400-201 177 Questions CCIE SP Written v4.0

Question 1
How many neighbour relationship did the DR have: isis q, 4 routers on Ethernet segment, one was the DR, DR was L1/L2, something like this (R1 – L1 R2 – L2 R3 – L1).

A. 3
B. 2
C. 1
D. 0

Correct Answer: A
Explanation/Reference:

Question 2
DnD – match sonet to sdh (i.e. section, line, path, payload, etc)
DnD – match sonet to sdh (i.e. section, line, path, payload, etc)
just like the last example
you OC12 on left and STM4 on right you have path on left and i matched it with path on right (i think that was correct) section on left and you had to match it with the correct sdh term on right for sonet they had – section, line, path, oc12, and somthing else

[Diagram]

A. (a) SONET
B. (b) SDH
C. (c) SDH
D. (d) SONET

Correct Answer: A
Explanation/Reference:

Question 3
1 question related to new NFV for DND.
1 question related to new NFV for DND.
hp://www.telecomlighthouse.com/a-beginners-guide-to-nfv-management-orchestration-mano/

A. A
B. B
C. C
D. D

Correct Answer: A
Explanation/Reference:
– Virtualize NFV manager
– NFV Manager
– NFV orchestration

Question 4
Refer to the exhibit
Question 5
Refer to the exhibit

A. Configure a sham link between PE2 and PE3
B. on PE2 and Pe3, reconfigure redistribute BGP into IS-IS using the metric-type external parameter
C. on PE2 allow only redistribution from BGP into IS-IS, on PE3 allow only redistribution from IS-IS into BGP
D. Configure all IS-IS instance as level-1 only

Correct Answer: B
Explanation/Reference:

Question 6
Classification of all traffic for a link in a MPLS L3VPN + mcast Rosen scenario (L3VPN traffic: use MPLS EXP, mcast+NC traffic:
Classification of all traffic for a link in a MPLS L3VPN + mcast Rosen scenario (L3VPN traffic: use MPLS EXP, mcast+NC traffic:
A. in the class-map you have to match EXP values and precedence (like priority, critical, flash, network, etc) because the multicast traffic is IP based answers match on the old style, not IP Pre or dscp. Example voice you have to match on critical
B. 
C. 
D. 

Correct Answer: A
Explanation/Reference:

Question 7
SoO with BGP as CE-PE protocol. Topology is 2 distinct sites with a backdoor: options use same/distinct SoO with route-map in/out or vrf sitemap.
SoO with BGP as CE-PE protocol. Topology is 2 distinct sites with a backdoor: options use same/distinct SoO with route-map in/out or vrf sitemap.
A. know how to configure BGP SoO and apply it on neighbor 2 answers – SOO value had to agree on both PEs
B. 
C. 
D. 

Correct Answer:
Explanation/Reference:

Question 8
LDP — options — udp 646, 711.tcp 646,711.multicast 224.0.0.1,multicast 224.0.0.2
LDP — options — udp 646, 711.tcp 646,711.multicast 224.0.0.1,multicast 224.0.0.2
LDP — TCP /UDP 646 & hello message it is targeted at "all routers on this subnet" multicast address 224.0.0.2
A. multicast 224.0.0.2 and UDP 646 hello
B. 

http://www.aoowe.com/practice-400-201-3159.html
Question 9
Which prefixes must be selected to meet requirements?
A service provider is in process of providing Layer2 and Layer 3 VPN services. After a while the number of Labels across the core have increased and the service provider scalability becomes the most important concern and the ISP decides to allocate label for the necessary prefixes. Which prefixes must be selected to meet requirements?
A. CE loopbacks only that are used as BGP next hop
B. RR, P, and PE loopbacks that are used as BGP next hop
C. PE loopbacks only that are used as BGP next hop
D. P and PE loopbacks that are used as BGP next hop
E. All/32 prefixes advertised in the IGP
Correct Answer: C
Explanation/Reference:

Question 10
Which MPLS TE Feature allow the network engineer to configure MPLS TE LSP by using a few CLI commands
Refer to the exhibit, a Network Engineer has requirement to enable MPLS TE Tunnel on the network, Which MPLS TE Feature allow the network engineer to configure MPLS TE LSP by using a few CLI commands

A. Auto tunnel Mesh groups on all P and PE Routers
B. Auto tunnel primary and backup on all P Router
C. Auto tunnel mesh Group on all PE Routers
D. Auto tunnel primary and backup on all P and PE Router
Correct Answer: C
Explanation/Reference:

Question 11
How to install 2 routes for same prefix in CEF — one had LP of 100 and other had 200 — there was exhibit —
How to install 2 routes for same prefix in CEF — one had LP of 100 and other had 200 — there was exhibit —
A. bgp additional-paths install
B. 
C. 
D. 
Correct Answer: A
Explanation/Reference:
IP cef switch
– CEF is doing load-balancing per-flow
– By default, it takes source-destination IP pair, feeds it to the hashing algorithm, returns the number of the bucket, buckets are allocated automatically per NH, depending on the traffic share count in RIP
– Load sharing using next-hop

Question 12
THREE ways to configure SoS value for a BGP neighbor.
*HINT*
THREE ways to configure SoS value for a BGP neighbor.
A. BGP peer policy template
B. BGP neighbor command
C. BGP peer group
D.
Question 13
Which two options must be configured on the R1 router to achieve this goal?
An R1 router requires an equal load balancing to reach the prefix 192.168.0.0/16 over two exit points: through R2 and R3 routers. Which two options must be configured on the R1 router to achieve this goal? (Choose two.)
A. The BGP maximum path feature must be configured on R1.
B. The BGP PIC core must be enabled on R1
C. Weight, local-pref, MED, as-path length, origin, and the BGP next-hop IGP cost must be the same for the R2 and R3 IBGP updates to R1
D. The BGP Link Bandwidth feature must be applied on R1.
E. BGP extended community exchange must be enabled between IBGP neighbors.
Correct Answer: AC
Explanation/Reference:

Question 14
Packet forwarding on ASR9k line card through fabric and out another line card
packet forwarding on ASR9k line card through fabric and out another line card
Answer
Step 1 – incoming interface on LC
Step 2 – NP Mapped to incoming interface on LC
Step 3 – FIA on incoming interface
Step 4 – local XBAR on local FC
Step 5 – XBAR on switch fabric
Step 6 – FIA on outgoing NP
Step 7 – NP Mapped to outgoing interface on outgoing LC
Step 8 – outgoing interface
A. 
B. 
C. 
D. 
Correct Answer: 
Explanation/Reference:

Question 15
67- IS-IS redistribution in MP-BGP to avoid loop (IS-IS as IGP)
67- IS-IS redistribution in MP-BGP to avoid loop (IS-IS as IGP)
Redistribution doesn’t take into account the IS-IS connected routes. You have to explicitly define them. In order to void a possible loop while doing redistribution (when L1 is involved), you can change the distance of the ISIS advertised routes (excluding connected) on the PE to be higher than BGP’s. ISIS metric = hops (10)
A. 
B. 
C. 
D. 
Correct Answer: 
Explanation/Reference:
IOS
router isis 100
address-family ipv4 vrf VPN
redistribute bgp 200

IOS-XR
router isis 100 vrf VPN
redistribute bgp 200

IOS-XR
router bgp 200 vrf VPN
address-family ipv4 unicast
redistribute isis 100

Question 16
Which solution meets these requirement?
A service provider requires that PE-CE links be optimized by only compressing the TCP header. Neither Voice traffic nor other traffic packets must be compressed. Which solution meets these requirement?
A. Header compression using IPHC profiles
B. Enhanced RTP header compression
C. RTP header compression over satellite links
D. Class-based TCP header compression
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Question 17
Which description is true of what the fast-reroute keep-all-paths command accomplishes when used under OSPF process?
A. By default only the /32 routes have a backup path instead, this command creates a backup path for the router
B. By default only the /32 routes have a backup path instead, this command installs the remote LFA backup paths
C. All backup routes – not only the best backup route – are installed in the OSPF RIB
D. All possible alternate routes are installed in the OSPF RIB even if the alternate paths do not meet the LFA criteria
Correct Answer: C
Explanation/Reference:

Question 18
Why are thresholds defined based on baseline documents?
A. To verify that interfaces are in the correct state
B. To help identify current network problems and predict future bottlenecks
C. To ensure that QoS parameters are defined appropriately
D. To reduce polling traffic on the network
E. To suppress duplicate alarms and allow for event correlation
Correct Answer: B
Explanation/Reference:

Question 19
Which statement about LISP proxy ETR is true?
A. A LISP site with IPV4-only RLOC connectivity can send IPV6 EID within an IPV4 LISP header
B. PETR support transport of LISP only, traffic from one address to LISP site in the same address
C. A LISP site with IPV6-Only RLOC can communicate to non-LISP IPV6 internet users across IPV4 internet
D. A LISP PETR implement ITR mapping database lookup and LISP encapsulation function on behalf
Correct Answer: C
Explanation/Reference:

Question 20
Which test Can quickly identify the CORE Link causing the problem?
A. An MPLS traceroute with multipath option between the PEs loopback
B. An extended ping with multipath option between PEs loopback
C. A vrf Ping between customer CE Router and SP remote PE router
D. Vrf trace route between customer CE router and SP remote PE router
E. An MPLS ping with sweep option between the PE loopback
Correct Answer: A
Explanation/Reference:

Question 21
Which 3 OSPF pieces of Information must match between routers in order to form adjacency?
A. Area ID
B. LSA Refresh period value
C. Priority value
D. Hello Interval and dead interval timer value
E. stub flag
F. process ID
Correct Answer: ADE
Explanation/Reference:

Question 22
Which 2 configuration are required to accomplish this Goal,Choose 2?
an SP engineer has requirement to configure an inter-as MPLS L3VPN with a maximum of one LSP between PE-1 and PE-2, which 2 configuration are required to accomplish this Goal,Choose 2?
A. next-hop-self on ASBR
B. next-hop-unchanged on RR
C. next-hop-unchanged on ASBR
D. redistribute connected on ASBR
E. next-hop-self on RR
F. ip route on ASBR
G. redistribute BGP on ASBR

Correct Answer: BG
Explanation/Reference:

**Question 23**
What has caused the issue?
REP has been deployed in a Segment, a Network operation engineer notice that segment port does not become functional. What has caused the issue?
A. a neighbor is using a different port ID
B. more than one neighbor has the same segment ID
C. a local port is in alternate port state
D. neighbor port is in block state

Correct Answer: B
Explanation/Reference:

**Question 24**
Which solution achieve this
a SP engineering team must design a solution that support end-to-end LSP according to RFC 3107, which solution achieve this
A. LDP and BGP
B. BGP and send Label
C. RSVP and IS-IS or OSPF
D. RSVP and BGP
E. mLDP

Correct Answer: B
Explanation/Reference:

**Question 25**
Routes redistributed into an OSPF ASBR are which LSA type?
Routes redistributed into an OSPF ASBR are which LSA type?
A. LSA type 6
B. LSA type 5
C. LSA type 4
D. LSA type 3
E. LSA type 1
F. LSA type 2

Correct Answer: B
Explanation/Reference:

**Question 26**
In PIM-SM operations, the first router connected to the multicast source sends the Register message to which device?
In PIM-SM operations, the first router connected to the multicast source sends the Register message to which device?
A. Designated Router (DR)
B. Multicast source
C. Multicast receiver
D. RP mapping agent
E. RP

Correct Answer: E
Explanation/Reference:

**Question 27**
What is the port number of an IPsec Encapsulating Security Payload packet?
What is the port number of an IPsec Encapsulating Security Payload packet? ESP
A. IP protocol 50
B. IP Protocol 51
C. TCP Port 50
D. TCP Port 51
E. UDP Port 50
F. UDP Port 51

Correct Answer: A
Explanation/Reference:

**Question 28**
Which two methods are most commonly deployed?
In PPPoA architecture, which two methods are most commonly deployed? (Choose two)
A. terminating PPP sessions at the service provider
B. L2TP tunneling
C. GRE tunneling
D. PPP multiplexing
E. PPP framing

Correct Answer: AB
Explanation/Reference:
Question 29
What type of IPv6 address is this address: FF05::2:260:8FF:FE52:F9D8?
A. multicast permanent site local
B. multicast permanent node link local
C. multicast temporary site local
D. unicast permanent link local
Correct Answer: A
Explanation/Reference:

Question 30
Which technology is a forwarding decision point in a PE router that provide flexibility to make many layer 2 flow decision within an interface?
A. Local Connect
B. AToM
C. EFP
D. VPLS
E. Pseudowire
Correct Answer: C
Explanation/Reference:

Question 31
Which two QoS marking methods can a service provider use to mark user traffic and be visible only internally to the router
A. 802.1p
B. DS-TE
C. Discard-class
D. ToS
E. QoS-Group
F. MPLS EXP Bit
G. DSCP
Correct Answer: CE
Explanation/Reference:

Question 32
Which BGP feature protects the external BGP peering session from CPU utilization-based attacks that use forged IP packets?
A. BGP multihop
B. TTL security check
C. BGP FlowSec
D. Secure BGP
Correct Answer: B
Explanation/Reference:

Question 33
Which Cisco IOS EXEC command should the engineer apply?
A. tunnel mpls traffic-eng autoroute destination
B. tunnel mpls traffic-eng path-option lowest_number dynamic
C. mpls traffic-eng optimize lockout
D. mpls traffic-eng multicast-intact
E. mpls traffic-eng reoptimize
Correct Answer: E
Explanation/Reference:

Question 34
Which hardware component is used to build and distribute the forwarding plane information to all line cards?
A. ESP
B. RP
C. PRP
D. SIP
Correct Answer: B
Explanation/Reference:

Question 35
Which scenario Backscatter Traceback solution is recommended?
A. Rouge DNS/DHCP Servers
B. Distributed Denial of Service
C. Ping of death
D. IP Spoofing
Correct Answer: E
Explanation/Reference: Some say ESP
E. Network attack TCP/UDP Scan

Correct Answer: B
Explanation/Reference:
dump said IP Spoofing

**Question 36**
Which two actions can improve network performance without implementing a multi area design?
A service provider is running a single area OSPFv2 instance in the MPLS network. The OSPF re-convergence time is becoming excessively slow as the service provider MPLS network grows. Which two actions can improve network performance without implementing a multi area design? (Choose two).
A. Configure incremental SPF
B. Reduce type 5 LSAs
C. Implement Partial Route Computation
D. Limit number of TVLs
E. Enable LSA group pacing

Correct Answer: AE
Explanation/Reference:

**Question 37**
Which two PDU fields can a service provider use to mark L3VPN traffic without interfering with customer marking?
Which two PDU fields can a service provider use to mark L3VPN traffic without interfering with customer marking? (Choose two) (review)
A. MPLS EXP bit
B. DS-TE
C. ToS
D. discard-class
E. DSCP
F. QoS-Group
G. 802.1p

Correct Answer: DF
Explanation/Reference:

**Question 38**
Which protocol provides an alternative to the STP, which provides a way to control network loops, handle link failures, and improve convergence time and can coexist with STP?
Which protocol provides an alternative to the STP, which provides a way to control network loops, handle link failures, and improve convergence time and can coexist with STP?
A. REP
B. Flex links
C. PBB-EVPN
D. IEEE 802.1ah
E. E-TREE

Correct Answer: A
Explanation/Reference:

*REP*
REP is a protocol used in order to replace the Spanning Tree Protocol (STP) in some specific Layer 2 network designs. The most current STP specification is Multiple Spanning Trees (MST), defined in 802.1Q-2005. Users who want an alternative to MST have these legitimate concerns: STP considers a bridged domain as a whole. As a result, a local failure is recovered if you change the state of an arbitrarily remote link. The apparent unpredictability of STP is only mitigated if you segment the bridged domain in small, independent pieces. Unfortunately, this is complex, if not impossible, to achieve without the removal of some key features from the Spanning Tree (like preventing loops in all scenarios).

STP convergence might seem slow for service providers, who expect recovery times of 50 milliseconds (ms), which common in circuit-switching technologies. This slowness is not caused by the protocol itself; the platforms require optimization in order to run STP in a more efficient way. In the meantime, there need to be new solutions that work around platform limitations.

The MST load-balancing configuration is not flexible. In order for MST to achieve instance load-balancing, all the bridges must be part of the same region. Regions are defined by user configuration, and there is no way to modify the MST configuration on a switch without the introduction of some reconvergence in the network. This could be worked around by adding pre-configuration, and to a limited extent, by the use of other protocols such as VLAN Trunk Protocol (VTP) v3.

**Question 39**
Which two models are used in MPLS TE bandwidth constraints?
Which two models are used in MPLS TE bandwidth constraints? (Choose two)
A. mdm
B. rdm
C. bdm
D. mam
E. tem

Correct Answer: BD
Explanation/Reference:

**Question 40**
Which are the two limitations of the predefined NAT solution?
Which are the two limitations of the predefined NAT solution? (Choose 2/3).
A. The Bulk ports allocation configuration is not available
B. The global port limit parameter is not available for the predefined mode
C. Only the port-presentation option is available
D. NetFlow and syslog are not supported
E. It cannot be configured for each of the inside VRF instance
F. The predefined mode cannot be turned on or off during the active translations
G. Port allocation must be uniform for all subscribers

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Correct Answer: A0G
Explanation/Reference:

**Question 41**
Select and Place:
Select and Place:

Correct Answer:

**Explanation/Reference:**

**Question 42**
DND
DND
ME3400 switch
C-UNI – access or trunk port
- Support Customer-tag BPDU
S-UNI – Support S-VLAN BPDU, however only encapsulation default is supported
- Access port only
S-NNI – TRUNK port only
- Use as Uplink port
Question 43
Refer to the exhibit

Supports inter-site connections.
The IPv4 address is embedded in the prefix.

Supports intra-site connections.
Uses a modified EUI-64 format for the prefix.

The IPv4 address has a dynamic location in the IPv6 header.
Uses flexible prefix format requirements.

A. DND
B. C.
C. D.

Correct Answer: A
Explanation/Reference:

Question 44
Which statement is true about this As filter accomplishes?

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Refer to the exhibit, which statement is true about this AS filter accomplishes?
A. It filters BGP updates with any AS number starting with the digit 5 and ending with the digit 5, and this only in an AS_PATH
B. It filters incoming BGP updates with any AS number matching “5.5", but not 515,525.535 etc this only in an AS_SET
C. It filters incoming BGP updates with any AS number starting with the digit 5 and ending with the digit 5 and this only in an AS_SET
D. If allows any number with the statement ".*" and this only in an AS_PATH.
Correct Answer: B
Explanation/Reference:

**Question 45**
Which three options reflect the minimum of required commands on this router?
An engineer is deploying SSH-V2-only in-bond access. Which three options reflect the minimum of required commands on this router? (DSA key in the question)
A. Define a hostname for the device
B. Define a domain name for this device
C. Configure a key modulus in the global configuration
D. Add router hostname on DNS services
E. Create an access list that defines authorized hosts for SSH
F. Create crypto keys by using the “Crypto key generate dsa” command
Correct Answer: ABF
Explanation/Reference:

**Question 46**
Which timing over packet solution provides only accurate frequency synchronization, but does not provide time/phase synchronization?
Which timing over packet solution provides only accurate frequency synchronization, but does not provide time/phase synchronization?
A. Synchronous Ethernet
B. Network Tree Protocol
C. Precision Time Protocol
D. Timing over IP connection and transfer of clock BOF
Correct Answer: A
Explanation/Reference:

**Question 47**
Which solution meets these requirement?
A service provider requires that PE-CE links be optimized by only compressing the TCP header. Neither Voice traffic nor other traffic packets must be compressed.
Which solution meets these requirement?
A. Header compression using IPHC profiles
B. Enhanced RTP header compression
C. RTP header compression over satellite links
D. Class-based TCP header compression
Correct Answer: D
Explanation/Reference:

**Question 48**

DnD

A.  
B.  
C.  
D.  
Correct Answer:  
Explanation/Reference:

**Question 49**
Refer to the exhibit
28) Which description is true of what the fast-reroute keep-all-paths command accomplishes when used under OSPF process?

A) By default only the /32 routes have a backup path instead, this command creates a backup path for the router
B) Besides the regular LFA backup paths, this command also installs the remote LFA backup paths (not sure)
C) All backup routes – not only the best backup route – are installed in the OSPF RIB
D) All possible alternate routes are installed in the OSPF RIB even if the alternate paths do not meet the LFA criteria

Correct Answer: B
Explanation/Reference:

Question 50
Which two improvements does EVPN provide compared to traditional VPLS?
In MPLS-enabled network, which two improvements does EVPN provide compared to traditional VPLS?
A. Use of LDP to allocate EVPN-related labels
B. Flow load balancing
C. Optimized learning and flooding process
D. Leveraging of enhanced VFI capabilities (not sure)
E. No need for exchange of MAC reachability between PEs
F. Use of BGP as a control-plane protocol

Correct Answer: BC
Explanation/Reference:

Question 51
Why are thresholds defined based on baseline documents?

A. To verify that interfaces are in the correct state
B. To help identify current network problems and predict future bottlenecks
C. To ensure that QoS parameters are defined appropriately
D. To reduce polling traffic on the network
E. To suppress duplicate alarms and allow for event correlation

Correct Answer: B
Explanation/Reference:

Question 52
Which command conserves IPv6 multicast traffic at layer 2 by configuring layer 2 ports dynamically to forward IPv6 multicast traffic only on the ports which need to receive it.
IPv6 multicast is enabled in a VPLS domain. An operation engineer must reduce the multicast flooding in their VPLS environment. Which command conserves IPv6 multicast traffic at layer 2 by configuring layer 2 ports dynamically to forward IPv6 multicast traffic only on the ports which need to receive it.
A. MLD snooping
B. MLD querier
C. MLD version 2
D. IGMP version 3
E. IGMP snooping

Correct Answer: A
Explanation/Reference:
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Question 53
Which command can be issued on R9 so that R12 receives all the external and internal routes?
Refer to the exhibit which command can be issued on R9 so that R12 receives all the external and internal routes?
A. Redistribute ospf 1 match internal external 1 external 2
B. Redistribute ospf 1 internal external 1 external 2
C. Redistribute ospf 1 internal nssa-external 1 nssa-external 2
D. Redistribute ospf 1 match nssa-external 1 nssa-external 2

Correct Answer: A
Explanation/Reference:

Question 54
Which OSPFv3 redistribute configuration provides the equivalent results for OSPFv3 as it happens when redistributing from EIGRP IPv4 prefixes into OSPFv2?
Refer to the exhibit which OSPFv3 redistribute configuration provides the equivalent results for OSPFv3 as it happens when redistributing from EIGRP IPv4 prefixes into OSPFv2?
Question 55
Which statement about LISP proxy ETR is true?
A. LISP site with IPv4-only RLOC connectivity can send IPv6 EID within an IPv4 LISP header.
B. PETR support transport of LISP only, traffic from one address to LISP site in the same address.
C. A LISP site with IPv4-Only RLOC can communicate to non-LISP IPv6 internet users across IPv4 Internet.
D. A LISP PETR implement ITR mapping database lookup and LISP encapsulation function on behalf.
Correct Answer: C
Explanation/Reference:

Question 56
Which test can quickly identify the CORE Link causing the problem?
A. Extended ping with multipath option between PEs loopback.
B. A VRF ping between customer CE Router and SP remote PE router.
C. Extended ping with sweep option between the PEs loopback.
D. An MPLS traceroute with multipath option between the PEs loopback.
E. VRF trace route between customer CE router and SP remote PE router.
F. An MPLS ping with sweep option between the PE loopback.
Correct Answer: D
Explanation/Reference:

Question 57
Which 3 OSPF pieces of information must match between routers in order to form adjacency?
A. area ID
B. LSA refresh period value
C. Priority value
D. Hello interval and dead interval timer value
E. Stub flag
F. Process ID
Correct Answer: ADE
Explanation/Reference:

Question 58
Which 2 configuration are required to accomplish this goal, choose 2?
an SP engineer has requirement to configure an inter-as MPLS L3VPN with a maximum of one LSP between PE-1 and PE-2, which 2 configuration are required to accomplish this goal, choose 2?

Option C
(still not sure the answer)
Question 59
Which description is true about how remote IP Fast re-route address feature in the ring topology
A. routers establish an MPLS TE Tunnel with all PQ nodes in the ring
B. routers establish an MPLS TE Tunnel with both ring edge routers
C. routers establish targeted LDP Session with the furthest router that is in a PQ space it requires
D. routers establish a GRE Tunnel with the closet PQ node in the ring
E. routers establish targeted LDP Session with the closet router that is in a PQ space

Correct Answer: F

Explanation/Reference:

Question 60
Which 2 actions can improve network performance without implementing a multi-area OSPF?
A. Configure increment SPF
B. Reduce Type 5 LSA
C. implement Partial route Computation
D. limit the number of TLV
E. enable LSA group pacing

Correct Answer: AE

Explanation/Reference:

Question 61
What has caused the issue?
REP has been deployed in a Segment, a Network operation engineer notice that segment port does not become functional. What has caused the issue?
A. a neighbor is using a different port ID
B. more than one neighbor has the same segment ID
C. a local port is in alternate port state
D. neighbor port is in block state

Correct Answer: B

Explanation/Reference:

Not sure

Question 62
Which solution achieve this
a SP engineering team must design a solution that support end-to-end LSP according to RFC 3107, which solution achieve this
A. LDP and BGP
B. BGP and send Label
C. RSVP and IS-IS or OSPF
D. RSVP and BGP
E. mLDP

Correct Answer: B

Explanation/Reference:

Question 63
Which PW type is negotiated
(Exhibit)
A. Type 1
B. Type 2
C. Type 3
D. Type 4 (Eth Type)
E. Type 5
F. Type 6

Correct Answer: D

Explanation/Reference:

Question 64
Which OSPFv3 LSA never flooded beyond the Link
A. Increment router LSA
B. Network LSA
C. Link LSA
D. Non-area prefix LSA
Question 65
What is the Advantage of BGP Confederation implementation compared to BGP RR implementation?
A. Bgp policies can differ internally within and between the AS
B. Confederation allow use of template session and template policy, RR can only Use Peer-group
C. Confederation is more scalable, RR implementation to eliminate
D. Confederation provides better redundancy, RR client can peer to only 1 Cluster
Correct Answer: A
Explanation/Reference:

Question 66
Which implementation achieves this goal?
Refer to the exhibit all PE routers are configured with full-mesh MP-BGP and VPNv4 routing to provide L3VPN service. The ISP preferred to provide management and monitoring products to customers with dedicated VRFs. The objective of this plan is providing connectivity between the central services VRF and VRFs A and B. Which implementation achieves this goal?
A. PE1
vrf definition A
rd 400:1
address-family ipv4
route-target export 1001:1
PE2
vrf-definition B
rd 500:1
address-family ipv4
route-target export 1001:1
PE3
vrf-definition SERVICES
rd 1001:1
address-family ipv4
route-target export 400:1
route-target export 500:1
B.
C.
D.
Correct Answer: A
Explanation/Reference:

Question 67
What is the Function of B4 Solution
In a Dual Stack LITE solution, what is the Function of B4 Solution?
A. Reverse network address translated of the IPV4 packet coming from the internet
B. It encapsulate the IPV4 packet using an IPV4 Tunnel
C. It decapsulate the tunneled IPV4 packet, translate the network address, and routes
D. Acts as an endpoint for ipv6 and ipv4 encapsulation and forwarding
Correct Answer: D
Explanation/Reference:

Question 68
Which two techniques achieve the load sharing and redundancy for inbound traffic?
A content provider uses IPS-A and ISP-B for internet transit service for the purpose of redundancy and load balancing address range assigned to it. Which two techniques achieve the load sharing and redundancy for inbound traffic?
A. BGP Load-preference attribute
B. BGP MED attribute
C. BGP AS-prepend technique
D. Aggregate all prefixes received from both ISPs into a less-specific prefix
E. Use SISPA for outbound traffic and ISP-B for inbound traffic
F. Address range split into two more specific prefixes, then advertise one specific prefix per ISP
Correct Answer: BC
Explanation/Reference:

Question 69
ME3400 port types – trunk — options — UNI C port, UNI S Port, NNI, NNI C port, NNI S Port, NNI or UNI T port
ME3400 port types – trunk — options — UNI C port, UNI S Port, NNI, NNI C port, NNI S Port, NNI or UNI T port (choose 2)
A. NNI C port
B. NNI S Port
C. UNI C port
D. UNI S Port
E. NNI
F. UNI T port
Correct Answer: ABE
Explanation/Reference:
Question 70
Which 3 services can be recommended
a service provider is considering investing in SP chaining solution, which 3 services can be recommended
A. Firewall
B. vxlan
C. CGNAT
D. WAAS
E. E-Mail
F. Authoritative DNS
Correct Answer: ACD
Explanation/Reference:

Question 71
Improve OSPF SPF convergence
improve OSPF SPF convergence
A. LSA pacing
B. incremental SPF (ispf)
C. incremental RPC/PRC (use in IS-IS and OSPF)
D.
Correct Answer: AB
Explanation/Reference:

Question 72
Spoke to spoke traffic flow in a 2547oDMVPN topology (hub & spoke) spoke to spoke traffic flow in a 2547oDMVPN topology (hub & spoke)
A. Communication between spoke-hub-spoke only
B.
C.
D.
Correct Answer: A
Explanation/Reference:
Communication between spoke-hub-spoke only, HUB acting as P router for LSP

Question 73
Which option can be deployed to rectify the high CPU performance issue?
An operator enabled BFD in echo mode and now CPU is High, which option can be deployed to rectify the high CPU performance issue?
A. Disable ICMP redirect on the interface
B.
C.
D.
Correct Answer: A
Explanation/Reference:

Question 74
Why would operator use load rollback instead of rollback?
Why would operator use load rollback instead of rollback?
A. Load rollback allow rollback to specific ID
B.
C.
D.
Correct Answer: A
Explanation/Reference:
Load rollback allow rollback to specific ID

Question 75
ASR9k nV IRL and single control plane options — minimum requirement —
ASR9k nV IRL and single control plane options — minimum requirement —
A. 2 IRL link 10G/40/100G layer 1
B. 1G link Layer 2
C. EOBC – 1G link Layer 2
D.
Correct Answer: AC
Explanation/Reference:

Restrictions of the Cisco ASR 9000 Series nV Edge System
These are some of the restrictions for the Cisco ASR 9000 nV Edge system:
+ The first generation Cisco ASR 9000 Ethernet linecards are not supported.
+ Chassis types that are not similar cannot be connected to form an nV edge system.
SFP-GE-S is the only Cisco supported SFP that is allowed for all inter rack connections.

- TenGigE SFPs are not supported on EOBC ports.
- The nV Edge system does not support mixed speed links.
- The nV Edge system does not support the ISM or CGN blade.

RSP440

- Typhoon Line Card.
- Trident Line Card.
- RSP 3G cannot co-exist in the same system.
- Requires a cluster software license on each chassis.

4.2.1 image or above required.

- Only like-like chassis supported in 4.2.1. Mixed Chassis Support no yet committed.
- Single RSP per chassis is supported but not recommended due to lack of fabric redundancy on the physical chassis.

Question 76
Predefined NAT benefits or limitations
Predefined NAT benefits or limitations A. B. C. D.

Correct Answer: Explanation/Reference:


The considerations and the limitations of the predefined mode for NAT 44 are as follows:

- You can configure the predefined mode for each of the inside VRF instance.
- A new parameter, private address range, has been added to the NAT 44 configuration for the predefined mode. You can specify a minimum of one private address range to a maximum of eight private address ranges. Ensure that you specify at least one private address range because the available public addresses and the associated ports are mapped to the private addresses specified in this range. If the incoming packet has an address that is outside the private address range, then the packet is discarded. Ensure that the sum of all addresses should not exceed one million across all predefined mode-enabled VRFs.
- The Bulk Port Allocation configuration is not available in the predefined mode. If you try to configure Bulk Port Allocation on an inside VRF that has the predefined mode enabled, the configuration is rejected during verification.
- The port-preservation option is not available in the predefined mode.
- The global port limit parameter is not available for the predefined mode. Even though you will be allowed to configure the global port limit, the inside VRF, which has predefined mode enabled, ignores that port limit and uses the port limit configured by the algorithm.
- If you turn the predefined mode on or off for an inside VRF using the global port limit during the active translations, all the translations on that VRF are deleted.
- If a request for configuring static port on a private address that is not in the address range is made, the request is rejected.
- Ensure that you configure NetFlow or syslog only if it is very much required.
- Any configuration change that results in changes in mapping deletes the existing translations. Therefore, ensure that you record such configuration changes. You might need this information to trace the port usage by a subscriber.
- Ensure uniform port allocation uniform for all subscribers.

Question 77
How does ipv4 host in internet connect to it — options — stateless NAT64 with static ipv6v4 mapping , stateful NAT64 with static ipv6v4 ipv6 web server — how does ipv4 host in internet connect to it — options — stateless NAT64 with static ipv6v4 mapping, stateful NAT64 with static ipv6v4 mapping, NAT444, stateful NAT64
A. stateful NAT64 with static v6v4
B. C.
D.

Correct Answer: A

Explanation/Reference:


Question 78
How to install 2 routes for same prefix in CEF — one had LP of 100 and other had 200 — there was exhibit —

How to install 2 routes for same prefix in CEF — one had LP of 100 and other had 200 — there was exhibit —

A. Enable Load Balancing ip cef [distributed] switch
B. BGP additional path install
C.
D.

http://www.aowe.com/practice-400-201-3159.html
Correct Answer: B
Explanation/Reference:
ip cef [distributed] switch
typ additional path install also could archive the same results

Question 79
Advantages of per link LFA over per prefix LFA
Advantages of per link LFA over per prefix LFA
A. Per Link LFA
- Simpler computation – single iSPF per protected neighbour
- No prefix processing
- Less CPU/Memory intensive
- Smaller coverage
B. Per- Prefix LFA
- More complex computation – full Dijkstra per neighbour
- Per prefix backup computation
- More CPU/Memory intensive
- Better Coverage
- Better controlled backup selection from the available set of backups
C. D.

Correct Answer: A
Explanation/Reference:
Advantages of using per-prefix LFAs are as follows:
- The repair path forwards traffic during transition when the primary path link is down.
- All destinations having a per-prefix LFA are protected. This leaves only a subset (a node at the far side of the failure) unprotected.
Prefix-based LFAs allow computing backup information per prefix. Thus, repair/backup info computed for a given prefix using prefix-based LFA may be different than one computed by per-link LFA.
- More complex computation – full Dijkstra per neighbour
- Per prefix backup computation
- More CPU/memroy intensive
- Better Coverage
- Better controlled backup selection from the available set of backups
In link-based LFAs, all prefixes reachable through the primary (protected) link share the same backup information. This means that the whole set of prefixes sharing the same primary also share the repair/FRR ability.
- Simpler computation – single iSPF per protected neighbour
- No prefix processing
- Less CPU/Memory intensive
- Smaller coverage

Question 80
Arrange the listed SONET alarm type to proper severity
**Arrange the listed SONET alarm type to proper severity
Select and Place:

<table>
<thead>
<tr>
<th>Alarm Type</th>
<th>Severity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remote defect Indication-line (LRDI)</td>
<td>Critical</td>
</tr>
<tr>
<td>Alarm Indicate Signal-Path (PAIS)</td>
<td>Major</td>
</tr>
<tr>
<td>Section Loss of Signal (SLOS)</td>
<td>Minor</td>
</tr>
<tr>
<td>Alarm Indicates signal-line (LAS)</td>
<td>Normal</td>
</tr>
<tr>
<td>Remote defect Indication-path (PRDI)</td>
<td>Minor</td>
</tr>
<tr>
<td>Section Loss of Frame (SLOF)</td>
<td>Minor</td>
</tr>
</tbody>
</table>

Correct Answer:
**Question 81**
Refer to the exhibit.

PE1 and PE2 have a Layer 2 VPN over a GRE tunnel. This GRE tunnel built between P1 and P2 has LDP enabled. Consider a packet capture of the packets from CE1 and CE2 at P1 and R1 link. Drag the headers on the left and drop them on the right in the order of the encapsulation, starting from the inner header (at the top) to the outer header (at the bottom).

Select and Place:
**Question 82**
Drag each resiliency mechanism on the left to its corresponding technology on the right.

Select and Place:

- **Correct Answer:**

  - CE IPv4 Header
  - MPLS VPN LABEL
  - MPLS Transport Label
  - GRE
  - Ethernet Transport Frame

**Explanation/Reference:**

**Question 83**
Drag and drop the subslot of the SIP-800 card that is used on Cisco CRS routers on the left to the correct PUM ASIC process on the right.

Select and Place:

- **Correct Answer:**

  - First PUM ASIC
  - Subslot 0
  - Subslot 1
  - Subslot 2
  - Subslot 3
  - Subslot 4
  - Subslot 5

  - Second PUM ASIC

**Explanation/Reference:**
**Question 84**
Drag and drop each fast detection mechanism on the left to its definition on the right.

Select and Place:

**Correct Answer:**

**Explanation/Reference:**

**Question 85**
Drag and drop the IPFIX terminology on the left to the correct description on the right. Not all options will be used.

Select and Place:

**Explanation/Reference:**

http://www.aoowe.com/practice-400-201-3159.html
Drag and drop the MPLS operation listed on the left to the correct order of the operation on the right.

Correct Answer:

Explanation/Reference:

**Question 86**

Drag and drop the MPLS operation listed on the left to the correct order of the operation on the right.

Select and Place:

- Edge LSR at egress removes label and delivers packets
- Ingress edge LSR receives packets, performs layer-3 value-added services, and "labels" packets
- Existing Routing Protocols (e.g., OSPF, IS-IS) establish reachability to destination networks
- LRS switches packets using Label Swapping
- LDP establishes "label" to destination network mappings

Correct Answer:
Question 87
Drag and drop Evolved Packet Core functional entities on the left to the correct description on the right.
Select and Place:

- **HSS**
  - is the concatenation of HLR and AuC.

- **MME**
  - is the termination point of the packet data interface towards the PDN.

- **PCRF Server**
  - is the termination point of the packet data interface towards E-UTRAN.

- **PDN GW**
  - manages the service policy and sends QoS setting information for each user session and accounting rule information.

- **Service GW**
  - is in charge of all the Control Plane functions related to subscriber and session management.

Correct Answer:

- **HSS**
- **PDN GW**
- **Service GW**
- **PCRF Server**
- **MME**

Explanation/Reference:

Question 88
Drag and drop the IOS XR NTP access group options on the left to the right from the least restrictive (top) to the most restrictive order (bottom).
Drag and drop the IOS XR NTP access group options on the left to the right from the least restrictive (top) to the most restrictive order (bottom).

http://www.aoowe.com/practice-400-201-3159.html
Drag and drop the OAM protocol listed on the left to the correct standard on the right. Not all options will be used.

Correct Answer:

Explanation/Reference:

**Question 89**
Drag and drop the OAM protocol listed on the left to the correct standard on the right. Not all options will be used.

Select and Place.
Question 90
Anycast RP (Multicast) configuration
Anycast RP (Multicast) configuration
A.  
B.  
C.  
D.  
Correct Answer:
Explanation/Reference: https://aitaseller.wordpress.com/2012/12/01/basic-multicast-part-6-anycast-rp/

Question 91
EVPL & EPL DnD
EVPL & EPL DnD
A.  
B.  
C.  
D.  
Correct Answer:
Cisco ANA models the E-Line point-to-point Ethernet services including Ethernet Private Line (EPL) and Ethernet Virtual Private Line (EVPL).
- Ethernet Private Line—Uses a point-to-point EVC between two UNIs. EPLs provide high service frame transparency between interconnected UNIs such that the service frame header and payload are identical at both the source and destination UNI.
- Ethernet Virtual Private Line—Creates a point-to-point EVC similar to the EPL. However, the EVPL allows for service multiplexing at the UNI, which means the EVPL can support more than one EVC at the UNI. The EVPL also does not require full service frame transparency.
Question 92
Inter-AS options MP-BGP (Option A, Option B, Option AB)
Inter-AS options MP-BGP (Option A, Option B, Option AB)
A. 
B. 
C. 
D. 
Correct Answer: 
Explanation/Reference: 

Question 93
DnD VPLS bgp signalling
**DnD VPLS bgp signalling
A. 
B. 
C. 
D. 
Correct Answer: 
Explanation/Reference:

Question 94
MPLS-TE (CBTS configuration)
MPLS-TE (CBTS configuration)
A. 
B. 
C. 
D. 
Correct Answer: 
Explanation/Reference: 

Question 95
Mvpn rosen draft question
mvpn rosen draft question
A. 
B. 
C. 
D. 
Correct Answer: 
Explanation/Reference:

Question 96
Question regarding erspan or rspan – gre tunnel
Question regarding erspan or rspan – gre tunnel
A. 
B. 
C. 
D. 
Correct Answer:
Explanation/Reference:
– ERSPAN, require GRE tunnelling from source to destination sniffing port.
– Tunnelling done via loopback address. Supported in 6500, ASR1000, Nexus, 7600
– ASR1000 only support source monitoring only and cannot be destination of the span.

Question 97
EIGRP/OSPF IPv6 redistribution
EIGRP/OSPF IPv6 redistribution
A. redistribute eigrp 1 include-connected
B. redistribute ospf 1 metric 100000 20000 255 255 1500 include-connected
C. 
D. 
Correct Answer: A 
Explanation/Reference:
https://supportforums.cisco.com/document/12110191/understand-include-connected-keyword-use-ipv6-redistribution
example:
1 
ipv6 router eigrp 1
eigrp router-id 2.2.2.2 
redistribute ospf 1 metric 100000 20000 255 255 1500 include-connected 
1 
ipv6 router ospf 1
redistribute eigrp 1 include-connected
Question 98
MPLS over DMVPN question
A. Communication between spoke-hub-spoke only, HUB acting as P router for LSP
B. 
C. 
D. 
Correct Answer: A
Explanation/Reference:
http://d2zmdbbm96qrpf.cloudfront.net/2015/usas/pdfs/BRKSEC-4054.pdf

Question 99
ME3X00 Interface type configuration (NNI, UNI)
ME3X00 Interface type configuration (NNI, UNI)
NNI/UNI customer wants to configure trunk port me 3xxx
A. 
B. 
C. 
D. 
Correct Answer: 
Explanation/Reference:

Question 100
SDN (What SDN Controller do?)
A. An SDN controller is an application in software-defined networking (SDN) that manages flow control to enable intelligent networking. SDN controllers are based on protocols, such as OpenFlow, that allow servers to tell switches where to send packets.
B. 
C. 
D. 
Correct Answer: A
Explanation/Reference:
http://searchsdn.techtarget.com/definition/SDN-controller-software-defined-networking-controller

Question 101
How do you fix for stability.
A new high speed link has been added but it flaps and cause routing instability, how do you fix for stability.
A. ip dampening
B. bfd dampening
C. bgp dampening
D. 
Correct Answer: A
Explanation/Reference:

Question 102
ISSU component
A. 
B. 
C. 
D. 
Correct Answer: 
Explanation/Reference:

Question 103
An LDP question with two routers forming neighbors but router id was loopbacks that weren’t in IGP, what two solutions could fix it, including adding loopbacks to ospf, changing router id for ldp to physical interface or its address etc
A. adding loopbacks to ospf
B. changing router id for ldp to physical interface or its address
C. 
D. 
Correct Answer: A
Explanation/Reference:

Question 104
MC Question on SMU’s, about whether its platform specific or its independent.
MC Question on SMU’s, about whether its platform specific or its independent.
A. SMU is built on a per release and per component basis and is specific to the platform.

Correct Answer: A
Explanation/Reference:

Question 105
What solution fixes downfall of VPLS including scale.
A. H-VPLS
B. 
C. 
D. 
Correct Answer: A
Explanation/Reference:
Only option remembered

Question 106
What loop prevention mechanism can be used for ospf type 3 sla in L3VPN.
A. sham link
B. down bit
Correct Answer: B
Explanation/Reference:
Two options i recall were sham link and down bit

Question 107
A CsC question regarding CE to CE connectivity failing.
A. 
B. 
C. 
D. 
Correct Answer:
Explanation/Reference:

Question 108
What are the two characteristics of service chaining
A. 
B. 
C. 
D. 
Correct Answer:
Explanation/Reference:

Question 109
Which action resolves this issue?
Refer to the exhibit:
A customer with two sites is running RIP as a CE-PE routing protocol. These two sites are connected through Layer 3 VPN services. Each of these CE routers cannot ping the LAN IP address of the other router. Which action resolves this issue?
A. On PE2 under RIP VRF ABC address family, add the redistribute bgp 100 metric 5 command.
B. On PE1 under RIP VRF ABC address family, add the network 10.10.13.0 command.
C. On both PEs under BGP VRF ABC address family, add the bgp bestpath igp-metric ignore command.
D. On PE1 under RIP VRF ABC address family, add the no auto-summary command.
E. On PE2 under BGP VRF ABC address family, add the bgp redistribute-internal command.
Correct Answer: AE
Explanation/Reference:
Question 110
Which command would significantly reduce the label allocations without compromising LDP functionalities?

Due to recent acquisitions, a company’s MPLS infrastructure is growing very quickly. Concerns arise about labeling each and every IP address on the service provider core network. The IP address space is designed as per following:

- Service provider ip address range is: 10.0.0.0/16
- All loopback addresses use subnet mask /32
- 10.0.0.0/24 range is used for loopback addresses
- All other subnet masks used for links are /24 and /25

Which command would significantly reduce the label allocations without compromising LDP functionalities?

A. ip prefix-list List1 deny 10.0.0.0/16 le 20 ge 25
   !
   mpls ldp label
   allocate global prefix-list List1
B. access-list 1 permit 10.0.0.0 0.0.255.255
   mpls ldp neighbor 10.0.0.1 labels accept 3
C. mpls ldp label
   allocate global host-routes
D. mpls ldp password required for 10
   !
   access-list 10 permit 10.0.0.1
   access-list 10 permit 10.0.0.2
   access-list 10 permit 10.0.0.3

Correct Answer: C
Explanation/Reference:

Question 111
Which action satisfies this requirement?

Two MPLS VPN customers want to acquire Internet access. They make use of overlapping address space but do not want to use NAT on the CPEs. Which action satisfies this requirement?

A. Configure each VRF with a default route in the global table by using a static route toward each customer’s range, pointing to the customer interface in the global table.
B. Configure VRF-aware NAT with a default route in the global table for each VRF that requires it
C. Configure a separate PE-CE subinterface that terminates in the global routing table on the PE.
D. Configure the Internet upstream interface inside a VRF, Which becomes an extranet VRF to which customers join and make use of NAT in this VRF.

Correct Answer: AB
Explanation/Reference:

Question 112
Which is one difference between H-VPLS and VPLS?

Which is one difference between H-VPLS and VPLS?

A. VPLS is a point-to-point Layer-2 services and H-VPLS is a multipoint Layer-2 services.
B. H-VPLS reduces signaling overhead and packet replication requirements for the provider edge.
C. VPLS improve scalability concerns identified on H-VPLS implementation.
D. H-VPLS connects using also other Layer-2 encapsulation such as PPP and VPLS connects using Ethernet encapsulation only

Correct Answer: B
Explanation/Reference:

Question 113
Which are the two advantages if an ISP chooses a platform that runs Cisco IOS-XR Software instead of Cisco IOS Software?

Which are the two advantages if an ISP chooses a platform that runs Cisco IOS-XR Software instead of Cisco IOS Software? (Choose two.)

A. Cisco IOS XR Software functions as a message-passing operating system.
B. The system’s scheduler is priority-based.
C. The context switching is based on Cisco Express Forwarding.
D. VoIP traffic is hardware-processed for real-time response.
E. Communication between client and server is realized by a dedicated mechanism.

Correct Answer: AB
Explanation/Reference:

Question 114
Which three configuration sections are required on service provider PE routers to enable IPv4 Layer 3 VPN?

**Which three configuration sections are required on service provider PE routers to enable IPv4 Layer 3 VPN? (Choose three.)

A. Configure route distinguishers that are used for importing and exporting customer VRF routes.
B. Configure at least one interface that is assigned to a customer link as a member of the VRF.
C. Configure the VRF+4 address-family under the MP-BGP configuration mode on the PE routers that participate in the customer VRF routing.
D. Configure route targets that are used for importing and exporting customer VRF routes
E. Advertise customer routes to all PE routers by configuring the IPv4 address-family under the MP-BGP configuration mode.
F. Implement MPLS for all customer-facing links

Correct Answer: BCD
Explanation/Reference:

Question 115
What is the status of the L2 tunnel between PE1, PE2, and the Layer 2 switches?

**Refer to the exhibit.
What is the status of the L2 tunnel between PE1, PE2, and the Layer 2 switches?

A. The Layer 2 tunnel is up, and SW1 becomes the root bridge for VLAN 10.
B. The Layer 2 tunnel is down, due to the ACL that is applied on the PE2 interface.
C. The Layer 2 tunnel is up, but no BPDUs are exchanged unless an extra configuration is applied.
D. The Layer 2 tunnel is down, due to the MTU mismatch between SW1 and SW2.

Correct Answer: A

Explanation/Reference:
Protocol 115 (not UDP/115) is used for L2TPv3. So by blocking UDP/115, the tunnel will still be up.

Question 116
Which two security issues must the engineer take into consideration?

**An engineer is tasked with configuring Lawful-Intercept on the Internet facing routers. Which two security issues must the engineer take into consideration?**
(Choose two)
A. Default SNMP does not include all the MIB references needed to respond to the request.
B. A new and dedicated loopback interface is required to communicate with the MD device.
C. Encryption might be required depending on the request.
D. The communication between the MD and the Content IAP happens over UDP port 161.
E. QoS and CoPP should be implemented to protect and optimize the tasks.
F. SNMPv2c should be enabled in order to provide the correct message format.

Correct Answer: AD

Explanation/Reference:
- SNMP notifications for lawful intercept must be sent to UDP port 161 on the mediation device, not port 162 (which is the SNMP default). See the “Enabling SNMP Notifications for Lawful Intercept” section for instructions.
- The default SNMP view excludes the following MIBs:
  - CISCO-TAP2-MIB
  - CISCO-IP-TAP-MIB
  - SNMP-COMMUNITY-MIB
  - SNMP-USM-MIB
  - SNMP-VACM-MIB

Question 117
How does BGPsec protect prefix advertisements?

**In order to prevent malicious traffic, how does BGPsec protect prefix advertisements?**
A. It validates only the originating AS.
B. It validates routes with encryption.
C. It validates the AS path.
D. It validates the next-hop AS.

Correct Answer: C

Explanation/Reference:
Securing Route Propagation: BGPsec

Question 118
Which MPLS TE component keeps track of the flooding and admission control?

Refer to the exhibit.
Which MPLS TE component keeps track of the flooding and admission control?
A. MPLS TE priorities
B. RSVP
C. link attributes
D. link manager

Correct Answer: D
Explanation/Reference:

MPLS traffic engineering link management module. This module operates at each LSP hop, does link call admission on the RSVP signaling messages, and
bookkeeping of topology and resource information to be flooded.

Question 119
Which are the three characteristics of SDR?
**Which are the three characteristics of SDR? (Choose three)
A. The logical router can span across chassis.
B. Each logical router has a distinct fabric and system controller module.
C. Owner SDR can be reloaded, without affecting all non-SDRs.
D. The logical router has dedicated route processor.
E. The logical router can share line cards.
F. The fabric and system controller module are shared by all logical routers.

Correct Answer: ADF
Explanation/Reference:

Question 120
Which three severity levels appear in the router syslog?
**Network Operations team has configured the routers with the logging buffered warnings command. Which three severity levels appear in the router syslog?
(Choose three.)
A. errors
B. notifications
C. informational
D. alerts
E. debugging
F. emergencies

Correct Answer: ADF
Explanation/Reference:
Warning is Level 4, when level 4 is enabled, it will cover all up to level 4 which is 0-3 (Emergencies, Alert, Critical, Errors & warning)

Question 121
What can be concluded about the interface based on output provided?
Refer to the exhibit.

A network engineer is troubleshooting PTP on Cisco ASR 9000 router. What can be concluded about the interface based on output provided?
A. The interface receives timestamps from a master clock, but the router’s clock is not yet synchronized to the master.
B. The interface is aware of a better clock than the one it would advertise if it was in Master state.

A. The interface receives timestamps from a master clock, but the router’s clock is not yet synchronized to the master.
C. The interface is not yet ready to participate on PTP.
D. The interface is about to go into Master state.

Correct Answer: A
Explanation/Reference:

**Question 122**
Which QoS DiffServ mode preserves the original customer IP marking besides of on egress PE router uses the DSCP value of this IP packet on outbound queuing?
A. MPLS PHB mode
B. Pipe mode
C. IntServ mode
D. Uniform mode
E. Short-Pipe mode

Correct Answer: E
Explanation/Reference:
Pipe mode marks the packet based on the EXP value vs short-pipe mode does it based on DSCP

**Question 123**
Which action is required to bring the MPLS TE tunnel 0 to up state?
Refer Exhibit

A service provider is running MPLS TE across its network. IS-IS is deployed as the IGP for the ISP network. The MPLS TE tunnel 0 configured on PE2 is seen in an operational down state. PE2 is a level-1 router and the destination 192.168.1.1 is located in the IS-IS level-2 area. Which action is required to bring the MPLS TE tunnel 0 to up state?
A. Configure the next-address entries as loose paths in the explicit path.
B. Change the autoroute option from destination to announce.
C. Configure a bandwidth value for the tunnel.
D. Configure an IPv4 address for the Tunnel 0.

Correct Answer: A
Explanation/Reference:

**Question 124**
Which are the two main techniques for creating virtualized router entities as defined by their physical and operational characteristics?

In a routing virtualization concept, which are the two main techniques for creating virtualized router entities as defined by their physical and operational characteristics?
(Choose two.)
A. HVR
B. SVR
C. SDR
D. DRP
E. VDC

Correct Answer: AB
Explanation/Reference:

**Question 125**
Which technology is being implemented?
**Refer to the exhibit.**
A service provider is using the configuration to determine traffic paths based on MPLS EXP markings. Which technology is being implemented?

A. MPLS TE FRR
B. CBTS
C. IP FRR
D. MPLS TE
E. PBTS
F. DS-TE

Correct Answer: B

Explanation/Reference:

Class-based Tunnel Selection

Question 126
Which three ways do PE routers manage multiple customers in MPLS VRF environments?

A. Route targets are configured that allow the PE to uniquely identify the customer routes in MP-BGP.
B. PE routers use route distinguishers to tag routes for importing and exporting into customer VRFs.
C. PE routers use PE-CE routing protocols to manage routing with client VRF devices.
D. PE routers use route targets to tag routes for importing and exporting into customer VRFs.
E. Route distinguishers are configured that allow the PE to uniquely identify the customer routes in MP-BGP.
F. PE routers use PE-PE routing protocols to manage routing with client VRF devices.

Correct Answer: CDE

Explanation/Reference:

Question 127
Which solution accomplishes these goals?

**An support engineer has been tasked to protect an ISP infrastructure from the growing number of encrypted DDoS attacks. The solution should also validate the eBGP peering. Which solution accomplishes these goals?**

A. BGP FlowSpec
B. BTSH
C. BGP LS
D. BGP Route Dampening
E. RTBH

Correct Answer: B

Explanation/Reference:

BGP TTL Security Hack

Question 128
Which BGP attribute should you use to address overcome the Option B limitation due to a rewritten originator nexthop in the network?

**In Multicast Inter-AS VPN context, which BGP attribute should you use to address overcome the Option B limitation due to a rewritten originator nexthop in the network?**

A. connector
B. AS Path
C. weight
D. originator

Correct Answer: A

Explanation/Reference:
Question 129
Which two results regarding the messages can the engineer expect?
**An engineer is troubleshooting Precision Time Protocol on Cisco ASR 9000 router and noticed the protocol is running in a Multicast mode. Which two results regarding the messages can the engineer expect? (Choose two)
A. IPTP messages that use unicast messages and those that use multicast messages must be specified.
B. Announce and Sync messages are sent as multicast messages.
C. Signaling, Delay-Request and Delay-Response messages are sent as multicast messages
D. All messages for PTP will be sent as multicast messages
E. Announce and Sync messages are sent as unicast messages
F. Signaling, Delay-Request, and Delay-Response messages are sent as unicast messages
Correct Answer: BF
Explanation/Reference:

Question 130
Which are the four main functions of the Cisco IOS XR System Manager?
Which are the four main functions of the Cisco IOS XR System Manager? (Choose four)
A. performs system monitoring
B. is the main IOS XR component for device drivers and software installation management
C. starts, restarts, and terminates processes in response to user configuration or RP failover
D. is responsible for the message-passing “bus” for interprocess communication
E. acts as a central repository for all process-related information
F. performs health checks
G. initiates disaster recovery based on the process health
H. invokes a dumper to collect a core dump when a process terminates abnormally
Correct Answer: CEGH
Explanation/Reference:

Question 131
Which OSPF LSA type?
In a PE-CE scenario using OSPF as the routing protocol, a down-bit set can be advertised in which OSPF LSA type?
A. type 1 LSA
B. type 2 LSA
C. type 3 LSA
D. type 5 LSA
E. type 7 LSA
Correct Answer: C
Explanation/Reference:

Question 132
Which technology is a forwarding decision point in a PE router that provides flexibility to make many Layer 2 flow decisions within an interface?
**Which technology is a forwarding decision point in a PE router that provides flexibility to make many Layer 2 flow decisions within an interface?
A. local connect
B. AToM
C. VPLS
D. pseudowire
E. EFP
Correct Answer: E
Explanation/Reference:
An Ethernet flow point (EFP) is a forwarding decision point in the provider edge (PE) router, which gives network designers flexibility to make many Layer 2 flow decisions within the interface.

Question 133
Which standards should you review to ensure that the hardware met certain environmental design guidelines?
**While evaluating a new hardware rollout plan before deployment, which standards should you review to ensure that the hardware met certain environmental design guidelines?
A. NAS
B. COBIT
C. ITIL®
D. NEBS
E. eTOM
Correct Answer: D
Explanation/Reference:

Question 134
Which technology provides the capability to detect, verify, isolate, and report faults across a provider network?
**In an end-to-end Layer 2 service, which technology provides the capability to detect, verify, isolate, and report faults across a provider network?
A. carrier detect
B. UDLD
C. BFD
D. CFM
Correct Answer: D
Explanation/Reference:
CFM – Connectivity Fault Management
Question 135
PIM sparse mode is implemented in the network RPF succeeds under which condition?
**Refer to the exhibit.

PIM sparse mode is implemented in the network RPF succeeds under which condition?
A. The RPF check succeeds for the next hop whose router ID is the highest.
B. The RPF check succeeds for the highest DR priority for the PIM router.
C. The RPF check succeeds for both PIM neighbors, and traffic load balances across both neighbors.
D. The RPF check succeeds for the highest interface IP address for the PIM router.

Correct Answer: D
Explanation/Reference:

Question 136
Which action should the service provider take to decrease the burden on the router resources in an unstable unicast routing environment?
**A service provider is using multicast flows to provide streaming video content to its customers. Video streams are sometimes interrupted, and network instability is determined to be the cause. Which action should the service provider take to decrease the burden on the router resources in an unstable unicast routing environment?
A. Reduce the volume of query messages.
B. Tune the RPF backoff
C. Increase the PIM hello hold timers.
D. Filter unnecessary SA messages.

Correct Answer: B
Explanation/Reference:

Question 137
Which two OoS strategies meet the design goal?
A service provider is designing control policies at the customer edge of the network, in order to prevent usage that exceeds the contracted terms. A new client that is contracted for only 2 Gbps is connecting to the service provider edge with a 10 Gbps interface. Which two OoS strategies meet the design goal? (Choose two.)
A. On the customer edge device, enable policing on the interface that is connected to the service provider.
B. On the service provider edge, enable WRED on the customer port.
C. On the customer edge, enable WRED on the interface that is connected to the service provider.
D. On the service provider edge, enable policing on the customer port.
E. On the customer edge device, enable traffic shaping on the interface that is connected to the service provider.
F. On the service provider edge, enable traffic shaping on the customer port.

Correct Answer: DE
Explanation/Reference:

Question 138
Which command would significantly reduce the label allocations without compromising LDP functionalities?
Due to recent acquisitions, a company’s MPLS infrastructure is growing very quickly. Concerns arise about labeling service provider core network. The IP address space is designed as per following:
- Service provide ip address range is: 10.0.0.0/16
- All loopback addresses use subnet mask /32
- 10.0.0.0/24 range is used for loopback addresses
- All other subnet masks used for links are /24 and /25
Which command would significantly reduce the label allocations without compromising LDP functionalities?
A. mpls ldp label
allocate global host-routes
B. ip prefix-list List1 deny 10.0.0.16 le 20 ge 25
   !
   mpls ldp label
   allocate global prefix-list List1
C. access-list 1 permit 10.0.0.0.0.0.255.255
   !
   mpls ldp neighbor 10.0.0.1 labels accept 3
D. mpls ldp password required for 10
   !
   access-list 10 permit 10.0.0.1
   access-list 10 permit 10.0.0.2
   access-list 10 permit 10.0.0.3

Correct Answer: A
Explanation/Reference:

Question 139
Which BGP configuration must be applied to achieve this goal?
**Refer to the exhibit
Customer ABC is peering with two service providers for Internet Access in order to prevent the AS100 from becoming a transit AS between ISP_1 and ISP_2. Which BGP configuration must be applied to achieve this goal?

A. CE1#
   ip as-path access-list 1 permit ^$
   route-map LOCAL_ONLY permit 10
   match as-path 1
   router bgp 100
   neighbor 1.1.2.2 route-map LOCAL_ONLY in
   CE2#
   ip as-path access-list 1 permit ^$
   route-map LOCAL_ONLY permit 10
   match as-path 1
   router bgp 100
   neighbor 1.1.1.2 route-map LOCAL ONLY in

B. CE1#
   ip as-path access-list 1 permit ^11$
   route-map LOCAL ONLY permit 10
   match as-path 1
   router bgp 100
   neighbor 1.1.1.2 route-map LOCAL ONLY in

C. CE1#
   ip as-path access-list 1 permit ^$
   route-map LOCAL ONLY permit 10
   match as-path 1
   router bgp 100
   neighbor 1.1.2.2 route-map LOCAL ONLY in
   CE2#
   ip as-path access-list 1 permit ^22$
   route-map LOCAL ONLY permit 10
   match as-path 1
   router bgp 100
   neighbor 1.1.1.2 route-map LOCAL ONLY out

D. CE1#
   ip as-path access-list 1 permit ^100$
   route-map LOCAL ONLY permit 10
   match as-path 1
   router bgp 100
   neighbor 1.1.2.2 route-map LOCAL ONLY out
   CE2#
   ip as-path access-list 1 permit ^100S
   route-map LOCAL ONLY permit 10
   match as-path 1
   router bgp 100
   neighbor 1.1.1.2 route-map LOCAL ONLY out

Correct Answer: C

Explanation/Reference:

Question 140
What can the engineer do to prevent this service-affecting reconvergence only in the case of momentary link bounces until the link can be repaired? **Users are complaining of intermittent high packet loss for seconds at a time. The engineer troubleshooting the issue finds that a TenGigE link is bouncing for milliseconds at a time, causing the traffic path to reconverge onto a congested FastEthernet link. What can the engineer do to prevent this service-affecting reconvergence only in the case of momentary link bounces until the link can be repaired?**

A. decrease the carrier-delay up on both sides of the link
B. disable keepalives and BFD
C. decrease the carrier-delay down on both sides of the link
D. increase the carrier-delay up on both sides of the link
E. increase the carrier-delay down on both sides of the link

Correct Answer: E

Explanation/Reference:
Question 141
Which issue causes a temporary data flow blackholing when the IGP and LDP reconvenes?

**An engineer is troubleshooting L3VPN traffic loss over the MPLS-enabled core network when new core links were enabled. Assuming that the IGP is properly configured, which issue causes a temporary data flow blackholing when the IGP and LDP reconvenes?**

A. LDP is a Layer 2 protocol forwarding label packets before the IGP reconvened.
B. IP packets are forwarded as soon as routes are learned over a new IGP adjacency before the label exchange happens over the new links
C. MP-BGP sessions between PE and RR routers require extra time to reconverge than the underlying IGP.
D. MPLS-TE tunnels without LDP adjacencies are used over the new links black-holing the traffic before the LDP label exchange is completed

Correct Answer: B
Explanation/Reference:

**Question 142**
How many bits are expressed by "::" in the address 2D01:DB::C:B7BA:130B?

How many bits are expressed by "::" in the address 2D01:DB::C:B7BA:130B?
A. 16 bits
B. 32 bits
C. 48 bits
D. 40 bits
E. 44 bits
F. 52 bits
G. 56 bits
H. 64 bits

Correct Answer: C
Explanation/Reference:

**Question 143**
Why does R1 not receive a label for 10.0.0.3/32 prefix?

**Refer to the exhibit.**

Why does R1 not receive a label for 10.0.0.3/32 prefix?
A. R1 does not have an established LDP neighborship with the router announcing the 10.0.0.3/32 prefix.
B. The 10.0.0.3/32 prefix is being null-routed in the downstream neighbor
C. LDP peer is not configured to advertise a label for the 10.0.0.3/32 prefix.
D. BGP is not configured to exchange labels with the BGP peer advertising 10.0.0.3/32 prefix.

Correct Answer: C
Explanation/Reference:

**Question 144**
What is one difference between H-VPLS and VPLS?

What is one difference between H-VPLS and VPLS?
A. VPLS connect using Ethernet encapsulation only and H-VPLS using also other LAYER-2 encapsulation such as PPP
B. H-VPLS decreases signaling overhead and packet replication requirements for the provider edge
C. VPLS improves scalability concern identify on H-VPLS implementation
D. VPLS is a point-to-point Layer-2 service and H-VPLS is a multipoint Layer-2 services

Correct Answer: B
Explanation/Reference:

**Question 145**
Which way does the DS-Lite IPv6 transitioning mechanism differ from IPv6 Dual-Stack?

In which way does the DS-Lite IPv6 transitioning mechanism differ from IPv6 Dual-Stack?
A. DS-Lite is a combination of tunnel and translation technologies
B. DS-Lite is a transition technology that gives full IPv6 connectivity for IPv6 capable hosts that are on the IPv4 Internet but have no native connection to an IPv6 network.
C. DS-Lite is an automatic tunnel where the tunnel destination is determined by the IPv4 address extracted from the IPv6 address that starts with the prefix 2002::/16.
D. DS-Lite is a stateless tunneling mechanism with a lightweight and secure manner without requiring upgrades to existing IPv4 access network infrastructure.

Correct Answer: A
Question 146
Which label stack is correct?

Two Tier 2 Service Providers are using a Tier 1 Service Provider for transport. MPLS is required between the Tier 2 Service Providers for label switching. In this CSC solution, which label stack is correct?

A. original IP packet, MPLS CSC transport label, MPLS VPN label, and MPLS Tier 2 transport label
B. original IP packet, MPLS Tier 2 transport label, MPLS VPN label, and MPLS CSC transport label
C. original IP packet, MPLS VPN label, MPLS Tier 2 transport label, and MPLS CSC transport label
D. original IP packet, MPLS Tier 2 transport label, MPLS CSC transport label, and MPLS VPN label
E. original IP packet, MPLS VPN label, MPLS CSC transport label, and MPLS Tier 2 transport label

Correct Answer: C

Explanation/Reference:
A. original IP packet, MPLS CSC transport label, MPLS VPN label, and MPLS Tier 2 transport label
B. original IP packet, MPLS Tier 2 transport label, MPLS VPN label, and MPLS CSC transport label
C. original IP packet, MPLS VPN label, MPLS Tier 2 transport label, and MPLS CSC transport label
D. original IP packet, MPLS Tier 2 transport label, MPLS CSC transport label, and MPLS VPN label
E. original IP packet, MPLS VPN label, MPLS CSC transport label, and MPLS Tier 2 transport label

Pending actual answer

Question 147
Which Cisco IOS configuration achieves this goal?

Refer the exhibit.

Two Autonomous Systems are enabled to support multicast. An engineer wants to set up configuration so that a multicast client at AS 100 can receive multicast traffic from the M-Server at AS 200. However, the RP announcements must be limited within each autonomous system site. Which Cisco IOS configuration achieves this goal?

Exhibit:

A. On both ASBRs Eth0/0 and the no ip pim sparse-mode command.
B. On both ASBRs add the ip pim send-rp-discovery scope 1 command.
C. On both RPs add the ip pim send-rp-discovery scope 2 command.
D. On both ASBRs Eth0/0 and the ip pim bsr-border command.
F. On both RPs add the ip pim bsr-border command.

Correct Answer: D

Explanation/Reference:

Question 148
Which IOS command under the BGP VPNv4 address family implements a secondary backup path to the destination 192.168.1.1?

Refer to the exhibit. Which IOS command under the BGP VPNv4 address family implements a secondary backup path to the destination 192.168.1.1?

Exhibit:

A. maximum-paths ibgp2
B. bgp additional-paths install
C. bgp recursion host
D. bgp advertise-best-external

Correct Answer: B

Explanation/Reference:

Question 149
Which action does the route-map STATIC-TO-BGP do?

Refer to the exhibit. The configuration in the exhibit redistributes static route 172.16.0.0/24 into BGP. Which action does the route-map STATIC-TO-BGP do?

Exhibit:

A. maximum-paths ibgp2
B. bgp additional-paths install
C. bgp recursion host
D. bgp advertise-best-external

Correct Answer: B

Explanation/Reference:
A. Route 172.16.0.0/24 cannot be sent to the Internet.
B. Route 172.16.0.0/24 cannot be re-advertised beyond its neighbors.
C. Route 172.16.0.0/24 cannot be advertised outside of AS 100.
D. Route 172.16.0.0/24 cannot be exported from BGP to another protocol.

Correct Answer: C
Explanation/Reference:

Question 150
Which command would significantly reduce the label allocations without compromising LDP functionalities?

**Due to recent acquisitions, a company's MPLS infrastructure is growing very quickly. Concerns arise about labeling each and every IP address on the P router.**

Which command would significantly reduce the label allocations without compromising LDP functionalities?

A. ip prefix-list List1 deny prefix/prefix_length
mpls ldp label
allocate global prefix-list List1
B. mpls ldp label
allocate global host-routes
C. access-list 1 permit subnet wildcard
mpls ldp neighbor neighbor_ip labels accept 3
D. mpls ldp password required for 10
access-list 10 permit host_ip_1
access-list 10 permit host_ip_2
access-list 10 permit host_ip_n

Correct Answer: B
Explanation/Reference:

Question 151
What BGP feature improves on DDOS mitigation by allowing instructions that are more granular and allow for source address, destination, address, L4 details, and packet specifics to be analyzed?

What BGP feature improves on DDOS mitigation by allowing instructions that are more granular and allow for source address, destination, address, L4 details, and packet specifics to be analyzed?

A. RCMD
B. RTBH
C. BGP Flowspec
D. BGPSec

Correct Answer: C
Explanation/Reference:

Question 152
Which configuration should be applied in order to load-balance the multicast traffic across all three links.

Refer to the exhibit. Router RT1 has three equal-cost paths back to the source. Which configuration should be applied in order to load-balance the multicast traffic across all three links?

Exhibit:

A. Create three static multicast routes where each pointing out to one or three interfaces.
B. Enable PIM multipath.
C. Create a tunnel interface between RT1 and RT2. Enable PIM on the interface tunnel and disable PIM on the three interfaces part of equal-cost path between RT1 and RT2.
D. PIM load balance is not possible. PIM only chooses one interface for RFC check and prunes the other interfaces.

Correct Answer: C
Explanation/Reference:

Question 153

http://www.aoowe.com/practice-400-201-3159.html
What are the four key design requirements for mobile IP backhaul?

A. X2 interface turning point
B. bandwidth
C. Layer 2 Tunneling
D. native IPv6 support
E. DiffServ QoS
F. MPLS-enabled interface
G. network timing distribution and recovery
H. mandatory Layer 3 access up to a cell

Correct Answer: CEGH

Explanation/Reference:

Pending correct answer

Question 154

Which BFD mode should you use when you want to save the overhead of periodic protocol control packets?

An IS-IS enabled router with multiple IS-IS neighbors is required to have BFD sessions with all neighbors. Which BFD mode should you use when you want to save the overhead of periodic protocol control packets?

A. demand
B. echo
C. asynchronous
D. active

Correct Answer: A

Explanation/Reference:

Question 155

What command should be used within the route map to achieve this goal while keeping existing route policies in place?

A network engineer is designing the BGP architecture with a requirement of preventing the AS from becoming a Transit AS path, using the following configuration:

```text
router bgp 65000
neighbor 10.0.0.1 route-map BGP-ROUTE-POLICY in
```

The goal is to prevent routes learned from 10.0.0.1 from being advertised to any other eBGP peering in the AS 65000. What command should be used within the route map to achieve this goal while keeping existing route policies in place?

A. set community no-export additive
B. set community no-advertise
C. set community no-advertise additive
D. set community no-export

Correct Answer: A

Explanation/Reference:

Question 156

Which two statements are true about Route Distinguishers and Route Targets?

MPLS Service Providers use Route Distinguishers and Route Targets as methods to control routing for customer VRFs. Which two statements are true about Route Distinguishers and Route Targets? (Choose two.)

A. Route Targets are values that are used by a PE router to uniquely identify a VRF within its local MP-BGP VPNv4 table.
B. Route Distinguishers are used by PE routers by exporting and importing routes into a local VRF.
C. Route Targets are used by PE routers to define how to import and export prefixes into a local VRF database.
D. Route Targets are extended communities that are used by MP-BGP to identify routes as they are advertised to neighbor PE routers.
E. Route Distinguishers are values that are used by a PE router to uniquely identify a VRF within its local MP-BGP VPNv4 table.

Correct Answer: DE

Explanation/Reference:

Question 157

Which kind of attack would an engineer want to design a Backscatter Traceback solution?

A Server Provider is seeing an increasing amount of attacks against its customers. For which kind of attack would an engineer want to design a Backscatter Traceback solution?

A. Rogue DNS/DHCP Servers
B. Network Attack TCP/UDP Scan
C. Distributed Denial of Service
D. Ping of Death
E. IP Spoofing

Correct Answer: C

Explanation/Reference: DDos or IP Spoofing

Question 158

Which is the RP address of the IPv6 multicast address FF76:0:130:1234:5678:9abc::4321?

Which is the RP address of the IPv6 multicast address FF76:0:130:1234:5678:9abc::4321?

A. 4321-5678-9abc::30
B. 4321-5678-9abc::13
C. 1234-5678-9abc::130
D. 1234-5678-9abc::1
E. 1234-5678-9abc::13

Correct Answer: D

Explanation/Reference:
Question 159
What will the QoS result be for egress traffic with an average queue depth of 40 that is marked as DSCP AF32?
QoS is applied on an outgoing interface as shown below:
```plaintext
classDATA
random-detect dscp-based
random-detect exponential-weighting-constant 9
random-detect dscp 26 39 117 30
random-detect dscp 28 19 35 20
```
What will the QoS result be for egress traffic with an average queue depth of 40 that is marked as DSCP AF32?
A. Traffic will be dropped with a random rate less than the one defined by MPD.
B. All traffic will be tail dropped.
C. Traffic will be dropped with a rate of 1 packet out of 20.
D. Traffic will be dropped with a rate of 1 packet out of 30
Correct Answer: C
Explanation/Reference:

Question 160
Which three configuration steps are required to add Internet service to the VRF customers?
**Refer to the exhibit. The Service Provider is deploying Internet service to its VRF customers by using vrf INTERNET. A dedicated firewall provides NAT functionality towards the Internet. Assume that IP address overlapping between VRFs is not an issue.**

Which three configuration steps are required to add Internet service to the VRF customers?(Choose three.)
A. Export the RD of vrf INTERNET from all customer VRFs.
B. Originate a default route on PE4 in vrf INTERNET.
C. Import the RD from vrf INTERNET in all customer VRFs.
D. Originate a default route on the firewall in vrf INTERNET.
E. Import the VRF "INTERNET" Route Target in all customer VRFs.
F. Import the Route Target of all customer VRFs in vrf INTERNET.
G. Leak all VRF routes to the global routing table.
Correct Answer: BEF
Explanation/Reference:

Question 161
Which configuration meets this requirement?
**Two routers that are running MPLS and LDP have multiple links that than connect them to each other. An engineer wants to ensure that the label bindings are not flushed from the LIB if one of the links fails. Which configuration meets this requirement?**
A. the mpls ldp neighbor targeted command
B. the mpls ip command on a Cisco MPLS TE tunnel
C. the mpls ldp discovery targeted-hello accept command
D. the mpls ldp session protection command
Correct Answer: C
Explanation/Reference:
Question 162
What are three main characteristics of mLDP that differ from RSVP-TE?
A. The LSPs are built from tailend to headend
B. The LSPs are built from headend to tailend
C. It supports only P2MP LSPs.
D. It supports both P2MP and MP2MP LSPs.
E. Signaling is periodic.
F. No periodic signaling is performed.

Correct Answer: ADF
Explanation/Reference:

Question 163
Which core MPLS component flooding and provides admission control for any new added TE tunnel?

Correct Answer: A
Explanation/Reference:

Question 164
Which two configuration tasks achieve this goal?
A network engineer wants to decrease the convergence time of a network that is running integrated IS-IS as an IGP, at the expense of bandwidth and CPU usage.

Correct Answer: BE
Explanation/Reference:

Question 165
Which configuration on R1 enables TE 14 to be the primary tunnel and TE 124 to be come active when TE 14 is admin disabled?
Refer to the exhibit. Both MPLS TE tunnel 14 and MPLS TE tunnel 124 pass over the same physical links. Which configuration on R1 enables TE 14 to be the primary tunnel and TE 124 to be come active when TE 14 is admin disabled?

Correct Answer: 
Explanation/Reference:
A. Interface Tunnel14
tunnel mpls traffic-eng priority 3 1

B. Interface Tunnel14
tunnel mpls traffic-eng priority 5 4

c. Interface Tunnel14
tunnel mpls traffic-eng priority 4 1

D. Interface Tunnel14
tunnel mpls traffic-eng priority 3 2

Correct Answer: A

Explanation/Reference:

**Question 166**

Which action allows CE1 to get the subnet 10.10.2.0/24 over the CE1-PE1 link, regardless of whether there is a flap in the MPLS link or backdoor link?

**Refer to the exhibit. A customer is running IS-IS within a network and is using BGP as a CE-PE routing protocol. Which action allows CE1 to get the subnet 10.10.2.0/24 over the CE1-PE1 link, regardless of whether there is a flap in the MPLS link or backdoor link?**

**Exhibit:**

A. Configure the neighbor weight 33768 command on CE1 under the BGP process.
B. Configure the distance bgp 115 200 200 command on CE1 under the BGP process.
C. Configure the distance 30 ip command on CE1 under the IS-IS process.
D. Configure the distance bgp 115 200 200 command on CE2 under the BGP process.
E. Configure the neighbor weight 33768 command on CE2 under the BGP process.

Correct Answer: B

**Explanation/Reference:**

**Question 167**

Which are the two main techniques for creating virtualized router entities as defined by their physical and operational characteristics?

In a routing virtualization concept, which are the two main techniques for creating virtualized router entities as defined by their physical and operational characteristics? (Choose two.)

A. VDC
B. SVR
C. DRP
D. HVR
E. SDR

Correct Answer: BD
**Question 168**
What will be the value of the keepalive timer and the hold-down timer, respectively?

**Refer to the exhibit.** After the BGP TCP negotiation between Router A and Router B, what will be the value of the keepalive timer and the hold-down timer, respectively?

**Exhibit:**

A. no value, because BGP negotiation will not be successful  
B. 3 seconds and 9 seconds  
C. 60 seconds and 180 seconds  
D. 10 seconds and 9 seconds  
E. 10 seconds and 10 seconds  
F. 10 seconds and 30 seconds  
G. 3 seconds and 30 seconds  
H. 3 seconds and 10 seconds

**Correct Answer:** A

**Explanation/Reference:**

R1 (config) #

* Jun 28 16:07:44.341: %BGP-3-NOTIFICATION: sent to neighbor 10.2.2.2 passive 2/6 (unacceptable hold time) 0 bytes

R1 (config) #

* Jun 28 16:07:44.603: %BGP-5-NBR_RESET: Neighbor 10.2.2.2 active reset (BGP Notification sent)

* Jun 28 16:07:44.607: %BGP-5-ADJCHANGE: neighbor 10.2.2.2 IPv4 Unicast topology base removed from session BGP Notification sent

**Question 169**
Which two IOS commands are required to meet this requirement?

Refer to the exhibit. A network engineer must configure BFD for IS-IS between R1 and R2. Incase the primary link fails, the convergence time should be less than a second. Which two IOS commands are required to meet this requirement? (Choose two.)

A. isis bfd  
B. bfd minimum-interval 250  
C. bfd interval 250 min_rx 250 multiplier 3  
D. bfd multiplier 3  
E. bfd interval 250 min_rx 250 multiplier 4  
F. bfd fast-detect ipv4

**Correct Answer:** AC

**Explanation/Reference:**

**Question 170**
Which two statements about multicast VPN configuration are true?

Based on the following configuration:

vrf definition ABC  
rd 10.0.0.1:1000  
1  
address-family ipv4  
route-target export 1:1  
route-target import 1:1  
multicast default 232.0.0.1

Which two statements about multicast VPN configuration are true? (Choose two.)

A. The SP core network is required in order to enable the BGP Multicast Address Family on all peerings.  
B. The multicast tree exists regardless of whether there are any active sources or receivers in the ABC VRF.  
C. Multicast is required for the core network in addition to the ABC VRF.  
D. Multicast needs to be enabled only on ABC VRF and is tunneled to participating PE routers in the ABC VRF  
E. The service provider core network is required to support SSM.  
F. The multicast tree is created based only on the existence of active sources or receivers behind PEs in the ABC VRF.

**Correct Answer:** AB

**Explanation/Reference:**

**Question 171**
What is the PPMP label used for?

What is the PPMP label used for?

A. for the partitioned mVPN mmodel with PIM signaling in an overlay model  
B. only for the inter-AS mVPN models that use mLDP  
C. for the ingress replication model with BIDIR-PIM in an overlay model
D. only for unicast over MPLS VPN
E. for all the default MDT and mVPN models

Correct Answer: A
Explanation/Reference:

Question 172
What are three actions that the control word performs in MPLS AToM?
What are three actions that the control word performs in MPLS AToM? (Choose three.)
A. is used to identify the VC label
B. is used for padding small packets
C. preserves the sequence of the transported frames
D. carries control bits of the Layer 3 header of the transported protocol
E. is used to identify the tunnel label
facilitates the load balancing of AToM packets in the MPLS backbone network

Correct Answer: BCF
Explanation/Reference:

Question 173
Which are the two purposes of the MPLS label value 1?
Which are the two purposes of the MPLS label value 1? (Choose two.)
A. it is used for MPLS OAM packets.
B. it indicates a router alert label.
C. it indicates an implicit null label.
D. it is used for VPNv6 packets.
E. it is used to carry the QoS value in the label stack
F. it indicates an explicit null label.

Correct Answer: AB
Explanation/Reference:

Question 174
What will be the ToS value at Site-B for the exceeded traffic that it is sent from Site-A with ToS 2?
**Refer to the exhibit. An MPLS Layer 3 VPN service has been provisioned for a customer. What will be the ToS value at Site-B for the exceeded traffic that it is sent from Site-A with ToS 2?**

Exhibit:

A. 0
B. 2
C. 3
D. 4
E. No exceeded traffic will reach Site-B.

Correct Answer: B
Explanation/Reference:

Question 175
How will the redistributed routes on R1 from EIGRP into OSPF be installed in the R4 routing table?
Refer to the exhibit. How will the redistributed routes on R1 from EIGRP into OSPF be installed in the R4 routing table?

Exhibit:

A. as a default route with an E2 route type
B. as a default route with an IA route type
C. as specific routes with an E2 route type
D. as specific routes with an N2 route type
E. as a default route with an N2 route type

Correct Answer: B
Explanation/Reference:

Question 176
Which are the three benefits of using the Yang model?
Which are the three benefits of using the Yang model? (Choose three.)
A. Reduce lab footprint
B. Improve access to resources
C. Support interoperability that provides a standard way to model management data
D. Support simplified network management applications
E. Provide a scale virtual lab environment
F. Support programmatic interfaces

Correct Answer: CDF
Explanation/Reference:

Question 177
Which configuration provides validation to customers that the service level agreement has been honored?
**A Service Provider is offering VoIP services and a service level agreement to customers. Which configuration provides validation to customers that the service level agreement has been honored?**
A. ip sla 999 icmp-jitter 209.165.200.225 tag VoIP-SLA
   ip sla schedule 999 life forever start-time now
   ip sla schedule 999 life forever start-time now
B. ip sla 999 icmp-jitter 209.165.200.225 tos 160
   ip sla schedule 999 life forever start-time now
C. ip sla 999 udp-jitter 209.165.200.225 1000 codec g729a tag VoIP-SLA
   ip sla schedule 999 life forever start-time now
D. ip sla 999 udp-jitter 209.165.200.225 1000 codec g729a tos 160
   ip sla schedule 999 life forever start-time now

Correct Answer: D
Explanation/Reference: