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Question 1

Question Type: MultipleChoice

A. Proxy-ARP/ND is operational for a VPLS. Which of the following statements is FALSE?

Options:

B- The PE has proxy-ARP and dynamic-populate enabled for the VPLS.

C- The proxy-ARP table is populated by snooping IP packets received from remote PEs.

D- When the PE learns a local host IP address, it adds an entry into its proxy-ARP table.

E- The PE advertises a MAC/IP route that includes the MAC and IP address of a local host.

Answer:

C

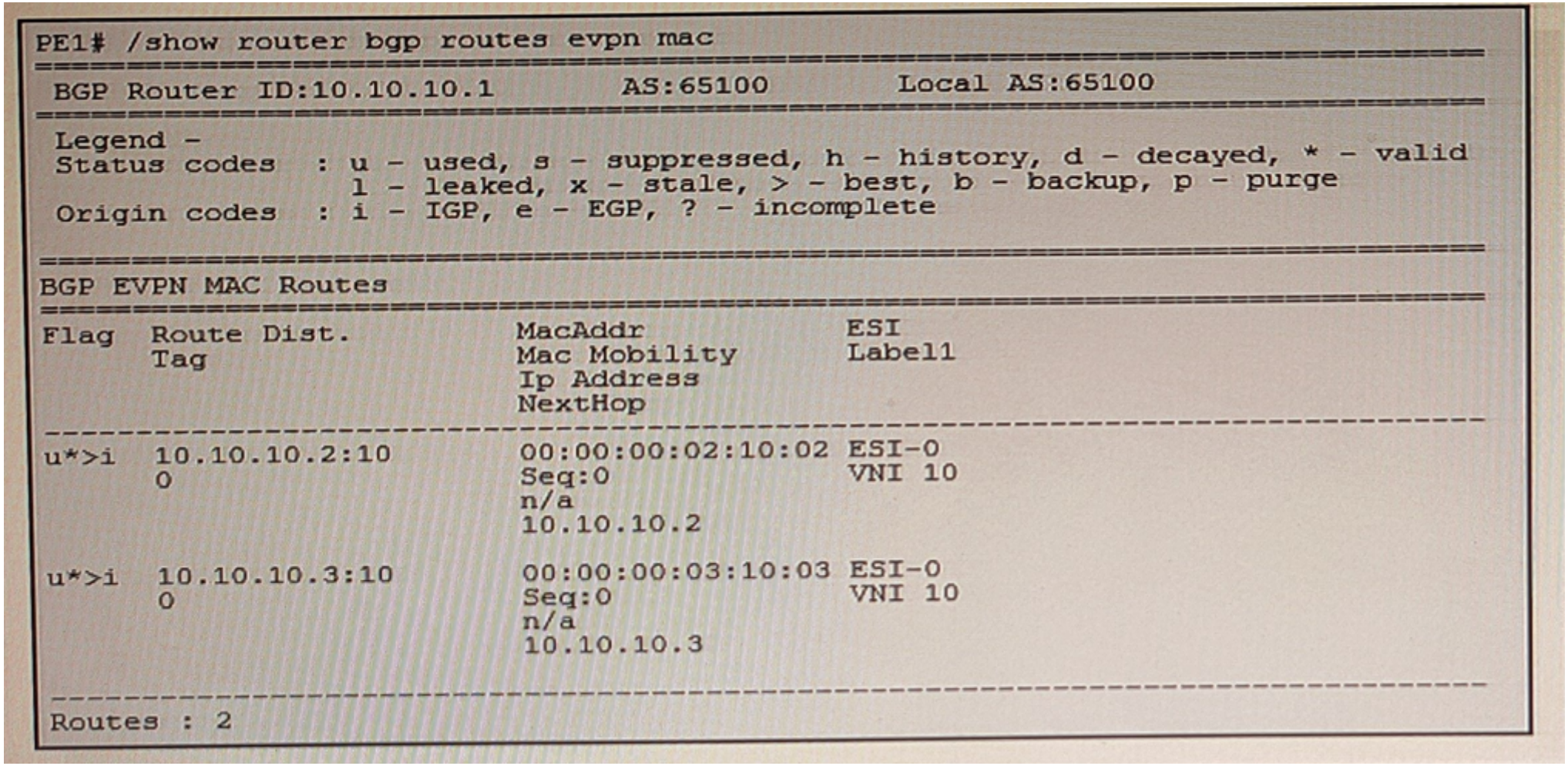
Explanation:

When the PE learns a local host IP address, it does not add an entry into its proxy-ARP table. The proxy-ARP table is populated by snooping IP packets received from remote PEs. The PE advertises a MAC/IP route that includes the MAC and IP address of a local host.

Question 2

Question Type: MultipleChoice

Based upon the exhibit, which of the following statements is FALSE?



```
PE1# /show router bgp routes evpn mac
===============================================================================
 BGP Router ID:10.10.10.1        AS:65100        Local AS:65100
===============================================================================
 Legend -
 Status codes  : u - used, s - suppressed, h - history, d - decayed, * - valid
                 l - leaked, x - stale, > - best, b - backup, p - purge
 Origin codes  : i - IGP, e - EGP, ? - incomplete

===============================================================================
BGP EVPN MAC Routes
===============================================================================
Flag  Route Dist.              MacAddr                 ESI
      Tag                      Mac Mobility            Label1
                               Ip Address
                               NextHop
-------------------------------------------------------------------------------
u*>i  10.10.10.2:10            00:00:00:02:10:02       ESI-0
      0                        Seq:0                   VNI 10
                               n/a
                               10.10.10.2

u*>i  10.10.10.3:10            00:00:00:03:10:03       ESI-0
      0                        Seq:0                   VNI 10
                               n/a
                               10.10.10.3

-------------------------------------------------------------------------------
Routes : 2
```

Options:

A- PEI populates this information into the local VPLS FDB.

B- Neighbors 10.10.10.2 and 10.10.10.3 have proxy-ARP enabled for the VPLS.

C- Neighbors 10.10.10.2 and 10.10.10.3 have a service that uses a network identifier of 10.

D- PEI uses VXLAN tunnels to reach neighbors 10.10.10.2 and 10.10.10.3.

Answer:

D

Explanation:

PE1 does not use VXLAN tunnels to reach neighbors 10.10.10.2 and 10.10.10.3. PE1 uses MPLS tunnels to reach these neighbors, as indicated by the MPLS label values in the output.

Question 3

Question Type: **MultipleChoice**

Based on the exhibit below, which of the following statements is TRUE?

```
PE1# /show router bgp routes evpn mac mac-address 00:00:00:02:10:02 hunt
===============================================================================
 BGP Router ID:10.10.10.1       AS:65100       Local AS:65100
===============================================================================
 Legend ...
===============================================================================
BGP EVPN MAC Routes
===============================================================================
-------------------------------------------------------------------------------
RIB In Entries
-------------------------------------------------------------------------------
Network          : n/a
Nexthop          : 10.10.10.2
From             : 10.10.10.2
Res. Nexthop     : 10.1.2.2
Local Pref.      : 100                    Interface Name : toPE2
Aggregator AS    : None                   Aggregator     : None
Atomic Aggr.     : Not Atomic             MED            : 0
AIGP Metric      : None                   IGP Cost       : 2
Connector        : None
Community        : target:65100:10 bgp-tunnel-encap:MPLS
Cluster          : No Cluster Members
Originator Id    : None                   Peer Router Id : 10.10.10.2
Flags            : Used Valid Best IGP
Route Source     : Internal
AS-Path          : No As-Path
EVPN type        : MAC
ESI              : ESI-0
Tag              : 0
IP Address       : n/a
Route Dist.      : 10.10.10.2:10
Mac Address      : 00:00:00:02:10:02
MPLS Label1      : LABEL 524284           MPLS Label2    : n/a
Route Tag        : 0
Neighbor-AS      : n/a
Orig Validation: N/A
Add Paths Send   : Default
Last Modified    : 00h12m09s
```

Options:

A- PE2 advertises this BGP update for a locally-configured VPWS service.

B- PEI uses this BGP update to build the flooding list of the associated service.

C- PEI uses MPLS label 524284 when sending traffic destined to

D- Neighbor 10.10.10.2 is connected to a multi-homed CE.

Answer:

B

Explanation:

PE1 uses this BGP update to build the flooding list of the associated service. The update contains an IMET route that indicates that neighbor 10.10.10.2 is participating in a VPLS service with a network identifier of 10.

Question 4

Question Type: MultipleChoice

Based on the exhibit below, which of the following statements is FALSE?

```
PE1# /show router bgp routes evpn incl-mcast originator-ip 10.10.10.2 detail
===============================================================================
 BGP Router ID:10.10.10.1       AS:65100       Local AS:65100
===============================================================================
-- Snip --
===============================================================================
BGP EVPN Inclusive-Mcast Routes
===============================================================================
Original Attributes

Network          : n/a
Nexthop          : 10.10.10.2
From             : 10.10.10.2
Res. Nexthop     : 10.1.2.2
Local Pref.      : 100                      Interface Name : toPE2
Aggregator AS    : None                     Aggregator     : None
Atomic Aggr.     : Not Atomic               MED            : None
AIGP Metric      : None                     IGP Cost       : 10
Connector        : None
Community        : target:65100:10 bgp-tunnel-encap:MPLS
Cluster          : No Cluster Members
Originator Id    : None                     Peer Router Id : 10.10.10.2
Flags            : Used Valid Best IGP
Route Source     : Internal
AS-Path          : No As-Path
EVPN type        : INCL-MCAST
Tag              : 0
Originator IP    : 10.10.10.2
Route Dist.      : 10.10.10.2:10
Route Tag        : 0
Neighbor-AS      : n/a
Orig Validation: N/A
Add Paths Send   : Default
Last Modified    : 00h11m41s
-------------------------------------------------------------------------------
PMSI Tunnel Attributes :
Tunnel-type      : Ingress Replication
Flags            : Type: RNVE(0) BM: 0 U: 0 Leaf: not required
MPLS Label       : LABEL 524284
Tunnel-Endpoint: 10.10.10.2
```

When forwarding BUM traffic, the local PE must replicate the traffic and send it as unicast to the advertising neighbor.

Options:

A- The MPLS label 524284 presented indicates the service label value that the neighbor 10.10.10.2 uses to forward BUM traffic to PEI.

B- When forwarding BUM traffic, the local PE uses an MPLS transport tunnel towards the advertising neighbor.

C- The IMET route is imported by a local VPLS configured with a route-target value of 65100:10.

Answer:

A

Explanation:

When forwarding BUM traffic, the local PE does not replicate the traffic and send it as unicast to the advertising neighbor. Instead, the local PE uses an MPLS transport tunnel towards the advertising neighbor and sends the traffic with an MPLS label that indicates the service.

Question 5

Question Type: MultipleChoice

What are EVPN inclusive multicast Ethernet tag (IMET) routes used for?

Options:

A- To advertise the MAC or MAC/IP addresses of locally-learned hosts

B- To advertise the redundancy mode of a local Ethernet segment

C- To discover all PES participating in the same VPIS service

D- To discover all PES attached to the same Ethernet segment

Answer:

C

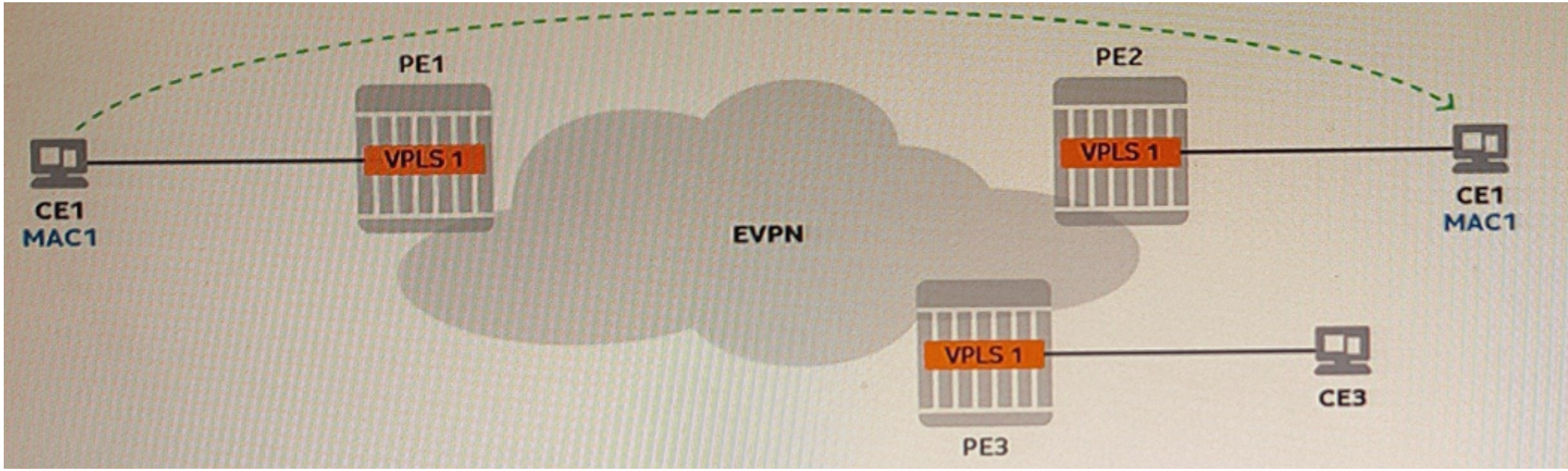
Explanation:

EVPN inclusive multicast Ethernet tag (IMET) routes are used to discover all PEs participating in the same VPIS service. These routes are also used to build the flooding list for BUM traffic.

Question 6

Question Type: MultipleChoice

In the exhibit,



MACI moves from PEI to PE2. Which of the following actions related to this MAC address mobility is performed?

Options:

A- CEI generates an update message to PEI withdrawing its MAC.

B- PEI generates an update message to remote PES identifying the new location of CEI.

C- PE2 advertises a MAC/IP route for MACI with a sequence number higher than that received from PEI.

D- PE3 waits to receive a data packet from CEI to update its FDB entry for MACI.

Answer:

C

Explanation:

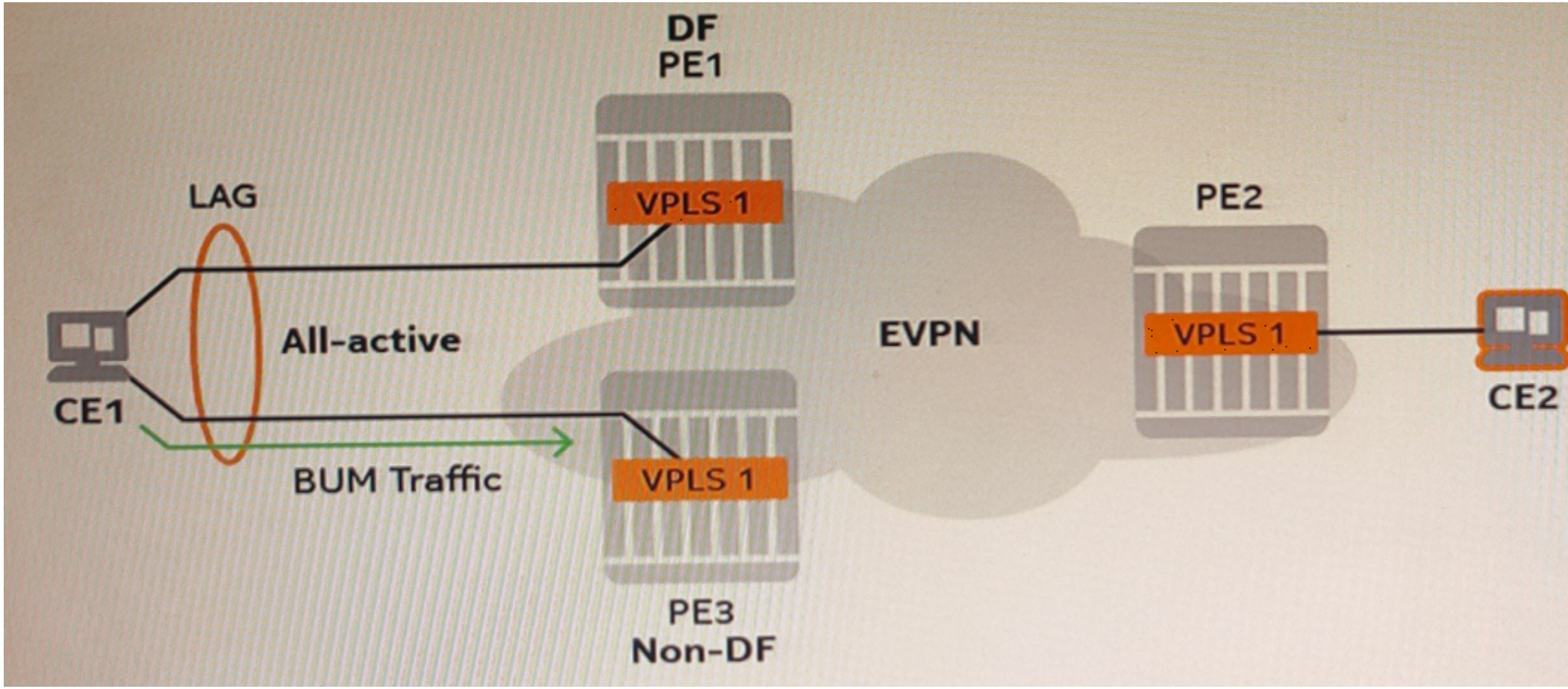
PE2 advertises a MAC/IP route for MAC1 with a sequence number higher than that received from PE1. This indicates that MAC1 has moved from PE1 to PE2 and triggers a MAC withdrawal message from PE1 to remote PEs.CE1 does not generate an update message to PE1 withdrawing its MAC, nor does PE1 generate an update message to remote PEs identifying the new location of CE11.

Verified Reference:Ethernet Virtual Private Networks (EVPNs)

Question 7

Question Type: MultipleChoice

Based upon the exhibit,



which of the following statements about the forwarding of BUM traffic is FALSE?

Options:

A- PE3 replicates the traffic and sends it to all PES in its VPLS I flooding list.

B- PE3 adds an ESI label to packets forwarded to PEI because PEI is connected to the same Ethernet segment.

C- PEI forwards the traffic received from PE3 to CEI, and CEI discards it based upon the ESI label.

D- PE2 decapsulates the packets received from PE3 and forwards the frames to CE2.

Answer:

B

Explanation:

PE3 does not add an ESI label to packets forwarded to PE1 because PE1 is connected to the same Ethernet segment.PE3 adds an ESI label only to packets forwarded to PEs that are not connected to the same Ethernet segment, such as PE21.

Verified Reference:Ethernet Virtual Private Networks (EVPNs)

Question 8

Question Type: MultipleChoice

Which of the following statements about EVPN Layer-3 services that utilize the interface-ful model is TRUE?

Options:

A- EVPN MAC/IP routes are used to advertise the IP prefixes of subnets attached to a VPRN.

B- VPRN instances are interconnected using a supplementary broadcast domain (SBD) VPLS.

C- Intra-subnet traffic is carried over the tunnels provided by the SBD VPLS.

D- The MAC/IP routing information is used to populate the VPRN routing table at the remote PEs.

Answer:

C

Explanation:

In the interface-ful model, VPRN instances are interconnected using a supplementary broadcast domain (SBD) VPLS. Intra-subnet traffic is carried over the tunnels provided by the SBD VPLS.The MAC/IP routing information is not used to populate the VPRN routing table at the remote PEs, but rather to populate the FDB of the SBD VPLS2.

Verified Reference:Nokia Ethernet Virtual Private Network Services Course | Nokia

Question 9

Question Type: MultipleChoice

Which of the following statements about PE-to-PE MAC address advertisement is FALSE?

Options:

A- The service distinguisher (label or VNI) is advertised with the MAC/IP EVPN update.

B- Route targets are used to uniquely identify routes between EVIS in the case of MAC address overlaps.

C- A PE uses a single MP-BGP session with a remote peer to exchange the routes for all EVIs.

D- A PE advertises locally-learned MAC addresses to remote PES using EVPN type-2 routes.

Answer:

B

Explanation:

Route targets are not used to uniquely identify routes between EVIs in the case of MAC address overlaps. Route targets are used to control the import and export of routes between different EVIs or VRFs.The service distinguisher (label or VNI) is used to uniquely

identify each service1.

Verified Reference:Ethernet Virtual Private Networks (EVPNs)

Question 10

Question Type: MultipleChoice

Which of the following statements about multi-homing for a Layer-2 service is TRUE?

Options:

A- In the single-active mode, the CE requires a LAG to be configured between the CE and all attached PEs.

B- In the single-active mode, the CE forwards traffic to all attached PES and receives traffic from a single PE.

C- In the all-active mode, all PES attached to a CE can forward traffic to and from the CE.

D- The Nokia 7750 SR supports a CE being multi-homed to a maximum of two PEs.

Answer:

C

Explanation:

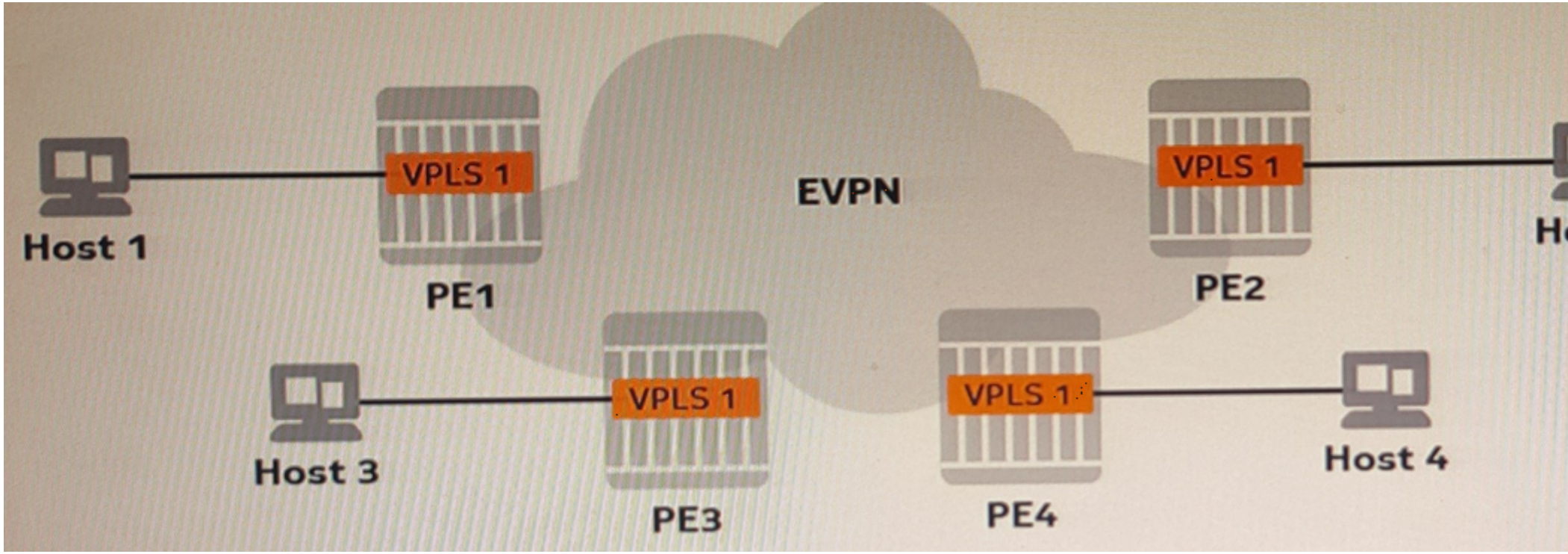
In the all-active mode, all PEs attached to a CE can forward traffic to and from the CE. This provides load balancing and redundancy for the CE.The CE does not require a LAG to be configured between the CE and all attached PEs1.

Verified Reference:Ethernet Virtual Private Networks (EVPNs)

Question 11

Question Type: MultipleChoice

Based upon the exhibit, how many MAC-VRFs are there?



Options:

A- 1

B- 2

C- 3

D- 4

Answer:

B

Explanation:

There are two MAC-VRFs in the exhibit, one for each EVI.A MAC-VRF is a logical entity that contains the MAC forwarding information for a given EVI1.

Verified Reference:Ethernet Virtual Private Networks (EVPNs)