecting index 100
```
- ```
router ospf 1
 area 1
 interface GigabitEthernet0/0/1
 fast-reroute per-prefix
 fast-reroute per-prefix ti-lfa
```
- ```
router ospf 1
  area 1
  interface GigabitEthernet0/0/1
  fast-reroute per-prefix
  fast-reroute per-prefix ti-lfa
  fast-reroute per-prefix tiebreaker srlg-disjoint index 100
```

Options:

A- Option A

B- Option B

C- Option C

D- Option D

Answer:

B

Question 10

Question Type: MultipleChoice

Refer to the exhibit.

```
show ip route ospf
```

```
O    192.168.1.0/24 [110/11] via 172.16.14.1, 01:17:30, Ethernet0/0
O IA 192.168.2.0/24 [110/21] via 172.16.14.1, 00:49:23, Ethernet0/0
O IA 192.168.3.0/24 [110/21] via 172.16.14.1, 00:47:37, Ethernet0/0
O IA 192.168.20.0/24 [110/21] via 172.16.14.1, 00:49:08, Ethernet0/0
O IA 192.168.21.0/24 [110/21] via 172.16.14.1, 01:11:23, Ethernet0/0
O IA 192.168.22.0/24 [110/21] via 172.16.14.1, 01:11:13, Ethernet0/0
O IA 192.168.23.0/24 [110/21] via 172.16.14.1, 01:11:03, Ethernet0/0
O IA 192.168.32.0/24 [110/21] via 172.16.14.1, 00:47:50, Ethernet0/0
O IA 192.168.33.0/24 [110/21] via 172.16.14.1, 01:04:37, Ethernet0/0
O IA 192.168.34.0/24 [110/21] via 172.16.14.1, 00:02:26, Ethernet0/0
O IA 192.168.35.0/24 [110/21] via 172.16.14.1, 00:02:16, Ethernet0/0
O IA 192.168.36.0/24 [110/21] via 172.16.14.1, 00:02:06, Ethernet0/0
O IA 192.168.37.0/24 [110/21] via 172.16.14.1, 00:01:56, Ethernet0/0
O IA 192.168.38.0/24 [110/21] via 172.16.14.1, 00:01:43, Ethernet0/0
O IA 192.168.39.0/24 [110/21] via 172.16.14.1, 00:01:28, Ethernet0/0
```

An engineer applied the summarization configuration on R1 for four networks (192.168.20.0/24 to 192.168.23.0/24) in area 1 and eight networks (192.168.32.0/24 to 192.168.39.0/24) in area 2 to stop the flooding of all the customer routes. While checking the routing table of R2, the engineer noticed that R1 is still sending only specific routes to R2. Which configuration should the engineer apply on R1 to summarize routes?

- R1(config)# **router ospf 1**
R1(config-router)# **area 1 range 192.168.20.0 255.255.252.0**
R1(config-router)# **area 2 range 192.168.32.0 255.255.240.0**

- R1(config)# **router ospf 1**
R1(config-router)# **area 1 range 192.168.20.0 255.255.248.0**
R1(config-router)# **area 2 range 192.168.32.0 255.255.240.0**

- R1(config)# **router ospf 1**
R1(config-router)# **area 1 range 192.168.20.0 255.255.252.0**
R1(config-router)# **area 2 range 192.168.32.0 255.255.248.0**

- R1(config)# **router ospf 1**
R1(config-router)# **area 1 range 192.168.20.0 255.255.252.0**
R1(config-router)# **area 2 range 192.168.32.0 255.255.253.0**

Options:

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

Answer:

C

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