

# 300-515<sup>Q&As</sup>

Implementing Cisco Service Provider VPN Services (SVPI)

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### QUESTION 1

How does Layer 3 VPN traffic traverse an ISP network?

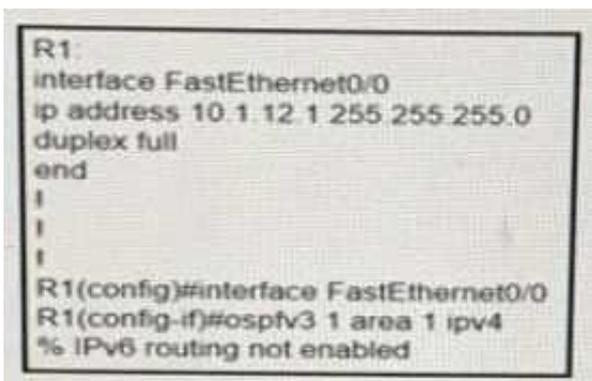
- A. Devices on the network use MPLS labels to share VPN routes between P routers in the network.
- B. Devices on the network use LSAs to share routes between P routers in the network.
- C. Devices on the network use MPLS labels to move VPN traffic through the network.
- D. Devices on the network use GRE tunnels to move traffic between VRFs.

Correct Answer: C

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### QUESTION 2

Refer to the exhibit:



```
R1
interface FastEthernet0/0
ip address 10.1.12.1 255.255.255.0
duplex full
end
|
|
|
R1(config)#interface FastEthernet0/0
R1(config-if)#ospfv3 1 area 1 ipv4
% IPv6 routing not enabled
```

A network engineer is implementing an OSPF configuration Based on the output, which statement is true?

- A. In the ospfv3 1 area 1 ipv4 command, area 0 must be configured instead of area 1.
- B. OSPFv3 does not run for IPv4 on FastEthernet0/0 until IPv6 routing is enabled on the router and IPv6 is enabled on interface FastEthernet0/0
- C. OSPFv3 cannot be configured for IPv4; OSPFv3 works only for IPv6.
- D. "IPv6 routing not enabled" is just an informational message and OSPFv3 runs for IPv4 on interface FastEthernet0/0 anyway

Correct Answer: B

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### QUESTION 3

Which optional information can be included with an IPv6 ping to support the troubleshooting process?

- A. IPv4 IP address

- B. source MAC address
- C. destination MAC address
- D. IPv6 hostname

Correct Answer: D

Reference: <https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/ipv6/configuration/xr-3s/ipv6-xr-36s-book/ip6-mng-apps.html>

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#### QUESTION 4

Refer to the exhibit.

```
R1
vfi ciscotest manual
vgn id 101
neighbor 192.168.1.2 encapsulation mpls
neighbor 192.168.10.2 encapsulation mpls
neighbor 192.168.20.2 encapsulation mpls
```

An organization is running H-VPLS on a network comprising four routers in a hub-and-spoke topology with R1 as the hub. An engineer added a new spoke with multiple VCs to the network, and now traffic cannot flow properly. How should the engineer update the configuration on R1 to correct the problem?

- A. Disable spanning tree to allow loops to occur within the hub-and-spoke topology.
- B. Disable split horizon to allow multiple VCs per spoke
- C. Disable Cisco Discovery Protocol to allow MPLS to share labels between the designated spokes
- D. Disable Cisco Discovery Protocol to allow for neighbor discovery

Correct Answer: B

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#### QUESTION 5

```
RP/0/0/CPU0:PE1#show run
evpn
no evi 100
no advertise-mac
!
!
vrf EVPN
address-family ipv4 unicast
import route-target
133:100
export route-target
133:100
!
!
interface BVI651
vrf EVPN
ipv4 address 192.168.100.1 255.255.255.0
mac-address 1337.1337.1337
```

Refer to the exhibit. A network operator is implementing EVPN IRB on PE1. Which two command placements enable the advertisement of Type 2 routes and what information do Type 2 routes contain? (Choose two.)

- A. The operator adds in "host-routing" under the VRF EVPN.
- B. Type 2 routes contain MAC/IP information.
- C. Type 2 routes contain Ethernet Auto-Discovery information.
- D. The operator adds in "host-routing" under the BVI651 interface.
- E. Type 2 routes contain inclusive source-specific multicast route information.

Correct Answer: BD

Reference: [https://www.cisco.com/c/en/us/td/docs/iosxr/ncs5500/vpn/61x/b-ncs5500-l2vpn-configuration-guide-61x/b-ncs5500-l2vpn-configuration-guide-61x\\_chapter\\_01010.html](https://www.cisco.com/c/en/us/td/docs/iosxr/ncs5500/vpn/61x/b-ncs5500-l2vpn-configuration-guide-61x/b-ncs5500-l2vpn-configuration-guide-61x_chapter_01010.html)

## QUESTION 6

How do Ethernet virtual circuits provide a way for service providers to maximize the use of VLAN tags?

- A. They add an additional tag to VLANs that allows up to two switch ports to use the same globally configured VLAN ID.
- B. They redefine the VLAN tag to include classification, forwarding, and QoS using MPLS labels and EXP bits
- C. They separate the classification and forwarding concepts for VLAN tagging which allows multiple switch ports to use the same VLAN ID without it being configured globally.

D. They assign VLAN IDs to VTP domains so that the same VLAN ID are used more than once globally.

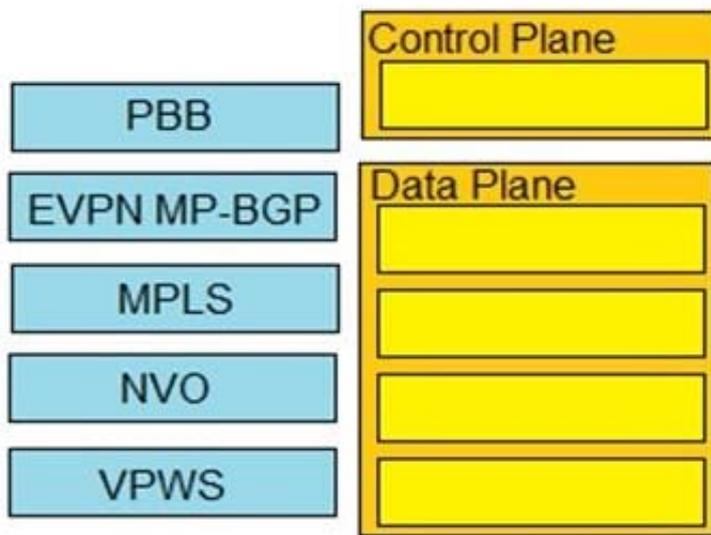
Correct Answer: C

**QUESTION 7**

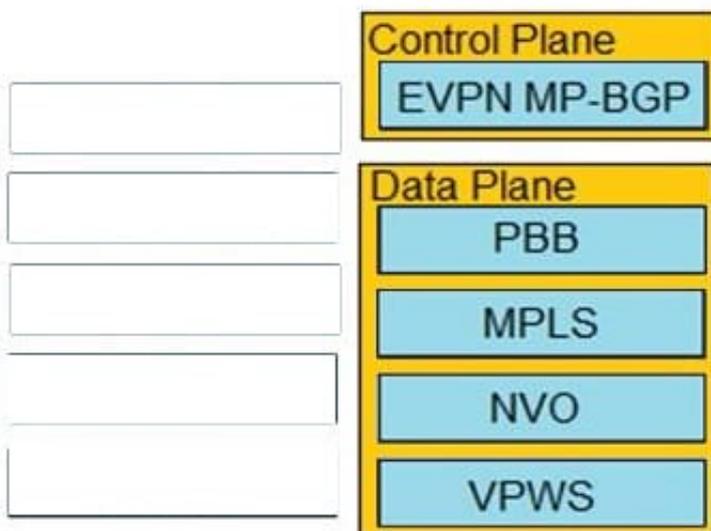
DRAG DROP

Drag and drop the EVPN components from the left onto the correct planes on the right.

Select and Place:



Correct Answer:



Reference: [https://www.cisco.com/c/dam/m/en\\_us/network-intelligence/service-provider/digital-transformation/knowledge-network-webinars/pdfs/0420-eqn-ckn.pdf](https://www.cisco.com/c/dam/m/en_us/network-intelligence/service-provider/digital-transformation/knowledge-network-webinars/pdfs/0420-eqn-ckn.pdf) slide 8

### QUESTION 8

You are troubleshooting ARP connectivity issues for an Ethernet interface on an IOS XR network that runs IS-IS. You verify that the IGP protocol is running, but an ARP entry has not yet been created. Which action should you take?

- A. debug ping packets
- B. debug ARP
- C. ping the connected neighbor
- D. verify the RIB table routes

Correct Answer: C

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### QUESTION 9

```
ip vrf mvpn-extranet
rd 12:1
vpn id 12:1
route-target import 12:2
route-target export 12:3
mdt default mpls mldp 192.168.1.2
exit
ip multicast-routing vrf mvpn-extranet
```

Refer to the exhibit. What is the effect of this configuration?

- A. The mroute table is cleared.
- B. Router 1 accepts multicast routes with a tag of 12:1
- C. A Cisco MPLS TE tunnel is generated with 192.168.1.2 as the source IP address of router 1.
- D. An LSP virtual interface tunnel is created.

Correct Answer: B

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### QUESTION 10

The network engineering group of a large ISP needs to harden the management plane of its Cisco 9000 Series ASRs. While addressing IPv6 ICMP issues, they realized they have to limit the rate at which IPv6 ICMP error messages are sent out on the network. Which command do they need to apply?

- A. icmp ipv6 rate-limit unreachable 1000

- B. ipv6 rate-limit 1000
- C. icmp ipv4 rate-limit unreachable 1000
- D. ipv6 icmp error-interval 50 20

Correct Answer: D

Reference: [https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/ipv6\\_basic/configuration/xe-3s/ip6b-xe-3s-book/ip6-icmp-rate-lmt-xe.html](https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/ipv6_basic/configuration/xe-3s/ip6b-xe-3s-book/ip6-icmp-rate-lmt-xe.html)

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### QUESTION 11

You are writing the requirements for an MPLS L3VPN environment that uses MP-BGP between PE routers. In this environment, route targets and route distinguishers need to be advertised between the PE routers.

Which three operations meet these requirements? (Choose three.)

- A. mandatory creation of PE-to-PE BGP sessions between the outgoing interface IP addresses
- B. advertisement of standard communities, enabled on the PE-to-PE BGP neighbors
- C. creation of PE-to-PE BGP sessions between loopback IP addresses
- D. full mesh of IBGP sessions
- E. full mesh of EBGP sessions and partial mesh of IBGP sessions
- F. advertisement of extended communities, enabled on the PE-to-PE BGP neighbors

Correct Answer: CDF

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### QUESTION 12

In an Ethernet Virtual Circuit environment, which restriction do bridge domains have when STP is running?

- A. The STP mode must be RSTP or PVST+
- B. Bridge domains must be mapped to a different VLAN.
- C. The STP mode must be MSTP
- D. Bridge domains must belong to different MST instances.

Correct Answer: C

Reference: [https://www.cisco.com/c/en/us/td/docs/routers/asr920/configuration/guide/ce/b\\_ce\\_xe-313s-asr920-book/b\\_ce\\_xe-313s-asr920-book\\_chapter\\_01.html#reference\\_770349446ED24E83821EF701DDC46BFD](https://www.cisco.com/c/en/us/td/docs/routers/asr920/configuration/guide/ce/b_ce_xe-313s-asr920-book/b_ce_xe-313s-asr920-book_chapter_01.html#reference_770349446ED24E83821EF701DDC46BFD)

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### QUESTION 13

With Layer 3 MPLS VPN implementations on Cisco IOS XR PE routers, an interface is assigned to a VRF using the vrf command in which configuration mode?

- A. RP/0/RP0/CPU0:PE(config-bgp)#
- B. RP/0/RP0/CPU0:PE(config-if)#
- C. RP/0/RP0/CPU0:PE(config-bgp-af)#
- D. RP/0/RP0/CPU0:PE(config-vrf)#

Correct Answer: B

Reference: [https://www.cisco.com/c/en/us/td/docs/ios\\_xr\\_sw/iosxr\\_r3-7/mpls/configuration/guide/gc37v3.html](https://www.cisco.com/c/en/us/td/docs/ios_xr_sw/iosxr_r3-7/mpls/configuration/guide/gc37v3.html)

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#### QUESTION 14

What do EVPN single-active and all-active have in common?

- A. They are default gateway redundancy options.
- B. They are multihoming mechanisms used for CE devices.
- C. They are used to provide single connection from a CE device to a service provider.
- D. They are both roles that a designated router can take when MPLS is used with EVPN.

Correct Answer: D

Reference: [https://www.cisco.com/c/en/us/td/docs/routers/asr9000/software/asr9k-r6-2/lxvpn/configuration/guide/b-l2vpn-cg-asr9000-62x/b-l2vpn-cg-asr9000-62x\\_chapter\\_01011.html](https://www.cisco.com/c/en/us/td/docs/routers/asr9000/software/asr9k-r6-2/lxvpn/configuration/guide/b-l2vpn-cg-asr9000-62x/b-l2vpn-cg-asr9000-62x_chapter_01011.html)

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#### QUESTION 15

Which two BGP attributes prevent loops in a route reflector environment? (Choose two.)

- A. cluster ID
- B. local preference
- C. origin
- D. originator ID
- E. AS\_PATH

Correct Answer: AD

Reference: <https://www.ciscopress.com/articles/article.asp?p=2756480andseqNum=10>