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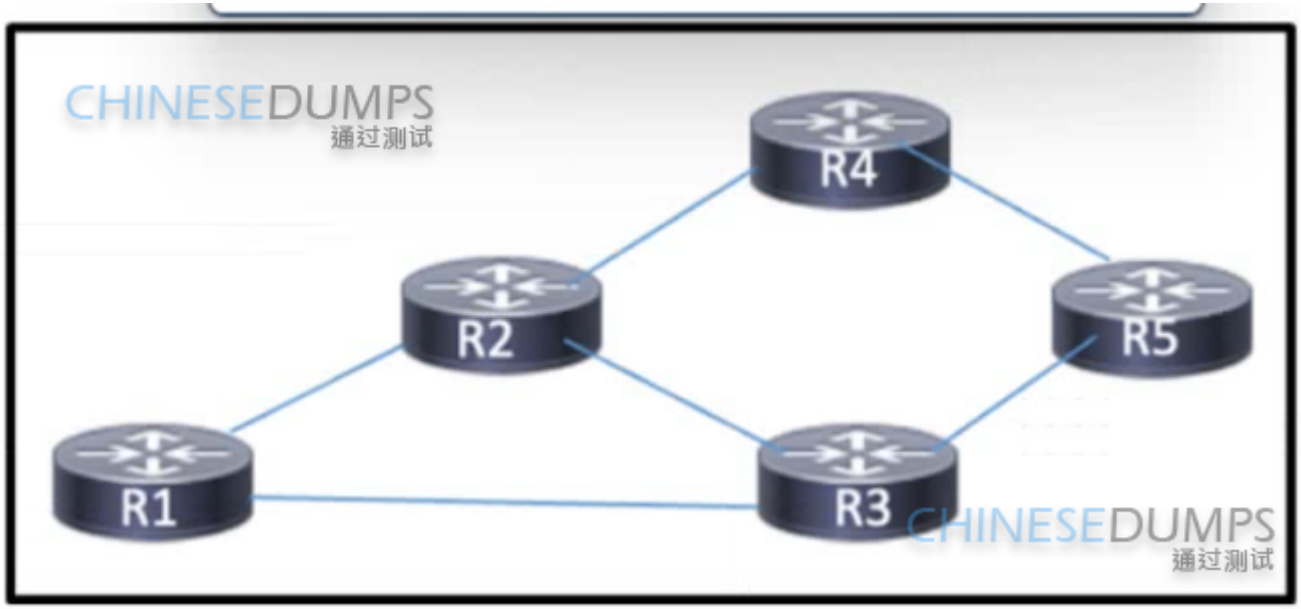
Question 1

Question Type: MultipleChoice

Refer to the exihibit.



Refer to the exhibit. Routers R1 through R5 are being deployed within the core of a service provider running BGP The core supports distribution of VPNv4 routes using MPLS. R3 currently has multiple paths to reach R4. A network engineer must implement BGP attributes so that R3 can reach R4 via R1. Which action must the engineer take to meet the requirement?

Options:

A- Configure R3 so the route to R4 through R1 will have a higher weight than the route from R2 or R5.

B- Configure R2 to send the route from R4 to R1 using a higher metric than what is advertised to R3.

C- Configure R5 to send the route from R4 to R1 using a longer AS path than the AS path that it receives from R1 or R2.

D- Configure R3 so the route to R4 through R1 will have a lower local preference than the route from R2 or R5

Answer:

A

Explanation:

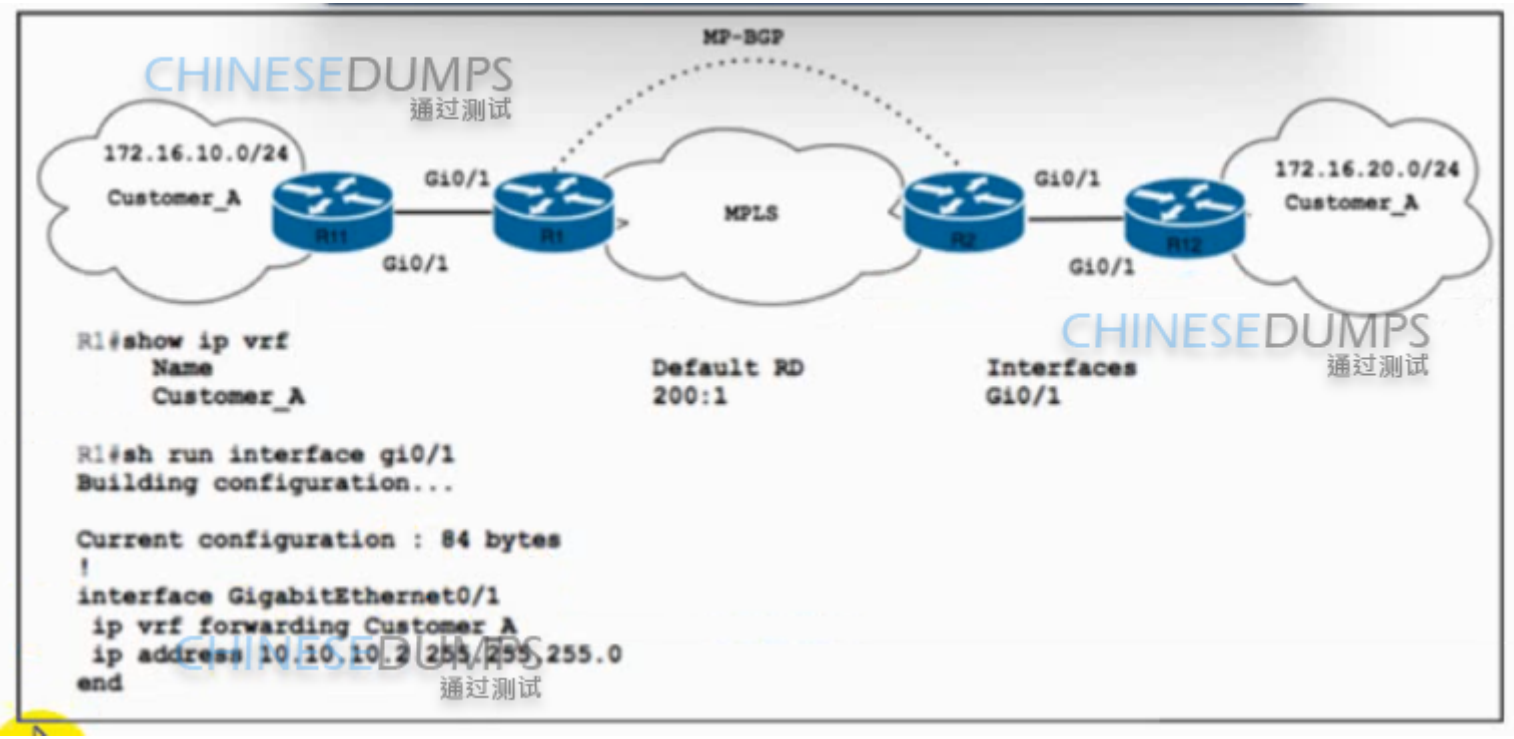
To direct traffic from R3 to R4 via R1, the weight attribute on R3 can be set higher for the route through R1 compared to other routes. Weight is a Cisco-specific BGP attribute that determines the preferred path when multiple routes to the same destination exist. It is local to the router on which it is configured and not advertised to other BGP peers.

Implementing and Operating Cisco Service Provider Network Core Technologies (SPCOR) course materials.

Question 2

Question Type: MultipleChoice

Refer to the exihibit.



Refer to the exhibit. Customer_A asked ISP_A to connect two offices via an MPLS L3 VPN. Customer_A is currently using only the default route toward ISP_

Options:

A- The engineer at ISP_A already configured the ip route vrf Customer_A 172.16.10.0 255.255.255.0 10.10.10.1 command on R1.

Which action completes the configuration?

A- Configure the network 172.16.10.0 and redistribute-internal static commands under the BGP address family for Customer_A in the global BGP configuration on R1.

B- Enable the bgp default route-target filter and default-Information originate commands under the global BGP configuration on R2.

C- Configure the route-target both 200:1 and route-replicate vrf Customer_A commands under the lp vrf configuration on R2.

D- Configure the redistribute static and redistribute connected commands on R1.

Answer:

A, A

Explanation:

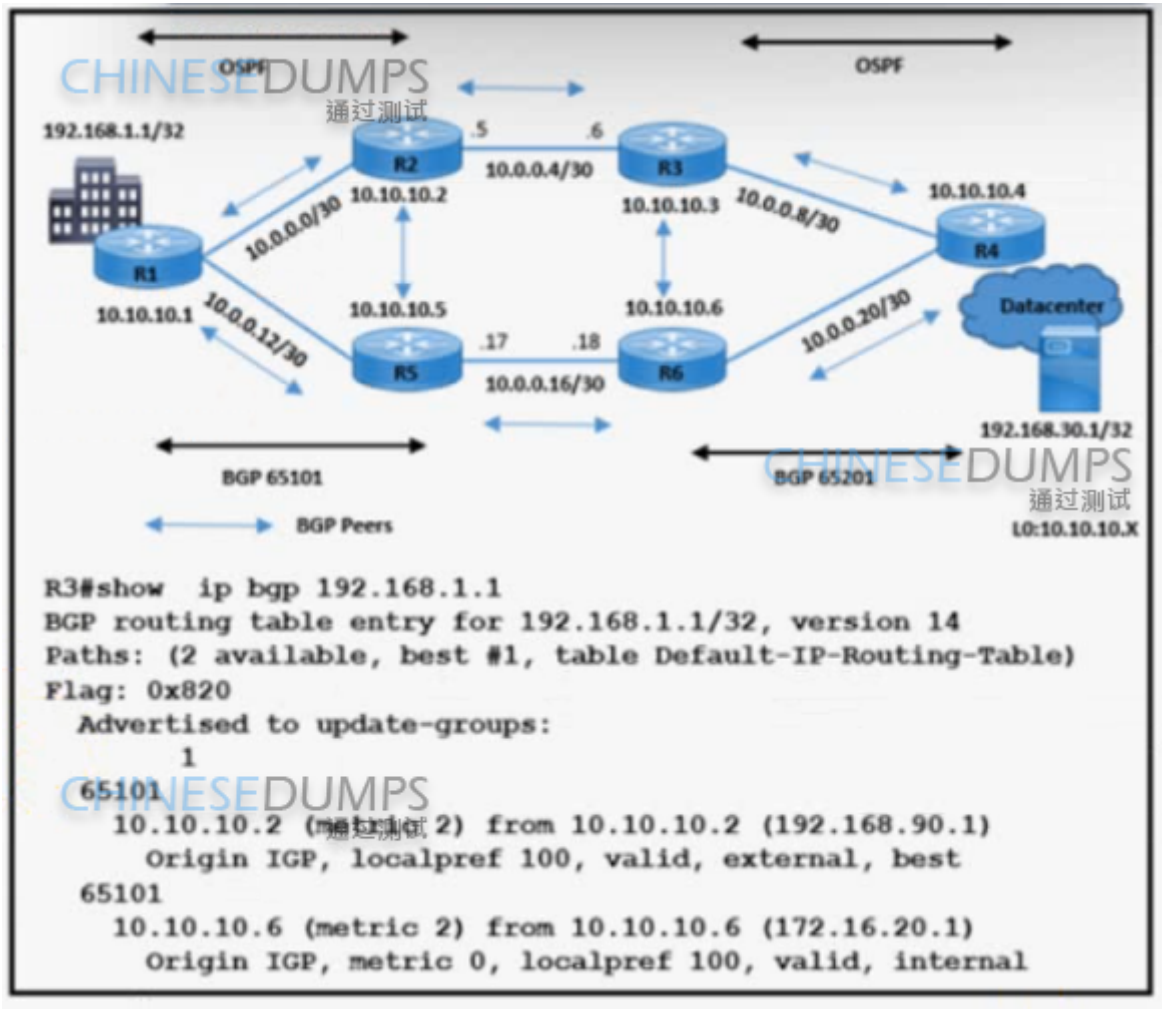
The correct action to complete the configuration for connecting two offices via an MPLS L3 VPN is option A. This involves configuring the network 172.16.10.0 and using the redistribute-internal static commands under the BGP address family for Customer_A in the global BGP configuration on R1. In an MPLS L3 VPN, the provider edge (PE) router, which is R1 in this scenario, redistributes customer routes into BGP. The PE router then advertises these routes to other PE routers within the MPLS network using MP-BGP, allowing for the establishment of the VPN.

Implementing and Operating Cisco Service Provider Network Core Technologies (SPCOR) course materials and official Cisco documentation.

Question 3

Question Type: MultipleChoice

Refer to the exihibit.



Refer to the exhibit. A network engineer is implementing BGP in AS 65101 and AS 65201. R3 sends data traffic to 192.168.1.1 /32 via the path R3-R2-R1. The traffic must travel via alternate path R6-R5 for prefix 192.168.1.1/32. Which action must be taken to meet the requirement?

Options:

A- Apply route-map HIGH-MED out on R2 for neighbor R3.

B- Apply route-map HIGH-LP in on R3 for neighbor R6

C- Apply route-map LOW-LP out on R2 for neighbor R3.

D- Apply route-map LOW-MED in on R5 for neighbor R2

Answer:

B

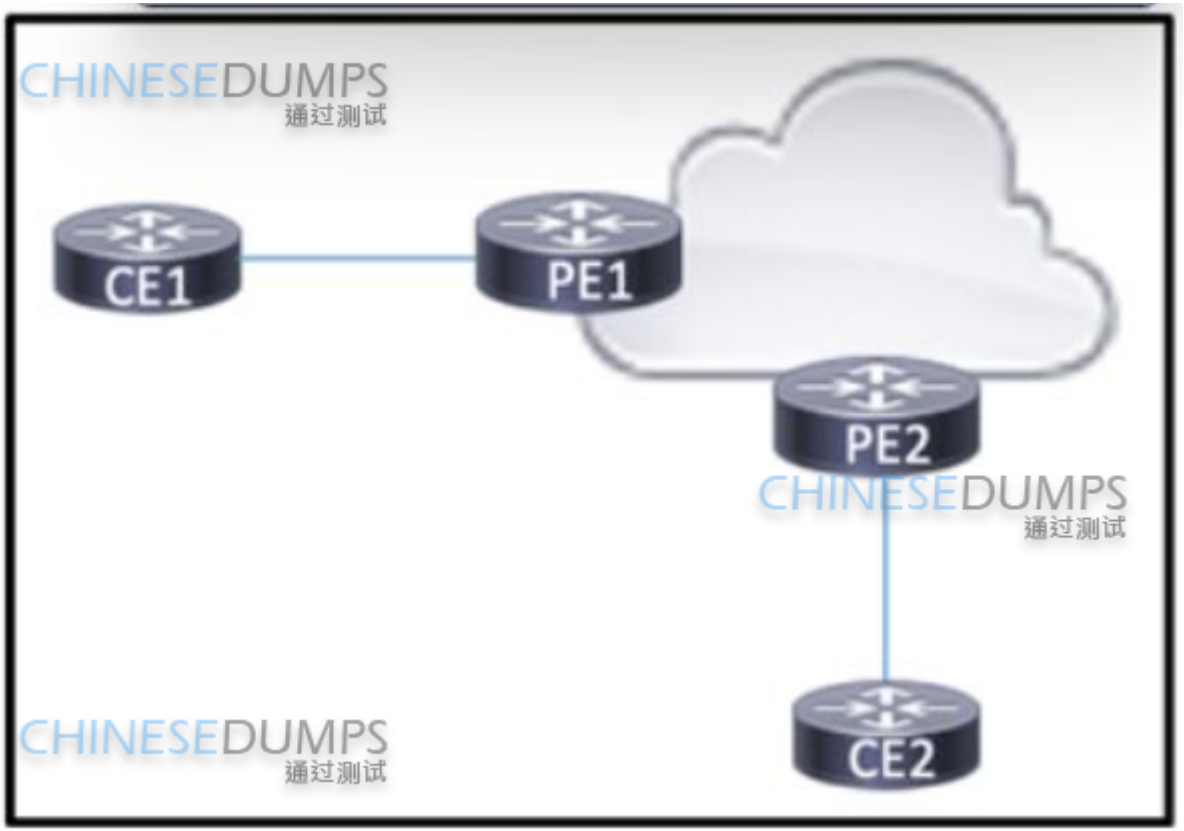
Explanation:

To ensure that traffic for the prefix 192.168.1.1/32 travels via the alternate path R6-R5, a route-map with a higher local preference should be applied inbound on R3 for neighbor R6. This will make the path through R6-R5 more preferable, thus meeting the requirement.Reference:=Implementing and Operating Cisco Service Provider Network Core Technologies

Question 4

Question Type: MultipleChoice

Refer to the exihibit.



Refer to the exhibit BGP is running in the core of the service provider to exchange routes for its customers, and OSPF serves as the PE-CE routing protocol. The service provider s existing customer at CE1 is opening a new office in a different geographical location connected via CE2. A network engineer must update the BGP implementation so that PE1 and PE2 will share routes and provide communication between CE1 and CE2 Which action must the engineer take?

Options:

A- Configured CE2 to establish a BGP relationship with PE1 and PE2

B- Configure CE1 and CE2 with a pseudowire that will run over the service provider core.

C- Configure PE1 and PE2 to mutually redistribute BGP and OSPF in the VRF for the customer.

D- Configure PE1 and PE2 to redistribute OSPF from the VRF for the customer into BGPPUM

Answer:

C

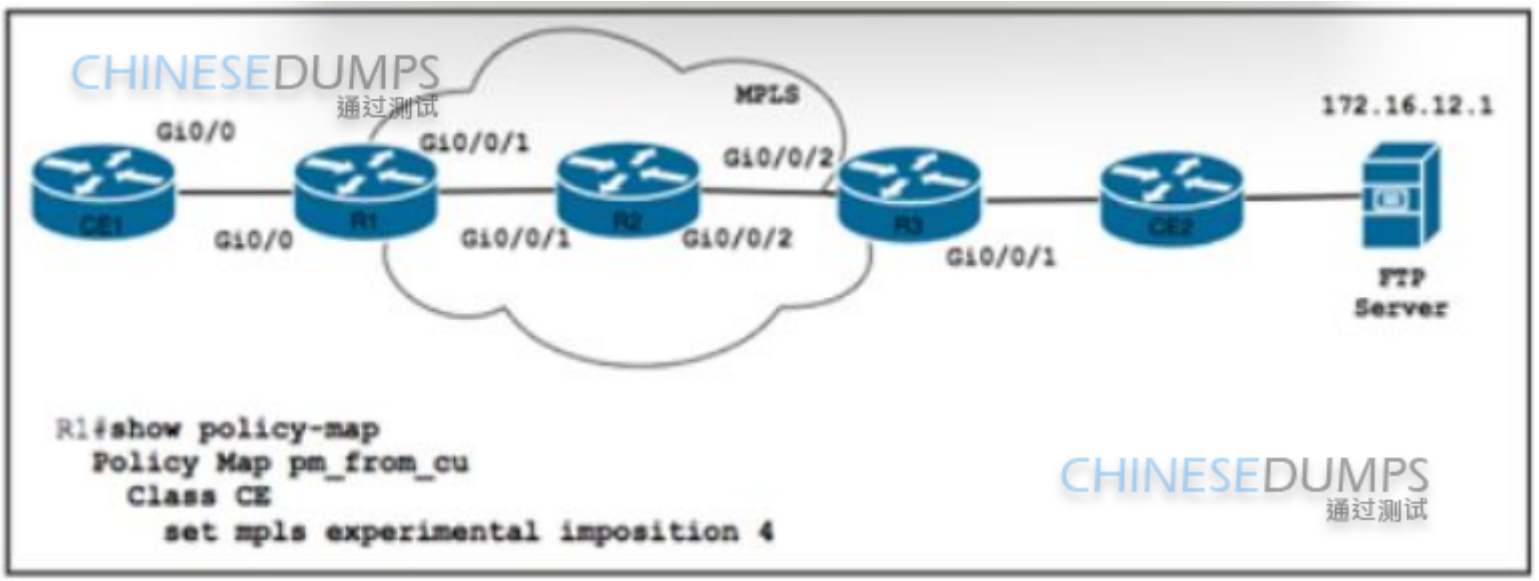
Explanation:

In this scenario, BGP is used in the core of the service provider network, while OSPF serves as the PE-CE routing protocol. To ensure communication between CE1 and CE2, which are located in different geographical locations, it's essential for PE1 and PE2 to share routes. This can be achieved by configuring both PEs to mutually redistribute BGP and OSPF routes within the VRF dedicated for that customer, ensuring seamless communication between both customer endpoints.Reference:Implementing and Operating Cisco Service Provider Network Core Technologies

Question 5

Question Type: MultipleChoice

Refer to the exihibit.



Refer to the exhibit. Router R1 is configured with class map CE with match Ip precedence critical to align with customer contract SLAs. The customer is sending all traffic from CE1 toward the FTP server with IP precedence 5 A network engineer must allow 10% of interface capacity on router R3 Which two actions must the engineer take to accomplish the task? (Choose two)

Options:

A- Imptem4Dt4M$ map on R1 to match all packets with QoS IP precedence value 100.

B- Implement a class map on R3 to match all packets with QoS IP precedence value 101.

C- Apply a policy map to R1 to reserve the remaining 10% of interface bandwidth.

D- Apply a policy map to R3 to reserve 10% of interface bandwidth.

E- Implement a class map on R3 to match all packets with QoS IP precedence.

Answer:

C, D

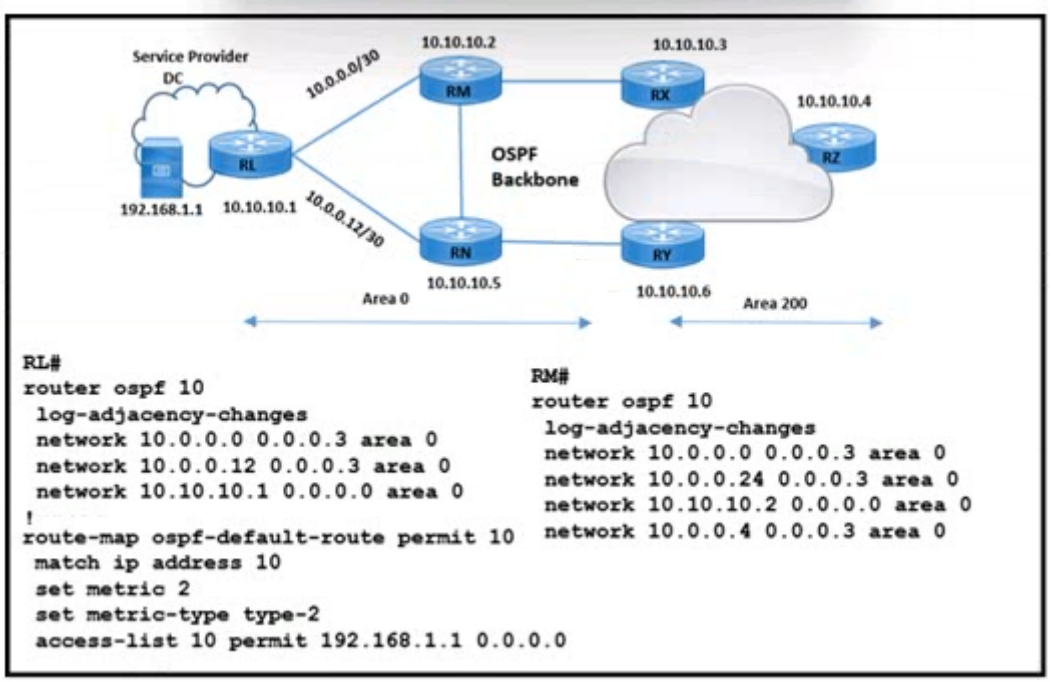
Explanation:

To align with customer contract SLAs and allow 10% of interface capacity on router R3 for traffic from CE1 towards the FTP server, the network engineer must apply a policy map to R1 to reserve the remaining 10% of interface bandwidth (Option C). Additionally, applying a policy map to R3 to reserve 10% of interface bandwidth (Option D) ensures adherence to the customer's contract SLAs while utilizing the allocated bandwidth capacity.Reference: Implementing and Operating Cisco Service Provider Network Core Technologies (SPCOR) - Quality of Service section.

Question 6

Question Type: MultipleChoice

Refer to the exihibit.



Refer to the exhibit. The operations team for a service provider network is implementing a route map policy. OSPF area 0 should originate the default route with a type 2 metric of 2 when the application server on the connected interface (192.168.1.1) is up. Routers RL and RM have set up OSPF peering with other adjacent routers. Which action meets this requirement?

Options:

A- Apply default-information originate route-map ospf-default-route on router RL.

B- Configure distribute-list route-map ospf-default-route out on router RM.

C- Configure distribute-list route-map ospf-default-route out on router RL.

D- Apply default-information originate route-map ospf-default-route on router RM.

Answer:

A

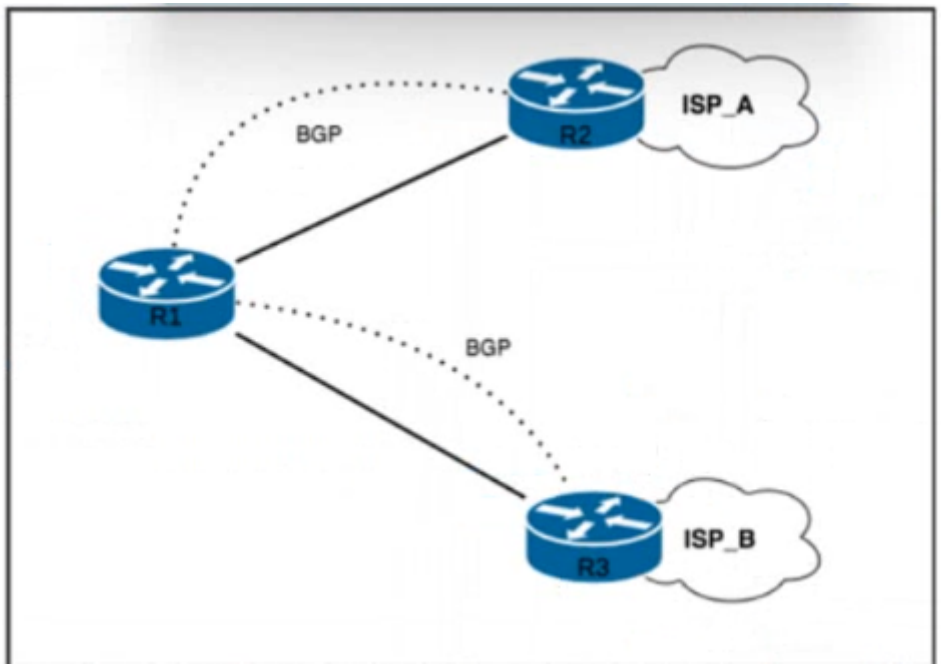
Explanation:

To achieve the origination of a default route based on the condition of the application server being up, a route map policy needs to be applied. This policy should match the condition of the server's status and then use thedefault-information originatecommand to originate the default route with the specified metric type and value on router RL.

Question 7

Question Type: MultipleChoice

Refer to the exihibit.



Refer to the exhibit. R1 has two upstream Tier 1 service providers. BGP is in use as the exterior routing protocol, and ISP_A and ISP_B are sending the full BGP table. A network engineer must assign local-preference 70 to all routes with multiple exit discriminator 30. Which configuration must the network engineer apply?

○ route-policy routepolicy
if destination in (0.0.0.0/0) and (med = 30) then
set local-preference 170
else
set local-preference 70
drop
endif
end-policy

○ route-policy routepolicy
if destination 0.0.0.0/0 and med 30 then
set local-preference 70
else
drop
endif
end-policy

○ route-policy routepolicy
if med eq 30 then
set local-preference 70
else pass
endif
end-policy

○ route-policy routepolicy
if destination in (.*) and med eq 70 then
set local-preference 30
else
drop
endif
end-policy

Options:

A- Option A

B- Option B

C- Option C

D- Option D

The configuration in Option C uses a route policy that checks if the MED is equal to 30 and then sets the local-preference to 70. This aligns with the requirement to prioritize routes with a MED of 30 by assigning them a higher local-preference value, which influences the BGP path selection process in favor of these routes.

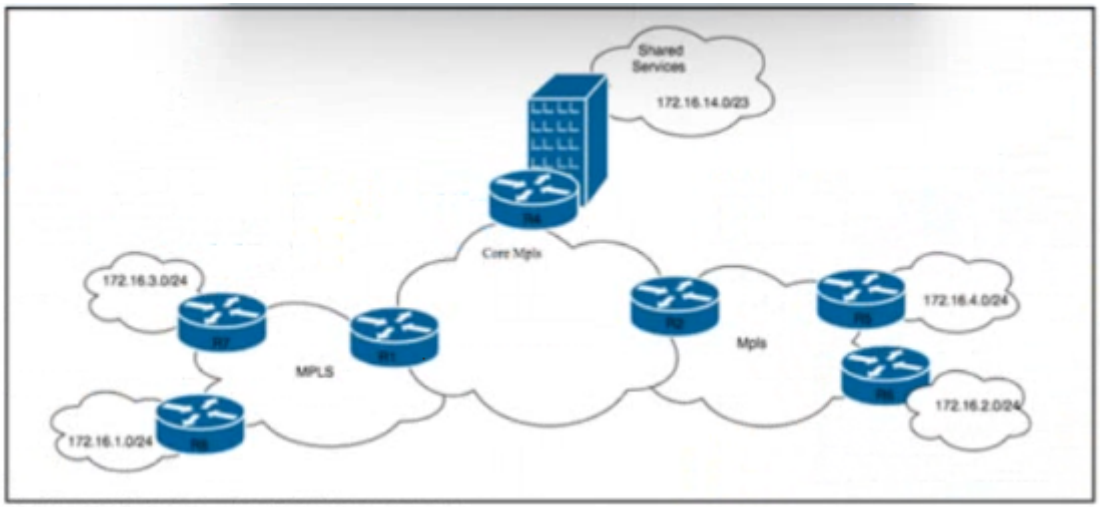
Answer:

C

Question 8

Question Type: MultipleChoice

Refer to the exihibit.



Refer to the exhibit. The ISP is implementing a new hosting-as-a-service solution for its business customers. Service accessibility must be unique and separate for each customer. The network architect must ensure that multiple paths toward the hosting-as-a-service solution are always available. Basic protection against traffic black-holing on the MPLS network is required in case of link failure. Which two actions must the engineering team perform to meet the requirements? (Choose two.)

Options:

A- Create the hosting-as-a-service VRF on router R4 and configure It with the route target both 65123:88 command.

B- Configure the fast-reroute per-prefix command for the IS-IS protocol in the MPLS network and enable the BGP route-reflector feature on R2.

C- Enable the VRF-Lite feature on router R4 and enable BGP address-family VPNv4.

D- Configure the mpls ldp sync command in the MPLS network with the BGP additional-paths receive and additional-paths send options.

E- Configure the fast-hello command under the IS-IS routing protocol with the BGP multipath 2 option enabled.

Answer:

B, D

Explanation:

To ensure multiple paths toward the hosting-as-a-service solution and basic protection against traffic black-holing in case of link failure, the engineering team should:

B) Configure the fast-reroute per-prefix command for the IS-IS protocol in the MPLS network. This action enables fast reroute, which is a mechanism to quickly switch over to a backup path in case the primary path fails, without waiting for the routing protocol to converge.

D) Configure the mpls ldp sync command in the MPLS network with the BGP additional-paths receive and additional-paths send options. MPLS LDP (Label Distribution Protocol) synchronization ensures that a label-switched path (LSP) is not used for forwarding traffic until all routers along the path have signaled that they have label information for that LSP. The BGP additional-paths feature allows for the advertisement of multiple paths for the same prefix, providing path diversity and redundancy.