Practice exam questions for the Nokia NRS II Composite Exam

The following questions will test your knowledge and prepare you for the Nokia NRS II Composite Exam. Compare your responses with the Answer Key at the end of the document.

**Interior Routing Protocols**

1.1. Router R1 wants to resolve FE80::216:4DFF:FE13:5ACE to a MAC address. What is the destination address for the Neighbor Solicitation message that router R1 sends to router R2?

a. FE80::203:FAFF:FE0E:9331  
   b. FE80::216:4DFF:FE13:5ACE  
   c. FF02::1:FF13:5ACE  
   d. FF02::1:FF0E:9331

1.2. Which of the following statements is FALSE about 6over4 tunneling?
   a. It encapsulates IPv6 packets in IPv4 and routes them across the IPv4 network.  
   b. It enables network core routers to forward traffic based on IPv6 addresses.  
   c. It runs a dual stack of IPv4 and IPv6 on the PE routers.  
   d. It allows IPv6 traffic to transit through an IPv4 network.  
   e. It requires IPv6 static routing configuration on the PE routers.

1.3. Which one of the following fields in Hello packets exchanged between neighbors must match to establish a full OSPF adjacency?
   a. Router ID  
   b. Network Mask  
   c. Neighbor  
   d. Router Priority
1.4 A new router joins an OSPF broadcast network which already has a designated router (DR) and a backup designated router (BDR). Which of the following about the new router is TRUE?
   a. The router forms an adjacency with the DR only.
   b. The router forms an adjacency with the BDR only.
   a. The router forms an adjacency with both the DR and the BDR.
   b. The router forms an adjacency with all routers on the OSPF broadcast network.

1.5 All interfaces, including system interfaces, have been enabled in OSPF on all routers. Full adjacencies have been formed between all neighboring routers. How many link entries are in the Router-LSA that is originated by router R1?

1.6 What are the values of the link-state ID and network mask for the network LSA generated for the OSPF broadcast network shown below?

   a. Link-state ID = 10.1.1.3 and network mask = 255.255.255.224
   b. Link-state ID = 10.10.10.3 and network mask = 255.255.255.255
   c. Link-state ID = 10.1.1.4 and network mask = 255.255.255.224
   d. Link-state ID = 10.10.10.4 and network mask = 255.255.255.255
1.7 Router R2 is an ASBR configured to export R1’s system interface to OSPF. Which of the following statements is TRUE?

a. Router R2 generates a Type 4 LSA to inform other routers that it is an ASBR.
b. Router R2 generates a Type 4 LSA to advertise router R1’s system interface address to all other routers.
c. Router R3 generates a Type 4 LSA to advertise the location of the ASBR to routers in area 0.
d. Router R3 generates a Type 4 LSA to advertise router R1’s system interface address to routers in area 0.

1.8 Based on the below LSDB, which of the following is the ASBR’s router ID for the OSPF network?

a. 10.10.10.1
b. 10.10.10.2
c. 10.10.10.3
d. 10.10.10.4
1.9  Router R1 is an ASBR configured to export external routes to OSPF. Which of the following routers contain Type 4, Type 5 and Type 7 LSAs in their LSDBs?

a. Router R1 only  
b. Routers R1 and R3  
c. Router R3 only  
d. Routers R3, R4, and R5

1.10  Which of the following is the expected contents of LSDB on router R3?
a.  

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No. of Lsa: 8

b.  

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No. of Lsa: 10

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No. of Lsa: 7

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No. of Lsa: 8
1.11 Global IPv6 addresses have been assigned to all system, loopback, and broadcast interfaces but not to the point-to-point interfaces. Router R2 is the DR for the broadcast link. Which prefixes are included in the Intra-Area Prefix (IAP) LSA originated by router R1?

- All prefixes associated to router R1’s interfaces.
- Router R1’s system interface prefix, broadcast interface prefix, and loopback interface prefix.
- Router R1’s system interface prefix and loopback interface prefix.
- Router R1’s link-local prefixes and broadcast interface prefix.
- Router R1’s system interface prefix.

1.12 Which type of LSA is generated by an ASBR to advertise external routes to OSPFv3 routers?

- Network LSA
- Inter-Area Prefix LSA
- Inter-Area Router LSA
- AS External LSA

1.13 Which of the following statements about the IS-IS CSNP is TRUE?

- Periodic CSNPs are sent by all routers on a broadcast network to maintain database synchronization.
- CSNPs are used to discover neighbors and establish adjacencies.
- CSNPs are used to acknowledge and request link-state information.
- CSNPs are used to describe a router’s complete link-state database.
1.14 Given the CLI output shown below and assuming all routers in the network have formed adjacencies with all their neighbors, which of the following statements is FALSE?

```
13:01:41.960  show isis database
Level 1 LSP Count : 0
Level 2 LSP Count : 5
```

a. There are four level 2-capable routers in the network.

b. Routers R1, R2, R3, and R4 could be in different areas.

c. Router R1 has both point-to-point and broadcast adjacencies.

d. Router R1 has not established any level 1 adjacency.

1.15 IS-IS link metrics are indicated in the diagram below. Which path will packets follow from router R1 to router R8 and from router R8 to router R1?

![IS-IS Network Diagram]

a. Packets from R1 to R8 will follow R1-R2-R5-R7-R8; Packets from R8 to R1 will follow R8-R7-R5-R2-R1.

b. Packets from R1 to R8 will follow R1-R2-R5-R7-R8; Packets from R8 to R1 will follow R8-R6-R4-R3-R1.

c. Packets from R1 to R8 will follow R1-R3-R4-R6-R8; Packets from R8 to R1 will follow R8-R6-R4-R3-R1.

d. Packets from R1 to R8 will follow R1-R3-R4-R6-R8; Packets from R8 to R1 will follow R8-R7-R5-R2-R1.
1.16 The below Level 2 LSP is originated by router R3. Which of the following about route summarization from router R3 is TRUE?

a. Router R3 summarizes the loopback prefixes from router R1 as 192.168.10.0/30 and from router R2 as 192.168.20.0/30.
b. Router R3 only summarizes the loopback prefixes from router R1 as 192.168.10.0/30.
c. Router R3 only summarizes the loopback prefixes from router R2 as 192.168.20.0/30.
d. Router R3 does not summarize any of the loopback prefixes from routers R1 and R2.

1.17 Which of the following statements is FALSE about IS-IS for IPv6 in Nokia 7750 SR?

a. With native IPv6 routing, a router’s IPv4 and IPv6 prefixes for the same routing level are contained in the same LSP.
b. With multi-topology IS-IS, a router’s IPv4 and IPv6 prefixes for the same routing level are contained in two different LSPs.
c. By default, IPv4 and IPv6 are considered as a single topology and one SPF calculation is performed for all prefixes.
d. Multi-topology IS-IS considers IPv6 as a distinct topology with a separate SPF calculation.
1.18 All global IPv6 addresses as indicated in the diagram are advertised into IS-IS. How many IPv6 prefixes are in router R4’s route table?

- a. 6
- b. 8
- c. 11
- d. 14
- e. 22

1.19 Router R2 learns all four loopback addresses from IS-IS. A route policy is configured on router R2 as shown above. OSPF and IS-IS adjacencies are operationally up. On router R3, how many of router R1’s loopback prefixes are in the routing table?

- a. 0
- b. 1
- c. 2
- d. 3
- e. 4
1.20 OSPF adjacencies are operationally up on all links. Router R6 advertises 172.10.3.0/24 into OSPF. All links have the same OSPF cost and all routers are configured with ECMP value of 3. How many entries with a destination prefix of 172.10.3.0/24 are in router R1’s routing table?

a. 1
b. 2
c. 3
d. 4

**Multiprotocol Label Switching:**

2.1 Which of the following statements is FALSE about penultimate hop popping (PHP)?

a. The QoS parameters in the MPLS header are lost over the link between the penultimate router and the eLER.
b. To request PHP, the eLER signals a transport label value of 0 to its neighbors.
c. The PHP router pops the top transport label before forwarding the packet to the next hop router.
d. PHP is supported by both LDP and RSVP-TE protocols

2.2 Which of the following statements is TRUE about MPLS encapsulation for L2 VPN services?

a. The customer's Layer 2 header is removed at the iLER
b. The customer's Layer 2 header is removed at the eLER.
c. The iLER adds a service provider Layer 2 header to the customer's payload.
d. The eLER builds a new Layer 2 header before forwarding the frame to the CE device.

2.3 Which of the following statements describes the ordered control mode operation of an MPLS router?

a. A router generates a label for a FEC when it becomes aware of the FEC through its IGP.
b. A router only generates a label for a FEC for which it has received a label from the FEC's next-hop.
c. A router distributes a label for a FEC to a peer only when requested by that peer.
d. A router distributes a label for a FEC to all peers for which it might be a next-hop for the given FEC.

2.4 Which of the following statements is FALSE about the link LDP discovery process?

a. LDP peers of an LSR are discovered without explicitly configuring the peers.
b. Routers using a per-interface label space include a non-zero value for the label space ID in each Hello message.
c. LDP Hello messages are sent over TCP.
d. The destination IP address in a Hello message is the ‘all-routers' multicast group address of 224.0.0.2.
2.5 Which of the following is a possible cause for the “Nonexistent” state of the LDP session between routers R1 and R2?

- a. Router R1 does not have a route to router R2’s system IP address.
- b. LDP is not enabled on router R1’s interface towards router R2.
- c. LDP is not enabled on router R1’s system interface.
- d. Router R2 is not configured as the link LDP peer of router R1.

2.6 Given the CLI output shown which of the following statements is FALSE on router R1?

- a. 10.10.10.2 is the IGP next-hop for FEC 10.10.10.6/32.
- b. There is only one LDP tunnel to reach FEC 10.10.10.6/32.
- c. A packet received with a label 131066 is forwarded with label 131068.
- d. Only one entry is installed in the LFIB for FEC 10.10.10.6/32 with a PUSH action.
2.7 This policy is applied on a router as an LDP export policy. In addition to the FECs learned from the router’s neighbors, which FECs now appear in the router’s LIB?

- Local FECs that are not in the 192.168.7.0/24 address space.
- Local FECs that are in the 192.168.7.0/24 address space.
- Local FECs that are not in the 192.168.7.0/24 address space and the system IP FEC.
- Only the system IP FEC appears in the LIB.

2.8 Router R3 receives the summarized route for 172.20.0.0/16 and LDP labels for FECs 172.20.7.0/24 and 172.20.8.0/24. What configuration is required to ensure that router R3 has active LDP bindings for these two FECs?

- Enable aggregate prefix match on router R3.
- Enable aggregate prefix match on router R2.
- Disable route summarization on router R3.
- No specific configuration is needed.

2.9 Which of the following statements about T-LDP is TRUE?

- T-LDP requires IP reachability between peers.
- T-LDP is used to signal transport labels in the core network.
- T-LDP cannot be configured between directly connected routers.
- T-LDP Hello messages are sent to a multicast IP address.

2.10 An LSR receives a PATH message to establish a new RSVP-TE LSP. Which of the following functions will NOT be performed by the LSR?

- The LSR verifies it can support the traffic engineering requirements in the PATH message.
- The LSR creates a new PSB for the LSP in which it stores the contents of the PATH message.
- The LSR adds the IP address of its egress interface to the RRO.
- The LSR changes the HOP object to the system IP address of the next-hop router.
2.11 LSP 1 is configured to traverse R1-R2-R4-R6. When router R4 receives the RESV message from router R6, router R4 is unable to allocate a label for the LSP. Which of the following actions will router R4 initiate?

- a. Send a PathError message toward router R1.
- b. Send a PathError message toward router R6.
- c. Send a ResvError message toward router R1.
- d. Send a ResvError message toward router R6.

2.12 An LSR is configured with RSVP-TE refresh reduction. If the RSVP-TE state for an LSP changes, how does the LSR notify a downstream router?

- a. Increments the Tunnel ID of the LSP in the Summary Refresh message.
- b. Increments the LSP ID of the new LSP path in the Summary Refresh message.
- c. Increments the Message ID of the LSP in the Summary Refresh message.
- d. Increments both the LSP ID and Message ID in the Summary Refresh messages.

2.13 Which of the following is NOT a potential advantage of using RSVP-TE instead of LDP in the MPLS control plane?

- a. Control the path of traffic flow by using additional link constraints for LSP path calculations.
- b. Provide shorter convergence times when network failures occur.
- d. Allow network operators to plan for traffic load distribution easier.

2.14 Which of the following is FALSE about OSPF-TE?

- a. Traffic engineering information is carried in Type 10 opaque LSAs.
- b. Traffic engineering must be enabled on all IP/MPLS routers along the LSP path.
- c. Type 10 opaque LSAs are flooded to all OSPF areas.
- d. Type 10 opaque LSAs are stored in TEDs.

2.15 Which of the following statements is TRUE about the ERO in an RSVP-TE PATH message?

- a. Each LSR along the path of an LSP adds its egress interface IP address to the ERO.
- b. The ERO contains labels signaled by every LSR along the path of an LSP.
- c. The PATH message of an RSVP-TE LSP always contains an ERO.
- d. The ERO ensures that an LSP gets signaled over the hops calculated by CSPF.
2.16 The LSP from router R1 is configured with a loose hop to router R4 and a strict hop to router R5. Which of the following conditions is TRUE?

a. Router R1 does not send a PATH message because it detects an error.
b. Router R1 sends a PATH message and router R4 sends back a PATH Tear message.
c. Router R1 sends a PATH message and router R4 sends back a PATH Error message.
d. Router R1 sends a PATH message and the LSP is signaled properly to router R6.

2.17 Which of the following statements is FALSE about the Connection Admission Control (CAC) procedure for an RSVP-TE LSP on the Nokia 7750 SR?

a. Each LSR on the LSP path checks its ingress interface for the requested bandwidth.
b. CAC is performed even if CSPF is NOT configured on the LSP.
c. LSP bandwidth requirements are sent in the PATH message.
d. Routers flood link state information to reflect bandwidth changes on each link after the LSP is established.

2.18 All links have 1GB of bandwidth. An LSP “toR4” has 300MB of bandwidth reserved and a new requirement increases the bandwidth to 400MB. Which of the following statements is FALSE about the Make-Before-Break (MBB) function for the LSP?

a. The old LSP path is torn down only after a successful switchover occurs.
b. MBB is one of the RSVP-TE resiliency features.
c. MBB allows live LSP constraint changes with no traffic loss.
d. The head-end router sends a Path Error message to tear down the old LSP.
2.19 All links have 1 GB of bandwidth and same link cost. LSP 1 is signaled first. Then LSP 2 is signaled. What happens when LSP 3 is signaled?

a. LSP 3 will not be signaled due to insufficient bandwidth, LSP 1 and LSP 2 remain established.
b. LSP 3 will preempt LSP 1, LSP 1 will then preempt LSP 2 and LSP 2 will not be established due to insufficient bandwidth.
c. LSP 3 will preempt LSP 2, LSP 2 will then not be established due to insufficient bandwidth and LSP 1 will remain established.
d. LSP 3 will preempt LSP 1, LSP 1 will not be established due to insufficient bandwidth and LSP 2 will remain established.

2.20 An LDP-over-RSVP LSP is being configured between routers R1 and R6. Which routers will require T-LDP sessions for the LSP to work properly?

a. Routers R1 and R6
b. Routers R2 and R4
c. Routers R1, R2, R4, and R6
d. None of the routers
2.21 Both RSVP-TE and LDP tunnels have been established in the core network. Which of the following is selected as the MPLS shortcut tunnel by default on a Nokia 7750 SR?

a. An RSVP-TE tunnel is selected.
b. An LDP tunnel is selected.
c. No tunnel is selected. BGP uses the best IPv4 next hop.
d. Either RSVP-TE or LDP tunnel that has the longest uptime.

2.22 Which of the following is FALSE about 6PE topology?

a. P routers run IPv4 only.
b. PE routers run both IPv4 and IPv6.
c. An IPv6 explicit null label is added as the inner label.
d. BGP sessions are required on the P routers to propagate IPv6 routes.

2.23 The primary path for the LSP is already established. What happens to the incoming traffic if the primary path goes down?

a. Incoming traffic is switched to the detour tunnel indefinitely until the primary path is restored.
b. Incoming traffic is switched to the detour tunnel, then switched to the secondary path after it is signaled and established.
c. Incoming traffic is switched to the secondary path after the resignal timer expires.
d. Incoming traffic is switched to the secondary path immediately.
2.24 All links are operationally up initially and the LSP traffic goes through the primary path R1-R2-R4-R6. The link between routers R2 and R4 goes down. What will be the path of the LSP traffic after R1 is notified of the link error? All links have the same cost.

a. R1 will signal the secondary path R1-R3-R5-R6 and switch the traffic to it until the link is up again.
b. R1 will switch the traffic to the secondary path R1-R3-R5-R6 until the link is up again.
c. R1 will signal the primary path to R1-R3-R5-R4-R6 and switch the traffic to it until the link is up again.
d. R1 will switch the traffic to R1-R3-R5-R6 first and then to R1-R3-R5-R4-R6 until the link is up again.

2.25 When the primary path of LSP “toPE4” goes down, which secondary LSP path is signaled first?

a. loose-1
b. loose-2
c. loose-3
d. A random secondary LSP path is signaled.
2.26 A primary LSP is configured on router R1 with path R1-R2-R3-R4 using the one-to-one FRR protection mechanism. Which of the following is the DMP(s) for the protected tunnel?

- a. R1
- b. R1 and R4
- c. R2 and R3
- d. R4
- e. R6 and R7

2.27 Which of the following about facility protection bypass tunnel is FALSE?

- a. A bypass tunnel merges with the protected LSP as close to the tail end as possible.
- b. A single bypass tunnel can be used to protect multiple LSPs that traverse the same set of hops.
- c. Facility protection can reduce the number of required protection tunnels.
- d. Bypass tunnel encapsulates LSP traffic with an additional MPLS label.

2.28 Which object in the PATH message indicates the protection method requested by the head-end router to the downstream routers?

- a. RECORD_ROUTE
- b. SESSION_ATTRIBUTE
- c. DETOUR
- d. FAST_REROUTE
2.29 An LSP has been configured with one-to-one FRR backup protection. Which of the following about the LSP is TRUE?

a. The current nexthop for this LSP on PE1 is 10.1.2.2.

b. An LSP failure has occurred on router with router-id of 10.10.10.1.

c. LSP has link and node protection on router with router-id 10.10.10.3.

d. No failure has occurred on the LSP.

2.30 An LSP “toR6” with a strict primary path of R1-R2-R4-R6 is configured on a Nokia 7750 SR with FRR protection. A failure has occurred between R2 and R4 and the path is now R1-R2-R7-R8-R4-R6. Which of the following default behaviors will occur when the link between R2 and R4 is restored?

a. The LSP “toR6” will remain on the FRR backup path indefinitely until the LSP is manually resignalled.

b. The LSP “toR6” will revert back to the primary path after the retry timer expiry.

c. The LSP “toR6” will revert back to the primary path after the resignal timer expiry.

d. The LSP “toR6” will revert back to the primary path immediately once relearning the best IGP route.
Service Architecture

3.1 Which of the following about how MPLS transport tunnels are used in a service provider network is TRUE?
   a. The MPLS transport tunnels are used to signal the type of service being used by the customer.
   b. The MPLS transport tunnels are used by PE routers to identify to which customer the data belongs.
   c. The MPLS transport tunnels are used to exchange Layer 2 service labels between PE routers.
   d. The MPLS transport tunnels are used to transmit customer data across the service provider network.

3.2 Which statement defines a Service Distribution Point (SDP)?
   a. Logical representation of the transport tunnel that delivers customer data to the egress PE.
   b. Subscriber’s point of entry to the service provider network.
   c. Identifier used to signal service labels.
   d. Identifier used to group services together for accounting purposes.

3.3 Which one of the following SAPs accepts all untagged, dot1Q or Q-in-Q frames and forwards VLAN tags transparently across a service.
   a. SAP 1/1/1
   b. SAP 1/1/1:1.
   c. SAP 1/1/1:0
   d. SAP 1/1/1:1

3.4 Which of the following best describes the behavior when frames are received on a port configured with multiple SAPs including a default SAP?
   a. The default SAP accepts all untagged frames and all frames with a VLAN tag of 0.
   b. The default SAP accepts all untagged frames and any frames with tagged values that are not used on another SAP.
   c. The default SAP accepts all tagged frames and strips all VLAN tags.
   d. The default SAP accepts all tagged frames and untagged frames.

3.5 An IES interface is configured with an MPLS based spoke SDP. The network port associated with the SDP has an MTU of 9212 bytes. What is the default VC-MTU for the IES?
   a. 9204 bytes
   b. 9176 bytes
   c. 9190 bytes
   d. 9198 bytes
   e. 9212 bytes
3.6  The SDP used for Epipe service 10 uses MPLS encapsulation. Based on the given output, what is the MTU of the network port associated with the spoke SDP?

```
# NMS service 10

Service Basic Information
Service ID : 10
Service Type : Epipe
Name : (Not Specified)
Description : (Not Specified)
Creation Time : 10/09/2014 22:00:48
Last Change : 10/09/2014 22:05:15
Status : Up
Admin State : Up
Oper State : Up
MTU : 1514
IPv6 Routing : False
IPv6 RP : False
IPv6 MAddr : False
IPv6 MAddr Count : 1
IPv6 MAddr Domain : 1
IPv6 MAddr Prefix : 128
IPv6 MAddr Prefix Length : 0
IPv6 MAddr Origin : 0
```

a. 8914 bytes  
b. 8922 bytes  
c. 8928 bytes  
d. 8934 bytes  
e. 8936 bytes

3.7  PE1 has an Epipe service that is using RSVP-TE LSP with adspec enabled as the transport for the SDP. What is the effective SDP path MTU of the Epipe service on PE1?

```
# Epipe Service Path

Network Port MTU 9212
IP/MPLS Network 100
Epipe 100
```

a. 4964 bytes  
b. 4978 bytes  
c. 5000 bytes  
d. 9190 bytes  
e. 9212 bytes

3.8  An Epipe service receives a frame on SAP 1/1/2:7 and transmits it on SAP 1/1/2:5.20. Which one of the following statements is TRUE about the transmitted frame?

a. The frame will have an outer VLAN tag of 5 and an inner tag of 20.  
b. The frame will have an outer VLAN tag of 5 followed by a tag of 20 and an innermost tag of 7.  
c. The frame will have a single VLAN tag of 7.  
d. The frame will have a single VLAN tag of 20.
3.9 Which one of the following statements about Epipe service configuration on the Nokia 7750 SR is FALSE?
   a. VC-IDs must match on both PEs.
   b. Service MTU values must match on both PEs.
   c. The port associated with SAP must be in access mode.
   d. SDP ID values must match on both PEs.

3.10 Which of the following about the Ipipe service in a Nokia 7750 SR is FALSE?
   a. Ipipe is useful for network migration purposes.
   b. Ipipe only supports IP traffic between networks.
   c. Ipipe supports IP interconnection between ATM and Frame Relay networks.
   d. Ipipe is used to carry TDM frames over an IP/MPLS network.

3.11 Which of the following is TRUE when a broadcast frame is received on a mesh SDP in a VPLS?
   a. The broadcast frame is flooded to every SAP, spoke SDP, and mesh SDP.
   b. The broadcast frame is flooded only on every SAP.
   c. The broadcast frame is flooded on every SAP and spoke SDP.
   d. The broadcast frame is discarded to prevent a forwarding loop.

3.12 Which one of the following cause mesh SDPs to be operationally down on both PE1 and PE3?
   a. The SDP IDs are different between PE1 and PE3.
   b. The SDP path MTUs are different between PE1 and PE3.
   c. The VPLS is shutdown on PE3.
   d. The VC-IDs are different between PE1 and PE3.

3.13 Which of the following is the purpose of using the command oam svc-ping?
   a. It is used to verify the end to end connectivity for a service.
   b. It is used to verify if an MPLS LSP reaches the egress LER for a FEC.
   c. It is used to verify the MTU for an SDP in an MPLS network.
   d. It is used to verify the path of an MPLS LSP for a FEC.
   e. It is used to verify connectivity for an SDP in an MPLS network.

3.14 Which of the following is TRUE when configuring a local mirror service on a Nokia 7750 SR?
   a. The mirror source must be configured before the mirror destination service.
   b. The mirror source must specify a SAP ID as source type.
   c. The mirror destination must specify an SDP as mirror destination.
   d. The mirror source ID must be the same as the mirror destination service ID.
3.15 Which of the following is NOT a characteristic of an IES?
   a. The SAP of an IES interface has QoS, accounting, and billing capabilities.
   b. Multiple interfaces can be configured in a single IES.
   c. All IP interfaces created within an IES belong to the same customer.
   d. Each IES creates a VRF table to isolate routes from different customers.

3.16 Which of the following statements is FALSE about VPRN VRF tables?
   a. A VRF table is a logical forwarding routing table created within a PE.
   b. VRF tables are used to isolate routing information between customers.
   c. Routes from a VRF table are automatically advertised to customer networks.
   d. Multiple VRF tables can be maintained by a PE.

3.17 Which of the following is FALSE when using the VPN-IPv4 address family in MP-BGP?
   a. A route distinguisher is appended to the IPv4 prefix to form a 12-byte VPN-IPv4 prefix.
   b. A VPN-IPv4 prefix contains a route target to ensure that IP prefixes are globally unique.
   c. A VPN-IPv4 prefix can have only one route distinguisher, but it can have multiple route targets.
   d. An MP-BGP route update contains one or more route targets associated with the VPN-IPv4 prefix.

3.18 Which of the following is FALSE when exporting routes in this VPRN topology?
   a. An export policy is required on CE1 to advertise CE1’s loopback interfaces to PE1.
   b. An export policy is required on PE1 when propagating MP-BGP routes to CE1.
   c. An export policy is NOT required on CE2 due to the static routes.
   d. An export policy is required on PE2 to propagate routes for CE2 to PE1.

3.19 Which of the following is TRUE when deploying a 6VPE network that can support both IPv4 and IPv6 VPN services?
   a. Multiple MP-BGP sessions are required to support both IPv4 and IPv6 address families.
   b. The IP/MPLS network core must be both IPv4 and IPv6 aware.
   c. MP-BGP protocol must be configured to support both VPN-IPv4 and VPN-IPv6 address families.
   d. The VPRN interfaces only have to support IPv4 addresses.

3.20 Which of the following is TRUE about 6VPE?
   a. PEs must use a default static route to reach to the far end remote CEs.
   b. PEs require IPv6 enabled on all interfaces.
   c. PEs must use MP-BGP VPN-IPv6 address family.
   d. CEs must be dual stack routers.
# Answer Key

<table>
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<tr>
<th>Interior Routing Protocols</th>
<th>Multiprotocol Label Switching</th>
<th>Services Architecture</th>
</tr>
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<tbody>
<tr>
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