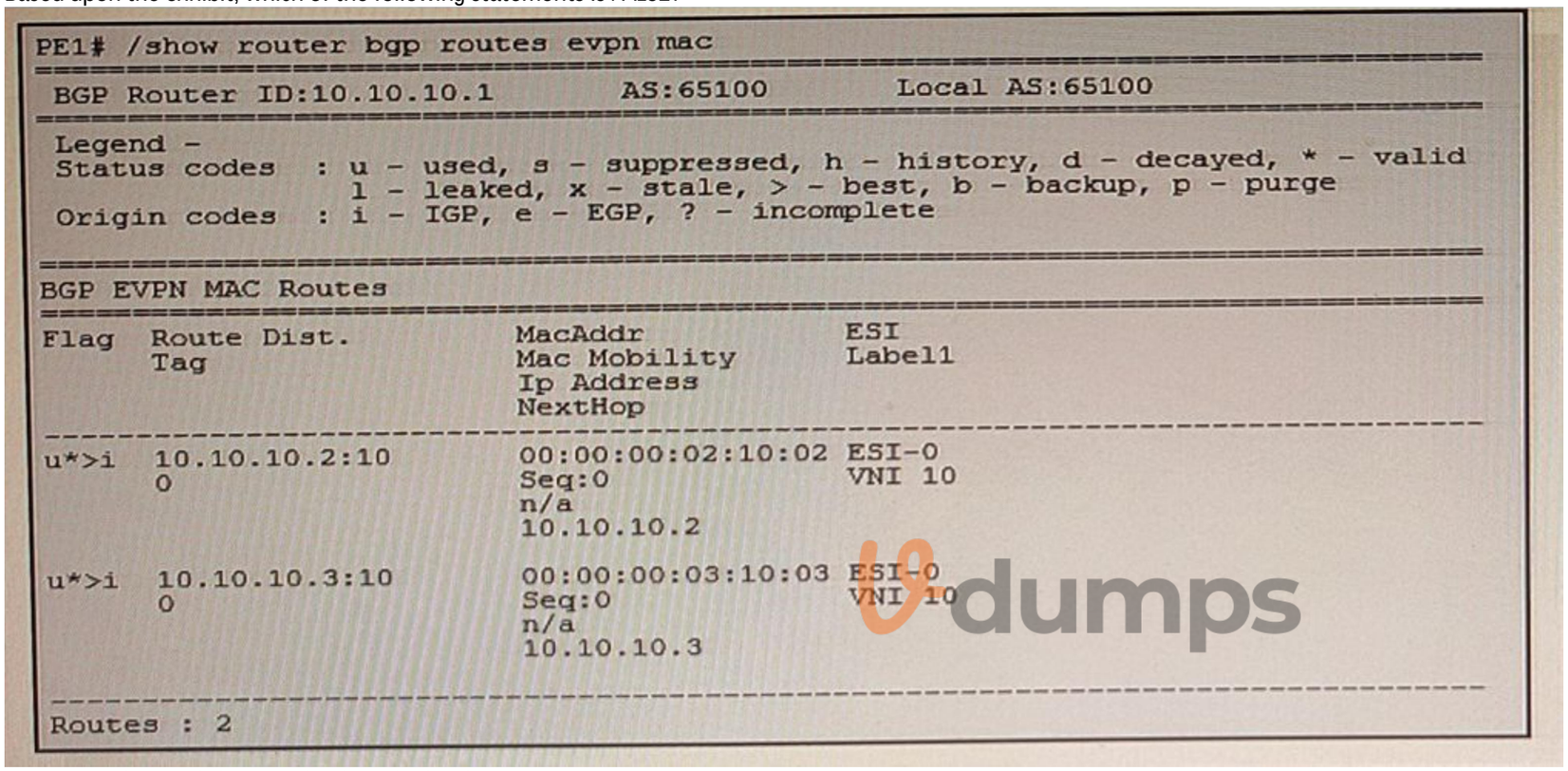
Number: 4A0-115
Passing Score: 800
Time Limit: 120 min
File Version: 2.0

**Exam Code: 4A0-115**

**Exam Name:** Nokia Ethernet Virtual Private Network Services

**Exam A**

**QUESTION 1**
Based upon the exhibit, which of the following statements is FALSE?




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.

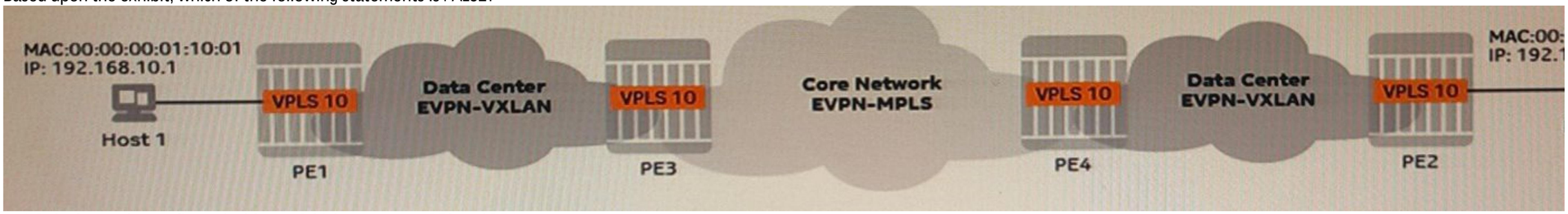
**Correct Answer: D**
**Section:**
**Explanation:**
PE1 does not use VXLAN tunnels to reach neighbors 10.10.10.2 and 10.10.10.3. PE1 uses MPLS tunnels to reach these neighbors, as indicated by the MPLS label values in the output.

**QUESTION 2**
Proxy-ARP/ND is operational for a VPLS. Which of the following statements is FALSE?
A. The PE has proxy-ARP and dynamic-populate enabled for the VPLS.
B. The proxy-ARP table is populated by snooping IP packets received from remote PEs.
C. When the PE learns a local host IP address, it adds an entry into its proxy-ARP table.
D. The PE advertises a MAC/IP route that includes the MAC and IP address of a local host.

**Correct Answer: C**
**Section:**

**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 3**
Based upon the exhibit, which of the following statements is FALSE?




A. VPLS 10 must be configured with two BGP instances on PE3 and PE4.
B. On PE3 and PE4, VPLS 10 must be configured with two different route-distinguisher values: one for VXLAN and another for MPLS.
C. On PE3 and PE4, VPLS 10 must be configured with two different route-target values: one for VXLAN and another for MPLS.
D. A BGP export policy is required on PE3 and PE4 to ensure that IMET routes originated with VXLAN encapsulation are not advertised to the peer across the core network.

**Correct Answer: A**
**Section:**
**Explanation:**
VPLS 10 does not need to be configured with two BGP instances on PE3 and PE4. VPLS 10 can be configured with a single BGP instance that supports both VXLAN and MPLS encapsulations.

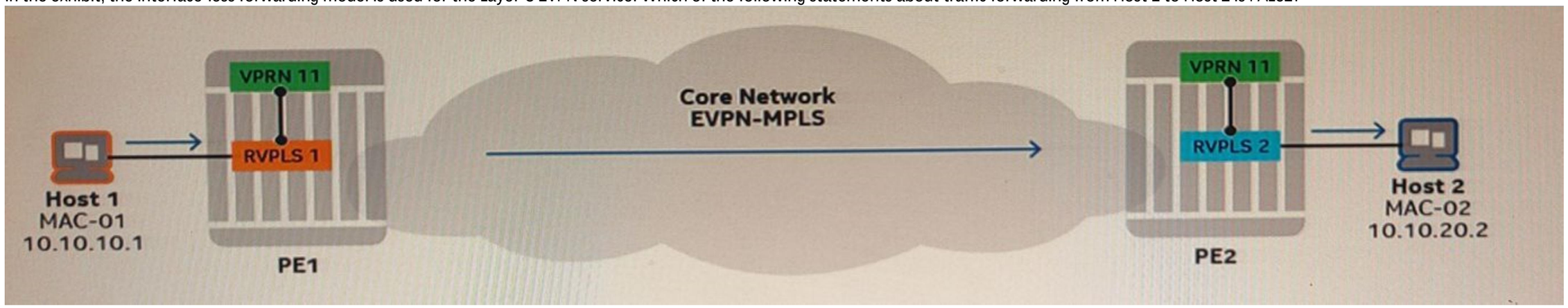
**QUESTION 4**
Which of the following statements about an EVPN with integrated routing and bridging (EVPN-IRB) service is FALSE?
A. This service requires the use of EVPN-MPLS for data plane.
B. In this service, the IRB interface acts as a default gateway for hosts in the corresponding subnet.
C. This service consists of a VPRN and multiple VPLSs.
D. This service enables the use of EVPN to provide connectivity between hosts in different subnets.

**Correct Answer: A**
**Section:**
**Explanation:**
EVPN with integrated routing and bridging (EVPN-IRB) service does not require the use of EVPN-MPLS for data plane. EVPN-IRB service can use either EVPN-MPLS or EVPN-VXLAN for data plane.

**QUESTION 5**
Which of the following statements does NOT describe the operation of the Layer-3 EVPN asymmetric forwarding model?
A. All VPLS instances must be configured on all PES regardless of whether they have a local host or not.
B. EVPN IP-Prefix routes are used to populate the VPRN VRF tables.
C. The egress PE does not perform any Layer-3 route look up to forward traffic.
D. The ingress PE performs both Layer-2 and Layer-3 look ups when forwarding traffic between subnets.

**Correct Answer: A**
**Section:**
**Explanation:**
All VPLS instances do not need to be configured on all PEs regardless of whether they have a local host or not. Only the VPRN instance needs to be configured on all PEs, while the VPLS instances are configured only on PEs that have a local host attached to them.

**QUESTION 6**
In the exhibit, the interface-less forwarding model is used for the Layer-3 EVPN service. Which of the following statements about traffic forwarding from Host 1 to Host 2 is FALSE?



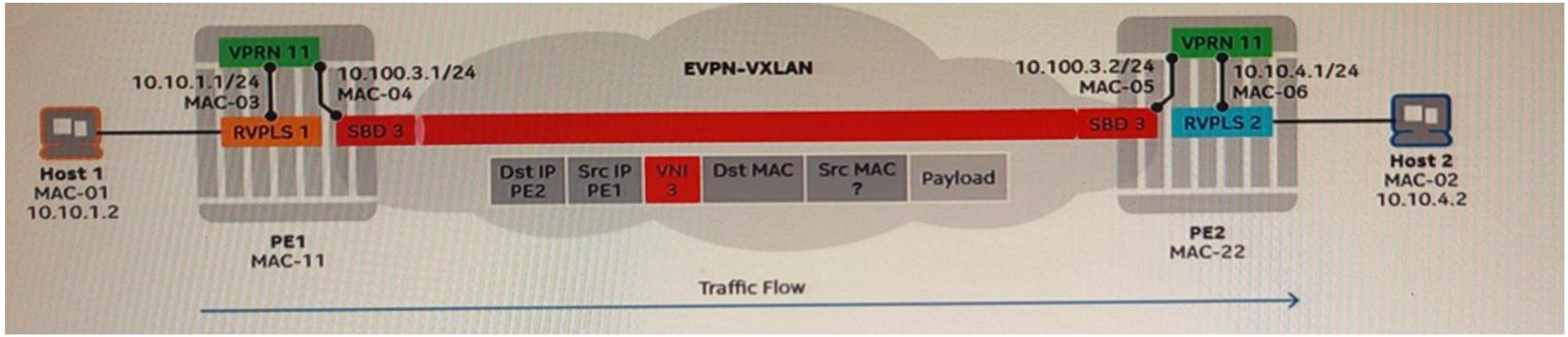

A. PEI consults the FDB of RVPLS 1 and forwards the traffic to the local interface of VPRN 11.
B. PEI encapsulates the packet with two labels: an outer transport label and an inner service label.
C. PE2 inspects the service label and determines that it is associated with RVPLS 2.
D. PE2 consults the FDB of RVPLS 2 and forwards the traffic to Host 2.

**Correct Answer: B**
**Section:**
**Explanation:**
PE1 does not encapsulate the packet with two labels: an outer transport label and an inner service label.PE1 encapsulates the packet with three labels: an outer transport label, a service label associated with VPRN 11, and a service label associated with RVPLS 11.
Verified
Reference:Ethernet Virtual Private Networks (EVPNs)

**QUESTION 7**
The interface-ful numbered model is used for a Layer-3 EVPN service. Which of the following statements is FALSE?
A. EVPN routes are advertised with a service label associated with the SBD VPLS.
B. IP-Prefix routes exchanged between PES include a non-zero gateway IP address as an overlay index.
C. EVPN MAC/IP routes are used to advertise the MAC and IP addresses of local hosts.
D. EVPN MAC/IP routes are used to advertise the MAC and IP addresses of SBD IRB interfaces.

**Correct Answer: D**
**Section:**
**Explanation:**
EVPN MAC/IP routes are not used to advertise the MAC and IP addresses of SBD IRB interfaces.EVPN MAC/IP routes are used to advertise the MAC and IP addresses of local hosts attached to the SBD VPLS2.
Verified
Reference:Nokia Ethernet Virtual Private Network Services Course | Nokia

**QUESTION 8**
In the exhibit, the interface-ful numbered model is used for the Layer-3 EVPN service. Which of the following is used as the source MAC address in the packets sent from PEI when forwarding customer traffic to Host 2?




A. MAC-OI
B. MAC-03
C. MAC-04
D. MAC-11

**Correct Answer: A**
**Section:**
**Explanation:**
MAC-01 is used as the source MAC address in the packets sent from PE1 when forwarding customer traffic to Host 2.MAC-01 is the MAC address of the SBD IRB interface configured in VPRN 11 on PE12.
Verified
Reference:Nokia Ethernet Virtual Private Network Services Course | Nokia

**QUESTION 9**
A Layer-3 EVPN service is configured to use the interface-ful unnumbered forwarding model. Which of the following statements is FALSE?
A. Each participating PE advertises a MAC/IP route that carries the MAC address of SBD IRB interface.
B. IP-Prefix routes exchanged between PES include a non-zero MAC address as an overlay index.
C. The VPRN service is configured to allow the advertisement of IP prefixes.
D. The SBD IRB interface configured in the VPRN service has no IP address assigned to it.

**Correct Answer: D**
**Section:**
**Explanation:**
The SBD IRB interface configured in the VPRN service has an IP address assigned to it.The IP address is used as a gateway IP address for hosts in the corresponding subnet2.
Verified
Reference:Nokia Ethernet Virtual Private Network Services Course | Nokia

**QUESTION 10**
An operator configures an EVPN-IRB that uses the interface-ful unnumbered forwarding model on a Nokia 7750 service router. Which of the following statements regarding the configuration performed on each participating PE is FALSE?
A. A supplementary broadcast domain (SBD) is configured as a routed VPLS.
B. A VPRN service is configured and has an interface bound to the local VPLS.
C. The advertisement of IP-Prefix routes is enabled in the SBD VPLS.
D. An IP address is configured in the VPRN interface that is bound to the SBD VPLS.

**Correct Answer: C**
**Section:**

**Explanation:**
The advertisement of IP-Prefix routes is not enabled in the SBD VPLS.The advertisement of IP-Prefix routes is enabled in the VPRN service that is associated with the SBD VPLS2.
Verified
Reference:Nokia Ethernet Virtual Private Network Services Course | Nokia

**QUESTION 11**
Which of the following statements about the EVPN route types used to support multi-homing is TRUE?
A. Ethernet segment (ES) routes indicate the redundancy mode of the Ethernet segment.
B. ES routes provide the ESI label required to support the split-horizon mechanism.
C. Auto-discovery (A-D) routes are imported by all PES participating in the EVPN service.
D. A-D per Ethernet segment routes indicate the desired designated forwarder election algorithm.

**Correct Answer: A**
**Section:**
**Explanation:**
Ethernet segment (ES) routes indicate the redundancy mode of the Ethernet segment.The redundancy mode can be either single-active or all-active, and it determines how traffic is forwarded to and from a multi-homed CE1.
Verified
Reference:Ethernet Virtual Private Networks (EVPNs)

**QUESTION 12**
Which of the following statements about EVPN auto-discovery per Ethernet segment (A-D per ES) routes is TRUE?
A. The updates include an Ethernet segment identifier label that is used in loop prevention.
B. The updates advertise the Ethernet segment availability in a given EVPN service.
C. The updates include an MPLS label that is set to a non-zero value.
D. The updates include an Ethernet tag ID that is set to zero.

**Correct Answer: D**
**Section:**
**Explanation:**
EVPN auto-discovery per Ethernet segment (A-D per ES) routes do not include an Ethernet tag ID that is set to zero.The Ethernet tag ID is set to a non-zero value that identifies the EVPN service instance1.
Verified
Reference:Ethernet Virtual Private Networks (EVPNs)

**QUESTION 13**
Which of the following statements about EVPN auto-discovery per EVPN instance (A-D per EVI) routes is FALSE?
A. A PE uses the received updates to create aliasing lists to PES that are part of an all-active Ethernet segment.
B. A PE advertises an A-D per EVI route for each operational service defined on an Ethernet segment.
C. The updates include an Ethernet tag ID that is set to zero.
D. The updates are used to discover all the PES associated with an Ethernet segment.

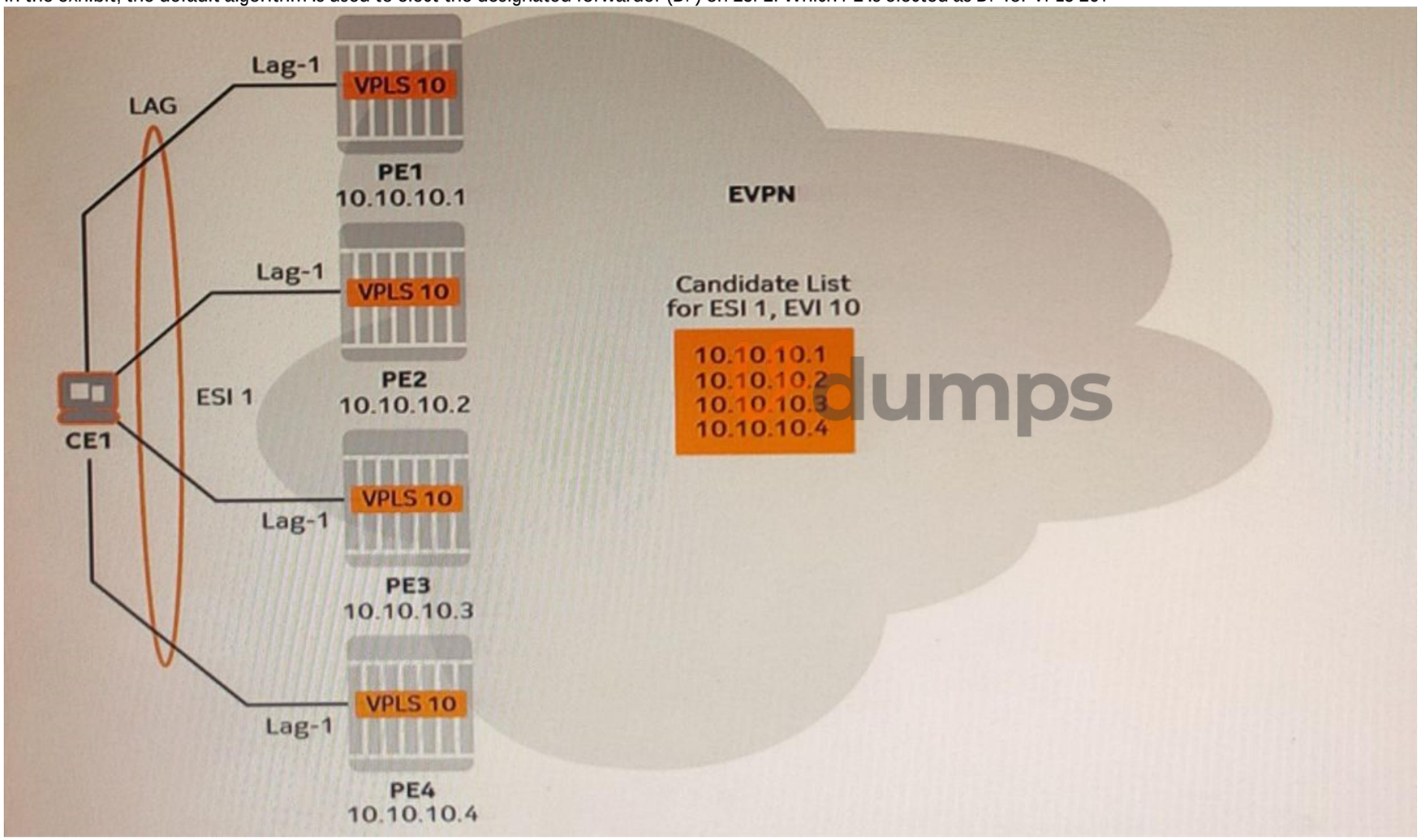
**Correct Answer: B**
**Section:**
**Explanation:**
A PE does not advertise an A-D per EVI route for each operational service defined on an Ethernet segment. A PE advertises a single A-D per EVI route for all services defined on an Ethernet segment.

**QUESTION 14**
Which of the following best describes the operation of a non-designated forwarder (non-DF) in a single-active Ethernet segment?
A. Blocks Tx unicast, allows Rx unicast, blocks Tx BUM, allows Rx BUM
B. Allows Tx unicast, allows Rx unicast, blocks Tx BUM, allows Rx BUM
C. Blocks Tx unicast, blocks Rx unicast, blocks Tx BUM, blocks Rx BUM

D. Allows Tx unicast, blocks Rx unicast, allows Tx BUM, blocks Rx BUM

**Correct Answer: A**
**Section:**
**Explanation:**
A non-designated forwarder (non-DF) in a single-active Ethernet segment blocks Tx unicast, allows Rx unicast, blocks Tx BUM, and allows Rx BUM. This prevents traffic duplication and ensures that only the DF forwards traffic to and from the CE.

**QUESTION 15**
In the exhibit, the default algorithm is used to elect the designated forwarder (DF) on ESI 1. Which PE is elected as DF for VPLS 10?

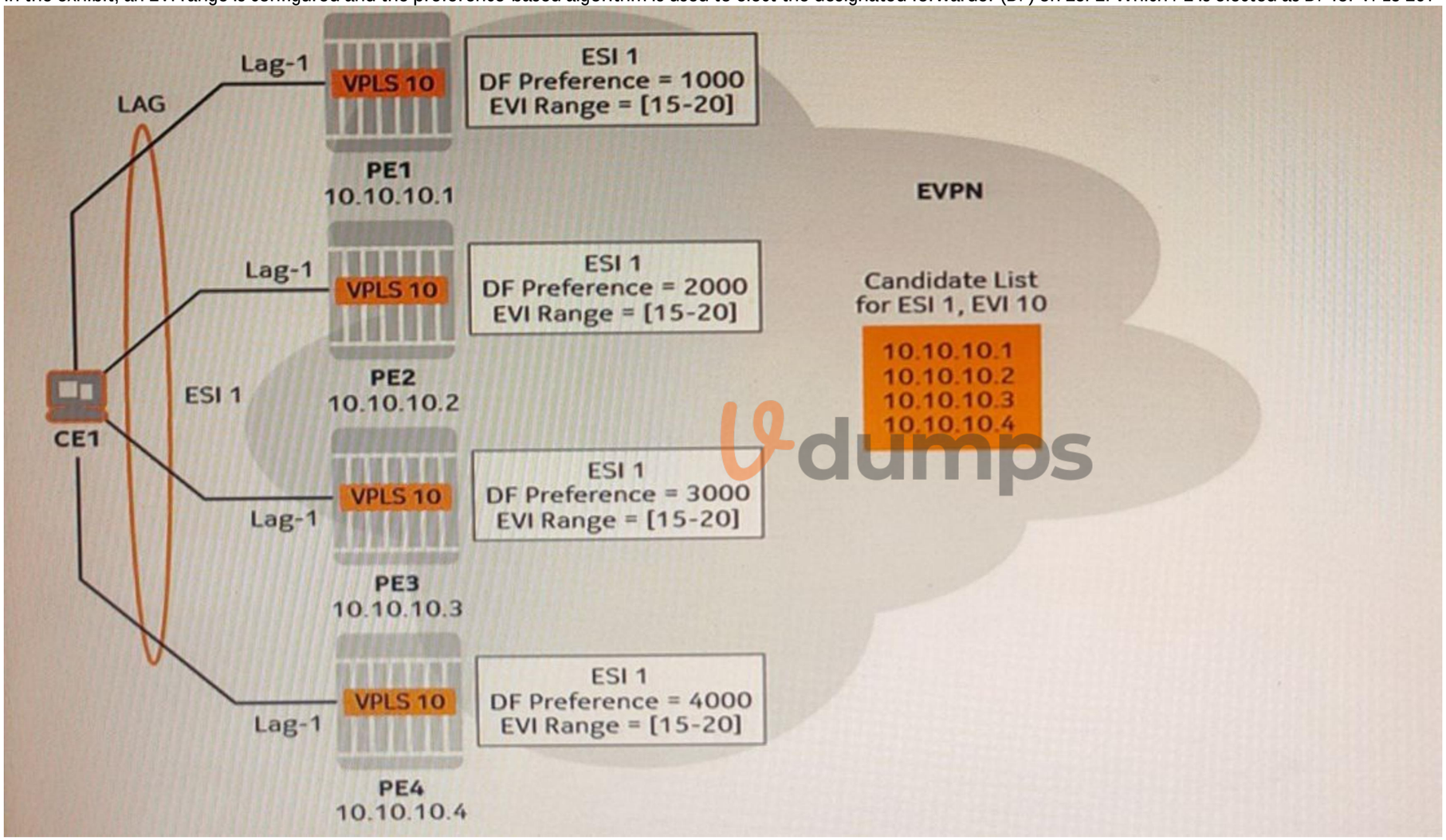



A. PEI
B. PE2
C. PE3
D. PE4

**Correct Answer: B**

**Section:**
**Explanation:**
PE2 is elected as DF for VPLS 10. The default algorithm uses the lowest IP address of the PEs attached to the same Ethernet segment as the tie-breaker criterion. PE2 has the lowest IP address among PE1, PE2, and PE3.

**QUESTION 16**
In the exhibit, an EVI range is configured and the preference-based algorithm is used to elect the designated forwarder (DF) on ESI 1. Which PE is elected as DF for VPLS 10?




A. PEI
B. PE2
C. PE3
D. PE4

**Correct Answer: C**
**Section:**
**Explanation:**
PE3 is elected as DF for VPLS 10. The preference-based algorithm uses the highest preference value of the PEs attached to the same Ethernet segment as the tie-breaker criterion. PE3 has the highest preference value

among PE1, PE2, and PE3.