

1.

Item 1 of 100 (Choice, Q1) Show Answer

On a network with multiple VLANs, Which three tasks must you perform to configure IP source guard on VLAN 50 only? (Choose three.)

- ☐ A. Configure the **ip dhcp snooping vlan 50** command globally.
- ☐ B. Configure the **ip verify source command** on the interface.
- ☐ C. Configure the **ip verify source** command globally.
- ☐ D. Configure the **ip dhcp snooping vlan 50** command on the interface.
- ☐ E. Configure the **ip dhcp snooping** command globally.
- ☐ F. Configure the **ip dhcp snooping** command on the interface.

ABE

2.

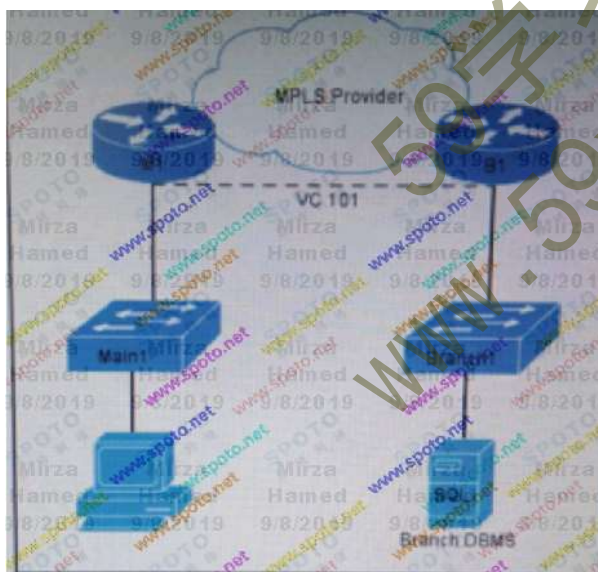
Item 2 of 100 (Choice, Q2) Show Answer

Which command sequence will configure an auto IP SLA scheduler that starts at 12:45AM on January 1, ends after 1 hour of inactivity, and repeats every 3 hours for one week?

- ☐ A. **ip sla schedule Jan1 start-time 12:45 jan 1 frequency 60 life 10800 porbe-interval 432000**
- ☐ B. **ip sla auto schedule Jan1 start-time 00:45 jan 1 frequency 360 life forever porbe-interval 432000**
- ☐ C. **ip sla auto schedule Jan1 start-time 00:45 jan 1 ageout 360 life 604800 porbe-interval 10800**
- ☐ D. **ip sla schedule Jan1 start-time 00:45 jan 1 frequency 360 life 10800 porbe-interval 10800**
- ☐ E. **ip sla schedule Jan1 start-time 12:45 jan 1 ageout 360 life 604800 porbe-interval 432000**

C

3.



Refer to the exhibit. The Main1 and Branch1 switches are connected directly over an MPLS pseudowire, and both run UDLD. After router B1 reloads because of a power failure, the pseudowire is restored. However, the Branch1 switch is unable to reach the Main1 switch. Which two actions can you take to restore connectivity and prevent the problem from recurring? (Choose two.)

- ☐ A. Enable UDLD recovery on both the Main1 and Branch1 switches.
- ☐ B. Enable errdisable recovery on both the Main1 and Branch1 switches.
- ☐ C. Configure a backup GRE tunnel between the Main1 and Branch1 switches.
- ☐ D. Issue the **shutdown** and **no shutdown** commands on the Branch1 switch uplink to the B1 router and the Main1 switch's uplink to the M1 router.
- ☐ E. Configure a backup pseudowire between the Main1 and Branch1 switches.

BD

4.

Item 4 of 100 (Choice, Q4)

Show Answer

Which option describes how a VTPV3 device responds when it detects a VTPV2 device on a trunk port?

- ☐ A. It sends a special packet that contains VTPV3 and VTPV2 packet information.
- ☐ B. It sends VTPV3 and VTPV2 packets.
- ☐ C. It sends VTPV3 packets only.
- ☐ D. It sends VTPV2 packets only.

B

5.

Item 5 of 100 (Choice, Q5)

Show Answer

Which statement about NAT64 is true?

- ☐ A. NAT64 should be considered as a permanent solution.
- ☐ B. NAT64 provides address family translation and can translate only IPv6 to IPv4.
- ☐ C. NAT64 provides address family translation and translates IPv4 to IPv6 and IPv6 to IPv4.
- ☐ D. NAT64 requires the use of DNS64.

C

6.

Item 6 of 100 (Choice, Q6)

Show Answer

Which two options are restrictions of BGP Outbound Route Filtering? (Choose two.)

- ☐ A. It can be used only with iBGP.
- ☐ B. It requires access list to match routes.
- ☐ C. It can be used only with eBGP.
- ☐ D. It can be used only with IPv4 multicast.
- ☐ E. Multicast is not supported.

CE

7.

Item 7 of 100 (Choice, Q7)

Show Answer

How does MSTP maintain compatibility with RSTP?

- ☐ A. MSTP supports five port states in the same way as RSTP.
- ☐ B. MSTP sends all spanning-tree information in one BPDU.
- ☐ C. RSTP implements a TTL that is compatible with the MSTP max age timer.
- ☐ D. RSTP encodes region information from an MSTP BPDU into a single instance.

B

8.

Item 8 of 100 (Choice, Q8)

Show Answer

Which two statements about PPP PAP are true? (Choose two.)

- ☐ A. It can protect against playback attacks.
- ☐ B. An authenticated peer is periodically requested to re-authenticate itself during the PPP session lifetime.
- ☐ C. Login attempts are controlled by the node that authenticates itself.
- ☐ D. It is vulnerable to trial-and-error attacks.
- ☐ E. In two-way authentication scenarios, it requires the use of the same password.

CD

9.

```

R2#
*Jun 17 10:21:06.407: IPSEC(validate_proposal_request): proposal part #1
*Jun 17 10:21:06.411: IPSEC(validate_proposal_request): proposal part #1,
(key eng. msg.) INBOUND local= 172.16.1.101:0, remote= 172.16.1.100:0,
local_proxy= 0.0.0.0/0.0.0.0/256/0,
remote_proxy= 0.0.0.0/0.0.0.0/256/0,
protocol= ESP, transform= NONE (Tunnel),
lifedur= 0s and 0kb,
spi= 0x0(0), conn_id= 0, keysize= 256, flags= 0x0
*Jun 17 10:21:06.419: IPSEC(ipsec_process_proposal): proxy identities not supported
R2#
*Jun 17 10:21:38.263: IPSEC(validate_proposal_request): proposal part #1
*Jun 17 10:21:38.267: IPSEC(validate_proposal_request): proposal part #1,
(key eng. msg.) INBOUND local= 172.16.1.101:0, remote= 172.16.1.100:0,
local_proxy= 0.0.0.0/0.0.0.0/256/0,
remote_proxy= 0.0.0.0/0.0.0.0/256/0,
protocol= ESP, transform= NONE (Tunnel),
lifedur= 0s and 0kb,
spi= 0x0(0), conn_id= 0, keysize= 256, flags= 0x0
*Jun 17 10:21:38.275: IPSEC(ipsec_process_proposal): proxy identities not supported

```

Refer to the exhibit. While troubleshooting the failure of two devices to establish an IPsec tunnel, you generated the given debug output on R2. What is the most likely reason the tunnel failed?

- ☐ A. Main Mode processing failed on R2.
- ☐ B. Main mode processing failed on the peer.
- ☐ C. R2 was unable to connect to the peer.
- ☐ D. The ACLs are mismatched on the devices.

D

10.

```

RDU#ping
Protocol [ip]:
Target IP address: 10.82.1.161
Repeat count [5]:
Datagram size [100]:
Timeout in seconds [2]:
Extended commands [n]: y
Source address or interface: 10.111.252.92
Type of service [0]:
Set DF bit in IP header? [no]: y
Validate reply data? [no]:
Data offset [0xABCD]:
Loose, Strict, Record, Timestamp, Verbose[none]:
Sweep range of sizes [n]: y
Sweep min size [36]: 1400
Sweep max size [18024]: 1500
Sweep interval [1]:
Type escape sequence to abort.
Sending 505 [1400..1500]-byte ICMP Echo to 10.82.1.161, timeout is 2 seconds:
Packet sent with a source address of 10.111.252.92
Packet sent with the DF bit set
.....
Success rate is 95 percent (480/505), round-trip min/avg/max = 16/68/1412 ms

```


Refer to the exhibit. What conclusion can you draw from the given ping output?

- ☐ A. The ping operation sent packets ranging from 505 to 1500 bytes in size.
- ☐ B. The Verbose option was set in the IP header.
- ☐ C. Fragmentation failed during the ping operation.
- ☐ D. The packet life was exceeded in 5 percent of the operations.

C

11.

Item 11 of 100 (Choice, Q11)

Show Answer

Which technology uses MPLS to provide IPv6 connectivity to customers in the core network without the need for dual-stack?

- ☐ A. NAT64
- ☐ B. 6PE
- ☐ C. 6to4
- ☐ D. NAT

C

12.

Item 12 of 100 (Choice, Q12)

Show Answer

Which two conditions can cause unicast flooding? (Choose two)

- ☐ A. forwarding table overflow
- ☐ B. multiple MAC addresses in the Layer 2 forwarding table
- ☐ C. RIB table overflow
- ☐ D. symmetric routing
- ☐ E. recurring TCNs

AE

13.

Item 13 of 100 (Choice, Q13)

Show Answer

Which statement about a type 4 LSA in OSPF is true?

- ☐ A. It is an LSA that is originated by an ABR, that is flooded throughout the area, and that describes a route to the ASBR.
- ☐ B. It is an LSA that is originated by an ASBR, that is flooded throughout the area, and that describes a route to the ASBR.
- ☐ C. It is an LSA that is originated by an ABR, that is flooded throughout the AS, and that describes a route to the ASBR.
- ☐ D. It is an LSA that is originated by an ABR, that is flooded throughout the AS, and that describes a route to the ABR.
- ☐ E. It is an LSA that is originated by an ASBR, that is flooded throughout the AS, and that describes a route to the ASBR.

C

14.

Item 14 of 100 (Choice, Q14)

Show Answer

```
interface Vlan223
ip address 10.1.22.3 255.255.255.0
standby 1 ip 10.1.22.1
standby 1 priority 150
```

Refer to the exhibit. You must modify the Cisco IOS Layer 3 switch configuration for high availability operation. Which additional configuration is needed, if any?

- ☐ A. This configuration is sufficient for high availability functionality.
- ☐ B. Enable HSRP preempt with a delay to allow time for the routing and switching protocols to converge.
- ☐ C. Modify the configuration to use VRRP, which has additional functionality that works better for high availability.
- ☐ D. Enable HSRP preempt to force the primary Layer 3 switch to resume the master role after a failure.

B

15.

Item 15 of 100 (Choice, Q15)

Which routing protocol is incompatible with VRF-lite?

- ☐ A. OSPF
- ☐ B. EIGRP
- ☐ C. BGP
- ☐ D. IS-IS

D

16.

Item 16 of 100 (Choice, Q16)

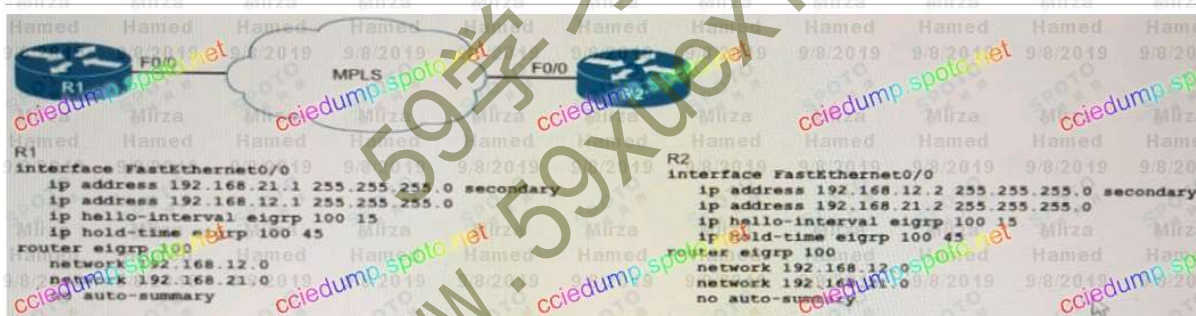
Which two limitations of PIM snooping are true? (Choose two)

- ☐ A. 224.0.1.39 and 224.0.1.40 are always flooded.
- ☐ B. If non-PIMv2 multicast routers are on the network, they are flooded with all traffic.
- ☐ C. All join and prune messages are flooded to all router ports.
- ☐ D. Directly connected sources are supported only for unidirectional PIM groups.
- ☐ E. All traffic in sparse group mode is treated as unknown traffic and dropped.

AB

17.

Item 17 of 100 (Choice, Q17)



Refer to the exhibit. If R1 and R2 cannot establish an EIGRP neighbor adjacency, which reason for the problem is most likely true?

- ☐ A. The MTU value between R1 and R2 is too small.
- ☐ B. The hello-interval and hold-time values are invalid.
- ☐ C. The auto-summary command under the route process is disabled.
- ☐ D. The primary networks are on different subnets.

D

18.

Item 18 of 100 (Choice, Q18)

Which two statements about VRF-lite are true? (Choose two)

- ☐ A. A single customer VRF can support overlapping IP addresses
- ☐ B. At least one physical interface must be configured to enable a VRF
- ☐ C. Multiple ISP customers can be supported on one customer edge device.
- ☐ D. Two or more VRFs can be assigned to a single Layer 3 interface
- ☐ E. An isolated VRF routing table is created for each VRF.

CE

19.

Item 19 of 100 (Choice, Q19)

Which component of a GETVPN deployment is responsible for obtaining an IPsec SA to encrypt data within a group?

- ☐ A. GDOI
- ☐ B. Key Server
- ☐ C. Group member
- ☐ D. GRE

A

20.

Item 20 of 100 (Choice, Q20)

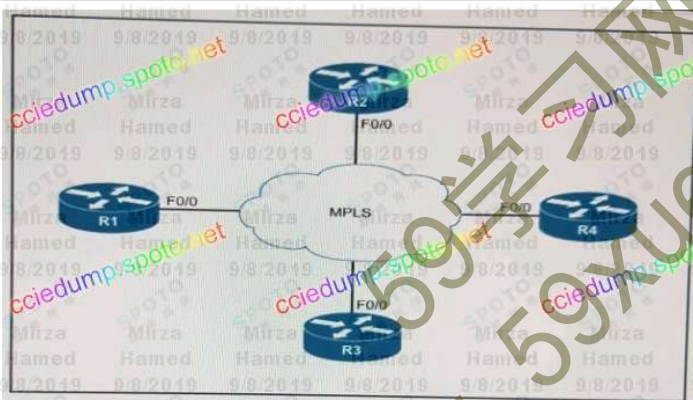
Which method can an IPv6 host use to learn the RP in an IPv6 multicast-enabled network.

- ☐ A. It receives it as part of the DHCP scope
- ☐ B. It extracts it from the multicast address
- ☐ C. It receives an advertisement through MGBGP
- ☐ D. It uses Auto-RP

B

21.

Item 21 of 100 (Choice, Q21)



Refer to the exhibit. Which IS-IS network type is enabled by default on this network?

- ☐ A. point-to-multipoint
- ☐ B. point-to-point
- ☐ C. broadcast
- ☐ D. non-broadcast multi-access

C

22.

Item 22 of 100 (Choice, Q22)

Ping and Traceroute extended options are very useful. What is the difference between using the **Record** option with the **ping** command vs. the **traceroute** command?

- ☐ A. The record option is not supported with the **traceroute** command
- ☐ B. The record option is not supported with the **ping** command
- ☐ C. When leveraged with the **traceroute** command, the **Record** option of this command not only informs you of the hops that the echo request (ping) went through to get the destination, but is also informs you of the hops it visited on the return path
- ☐ D. When leveraged with the **ping** command, the **Record** option of this command not only informs you of the hops that the echo request (ping) went through to get the destination, but is also informs you of the hops it visited on the return path

D

23.

Item 23 of 100 (Choice, Q23)

Which IPv6 solution provides network information to clients without providing an IPv6 host address?

- ☐ A. prefix delegation
- ☐ B. autoconfiguration
- ☐ C. stateless DHCPv6
- ☐ D. stateful DHCPv6

B

24.

Item 24 of 100 (Choice, Q24)

Which technology can be used to prevent flooding of ipv6 multicast traffic on a switch?

- ☐ A. MLD filtering
- ☐ B. IGMP snooping
- ☐ C. IGMP filtering
- ☐ D. MLD snooping

D

25.

Item 25 of 100 (Choice, Q25)

What are two general SDN characteristics? (Choose two)

- ☐ A. Northbound interfaces are open interfaces used between the control plane and the data plane.
- ☐ B. OpenFlow is considered one of the first Northbound APIs used by SDN controllers.
- ☐ C. The separation of the control plane from the data plane.
- ☐ D. OVSDB is an application database management protocol.
- ☐ E. Southbound interfaces are interfaces used between the control plane and the data plane.

CE

26.

Item 26 of 100 (Choice, Q26)

Which are the three recommended steps to implement your Risk-Based IoT Security Program? (Choose three)

- ☐ A. Analyze
- ☐ B. Formalize
- ☐ C. Optimize
- ☐ D. Implement
- ☐ E. Troubleshoot
- ☐ F. Assess

ADF

27.

Item 27 of 100 (Choice, Q27)

One of your clients which is in the manufacturer area is after a solution in order to manage all his fog nodes. Which management tool best suits his needs?

- ☐ A. Cisco Prime Infrastructure
- ☐ B. Cisco Connected Grid Network Management System
- ☐ C. Cisco Fog Director
- ☐ D. Cisco Network Control System

A

28.

Item 28 of 100 (Choice, Q28)

Which three basic types of SD-WAN deployments are out on the market? (Choose three)

- ☐ A. SD-WAN as-a-Services
- ☐ B. secure SD-WAN service
- ☐ C. policy-based SD-WAN
- ☐ D. managed service SD-WAN
- ☐ E. MPLS-based
- ☐ F. Internet-based SD-WAN

ADF

29.

Item 29 of 100 (Choice, Q29)

Which three benefits of virtualizing the DMZ are true? (Choose three.)

- ☐ A. per-app network functions and operation
- ☐ B. usage-based consumption model
- ☐ C. service catalog
- ☐ D. dynamic and automated service insertion with focus on security
- ☐ E. orchestration
- ☐ F. analytics

ADF

30.

Item 30 of 100 (Choice, Q30)

Which three connectivity models for vEdge Site Architecture are true? (Choose three.)

- ☐ A. secure tunnel
- ☐ B. augmentation model
- ☐ C. hybrid with FailBack
- ☐ D. secure virtual connectivity
- ☐ E. full SD-WAN
- ☐ F. cloud provider

CDE

31.

Item 31 of 100 (Choice, Q31)

Which three statements correctly describe the encoding used by NETCONF and RESTCONF? (Choose three)

- ☐ A. NETCONF uses YAML-encoded data
- ☐ B. NETCONF uses XML-encoded data
- ☐ C. RESTCONF uses XML-encoded data
- ☐ D. RESTCONF uses YAML-encoded data
- ☐ E. NETCONF uses JSON-encoded data
- ☐ F. RESTCONF uses JSON-encoded data

BCF

32.

Item 32 of 100 (Choice, Q32)

Which three campus fabric nodes in SD-Access architecture are true? (Choose three)

- ☐ A. data plane nodes
- ☐ B. virtual edge nodes
- ☐ C. fabric wireless access points
- ☐ D. fabric border nodes
- ☐ E. control plane nodes
- ☐ F. fabric edge nodes

DEF

33.

Item 33 of 100 (Choice, Q33)

Which statement correctly describes Ansible operations and playbooks?

- ☐ A. Ansible is agentless and uses playbooks formatted in YAML
- ☐ B. Ansible is agentless and uses playbooks formatted in XML
- ☐ C. Ansible is agent-based and uses playbooks formatted in YAML
- ☐ D. Ansible is agent-based and uses playbooks formatted in XML

A

34.

Item 34 of 100 (Choice, Q34)

How are the Cisco Express Forwarding table and the FIB related to each other?

- ☐ A. The Cisco Express Forwarding table allows route lookups to be forwarded to the route processor for processing before they are.
- ☐ B. There can be only one FIB but multiple Cisco Express Forwarding tables on IOS devices.
- ☐ C. Cisco Express Forwarding uses a FIB to make IP destination prefix-based switching decisions.
- ☐ D. The FIB is used to populate the Cisco Express Forwarding table.

C

35.

Item 35 of 100 (Choice, Q35)

Which information is contained in an OSPF Type 7 Not-So-Stubby Area NSSA External LSA?

- ☐ A. External network address,mask,and cost to reach each network that is external to the OSPF domain and only within the NSSA
- ☐ B. The address of routers that connect the current area to other areas and the cost to reach those routers.
- ☐ C. The path and costs to reach other stub area border routers in the OSPF routing domain.
- ☐ D. The external network address,mask,and cost to reach networks that are external to the OSPF NSSA,including the default route.
- ☐ E. The paths and costs to all OSPF NSSA areas that are external to the current area.

A

36.

Item 36 of 100 (Choice, Q36)

Which two statements about SPAN and RSPAN are true? (Choose two.)

- ☐ A. Only RSPAN sends monitored traffic to a dedicated VLAN.
- ☐ B. Only RSPAN is limited to monitoring VLANs.
- ☐ C. Only SPAN is limited to monitoring switch ports.
- ☐ D. Only RSPAN can monitor extended VLANs.
- ☐ E. Only SPAN sends monitored traffic to a local physical port.

DE

37.

Item 37 of 100 (Choice, Q37)

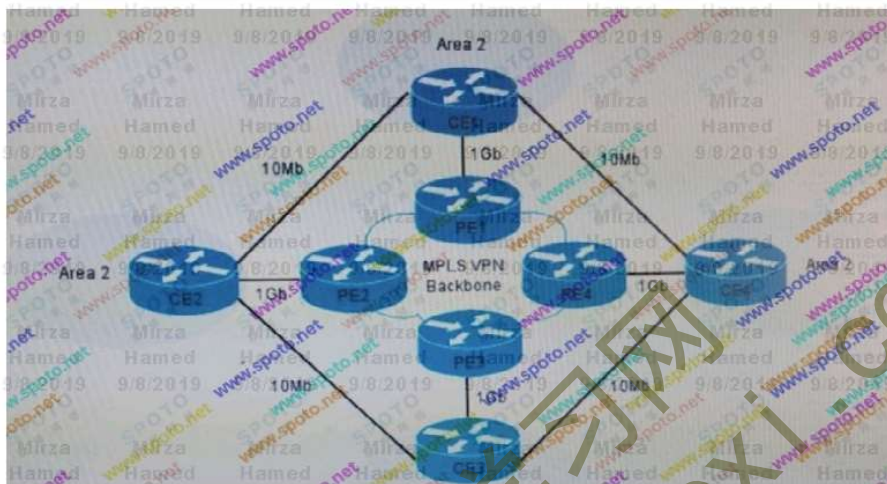
Which two methods can you use to limit the range for EIGRP queries? (Choose two)

- ☐ A. Configure unicast EIGRP on all routers in the EIGRP domain.
- ☐ B. Configure stub routers in the EIGRP domain.
- ☐ C. Use an access list to deny the multicast address 224.0.0.10 outbound from select EIGRP neighbors and permit everything else.
- ☐ D. Summarize routes at the boundary routers of the EIGRP domain.
- ☐ E. Configure route tagging for all EIGRP routes.
- ☐ F. Use an access list to deny the multicast address 224.0.0.1 outbound from select EIGRP neighbor and permit everything else.

BD

38.

Item 38 of 100 (Choice, Q38)



Refer to the exhibit. Your network uses an MPLS VPN backbone with OSPF between all PE and CE routers and on the 10Mb backup links between the CE routers. You notice that data between CE1 and CE3 is flowing over the backup links instead of the higher-bandwidth MPLS VPN backbone even when the backbone is up. What is the most likely explanation for this behavior?

- ☐ A. The devices are preferentially using inter-area routing
- ☐ B. The devices are preferentially using intra-area routing
- ☐ C. The devices are preferentially using lower-cost routing
- ☐ D. The network is using sham links on the MPLS VPN backbone
- ☐ E. The MPLS VPN backbone is using external BGP instead of OSPF

B

39.

Item 39 of 100 (Choice, Q39)

Which two statements about redistribution are true? (Choose two.)

- ☐ A. When OSPF traffic is redistributed into BGP, internal and external routes are redistributed.
- ☐ B. When BGP traffic is redistributed into OSPF, the metric is set to 1 unless the metric is defined.
- ☐ C. When EIGRP traffic is redistributed into BGP, a default metric is required.
- ☐ D. When BGP traffic is redistributed into OSPF, eBGP and iBGP routes are advertised.
- ☐ E. iBGP routes automatically redistribute into the IGP if the routes are in the routing table.
- ☐ F. When EIGRP routes on a CE are redistributed through a PE into BGP, the Cost Community POI is set automatically.

BF

40.

Item 40 of 100 (Choice, Q40)

Which three values are used to generate a unique bridge ID for each VLAN in PVST+? (Choose three)

- ☐ A. switch priority
- ☐ B. extended system ID
- ☐ C. max age
- ☐ D. port priority
- ☐ E. port cost
- ☐ F. spanning-tree MAC address

ABF

41.

Item 41 of 100 (Choice, Q41)

Which two OSPF network type require the use of a DR and BDR? (Choose two)

- ☐ A. point-to-point networks
- ☐ B. broadcast networks
- ☐ C. non-broadcast networks
- ☐ D. point-to-point non-broadcast networks
- ☐ E. point-to-multipoint network

BC

42.

Item 42 of 100 (Choice, Q42)

Which three components are in an MPLS header? (Choose three)

- ☐ A. a 2-bottom of stack
- ☐ B. an 8-bit TTL
- ☐ C. a 20-bit label
- ☐ D. a 4-bit experimental use field
- ☐ E. a 3-bit experimental use field
- ☐ F. a 4-bit label stack entry

BCE

43.

Item 43 of 100 (Choice, Q43)

What are IPv6 address of the form FC00::7 known as?

- ☐ A. transition addresses for 6to4
- ☐ B. multicast RP addresses
- ☐ C. link-local addresses
- ☐ D. unique local addresses

D

44.


```

R1#show mpls l2transport vc 100 detail
Local interface: Fa0/6 up, line protocol up, Ethernet up
Destination address: 2.2.2.3, VC ID: 000, VC status: up
Preferred path: Tunnel1, as
Default path: ready
Tunnel label: 12307, next hop point2point
Output interface: Tu1, imposed label stack (12307 20)
Create time: 00:00:11, last status change time: 00:00:11
Signaling protocol: LDP, peer 2.2.2.3:0 up
MPLS VC labels: local 21, remote 20
Group ID: local 0, remote 2
MTU: local 1500, remote 1500
Remote interface description:
Security: receive disabled, send disabled
Statistics:
packet totals: receive 1, send 6
byte totals: receive 368, send 0
packet drops: receive 0, send 0

```

Refer to the exhibit. Which statement is true?

- ☐ A. The default route 0.0.0.0/0 is available in the IPv4 routing table.
- ☐ B. R1 is using an MPLS TE tunnel for this pseudowire, because the IP path is not available.
- ☐ C. R1 has preferred-path configured for the pseudowire.
- ☐ D. R1 routes this pseudowire over MPLS TE tunnel 1 with transport label 20.

C

45.

Item 45 of 100 (Choice, Q45)

Which two statements about the Cisco Express Forwarding glean adjacency type are true? (Choose two)

- ☐ A. Packets destined for the interface are discarded and the prefix is checked.
- ☐ B. The adjacency database is used to gather specific prefixes when packets are destined to a specific host.
- ☐ C. The router FIB table maintains a prefix for the subnet instead of individual hosts.
- ☐ D. Packets destined for the interface are discarded and the prefix check is skipped.
- ☐ E. Packets destined for the interface can be dropped, which provide a form of access filtering.

BC

46.

Item 46 of 100 (Choice, Q46)

```
%CFIB->CFIB_EXCEPTION: FIB ICM exception, Some entries will be software switched
```

Refer to the exhibit. If a Layer 3 switch running OSPF in a VRF-lite configuration reports this error, which action can you take to correct the problem?

- ☐ A. Add the **vrf-lite** capability to the OSPF configuration.
- ☐ B. Upgrade the Layer 3 switch to a model that can support more routes.
- ☐ C. Configure the control plane with a larger memory allocation to support the Cisco Express Forwarding Information Base.
- ☐ D. Set **mls cef maximum-routes** in the global configuration.

D

47.

Item 47 of 100 (Choice, Q47)

Which two statements are true about IS-IS? (Choose two.)

- ☐ A. IS-IS can never be routed beyond the immediate next hop.
- ☐ B. IS-IS DIS election is nondeterministic.
- ☐ C. IS-IS works over the data link layer, which does not provide for fragmentation and reassembly.
- ☐ D. IS-IS SPF calculation is performed in three phases.

AC

48.

Item 48 of 100 (Choice, Q48)

What are the two requirements for BGP to install a classful network into the BGP routing table? (Choose two)

- ☐ A. Synchronization is enabled.
- ☐ B. A classful network statement with a classful mask is in the routing table.
- ☐ C. Auto-summary is enabled.
- ☐ D. A classful network statement with a lower administrative distance is in the routing table.
- ☐ E. Synchronization is disabled
- ☐ F. The AS contains the entire classful network.

BC

49.

Item 49 of 100 (Choice, Q49)

What command can you enter to configure NBAR to recognize VNC traffic?

- ☐ A. **ip nbar port-map VNC tcp 5900 5901**
- ☐ B. **ip nbar application-map VNC udp 5900 5901**
- ☐ C. **ip nbar port-map VNC hex 0xAA 0x1B**
- ☐ D. **ip nbar custom-map VNC tcp-udp 5900 5901**
- ☐ E. **ip nbar port-to-application seq 5 VNC tcp 5900 5901**

A

50.

Item 50 of 100 (Choice, Q50)

Which two statements about 6PE are true? (choose two)

- ☐ A. iBGP peering between the PE routers should be done using an IPv6 address.
- ☐ B. It does not require MPLS between the PE routers.
- ☐ C. Uses an IPv4-mapped IPv6 address as the IPv4 next-hop on PE router
- ☐ D. It requires a VRF on the IPv6 interface
- ☐ E. It requires BGP to exchange labeled IPv6 unicast between PE routers.

CE

51.

Item 51 of 100 (Choice, Q51)

Which statement about the BGP scope of the cost community is true?

- ☐ A. It is shared with IBGP neighbors and route reflectors.
- ☐ B. It is shared with IBGP and confederation peers.
- ☐ C. It is shared with EBGP neighbors only.
- ☐ D. It is shared with IBGP neighbors only.
- ☐ E. It is shared with IBGP and EBGP neighbors.

B

52.

Item 52 of 100 (Choice, Q52)

Which two statement about the EIGRP Over the Top feature are true? (Choose two.)

- ☐ A. EIGRP routers traffic between the PE devices.
- ☐ B. Traffic is LISP-encapsulated on the control plan
- ☐ C. The **neighbor** command must be configured with LISP encapsulation on each CE device
- ☐ D. The **network** statement must be configured on each PE device to connect separate EIGRP sites.
- ☐ E. Traffic is LISP-encapsulated on the data plan

CE

53.

Item 53 of 100 (Choice, Q53)

Which value does EIGRP use to determine the metric for a summary address?

- ☐ A. The average of the component metrics
- ☐ B. The highest metric among the component routes
- ☐ C. A default fixed value
- ☐ D. The lowest metric among the component routes

D

54.

Item 54 of 100 (Choice, Q54)

Which two statements about root guard and loop guard are true? (Choose two.)

- ☐ A. When loop guard is enabled, the port is transitioned to the root-inconsistent state
- ☐ B. Loop guard uses its own keepalives to determine unidirectional traffic
- ☐ C. Root guard should be enabled on an upstream interface
- ☐ D. Loop guard uses BPDU keepalives to determine unidirectional traffic
- ☐ E. Root guard disables an interface only when a superior BPDU is received
- ☐ F. Loop guard uses its own keepalives to prevent loops by detecting failures.

DE

55.

Item 55 of 100 (Choice, Q55)

Which two statements are true about control plane policing? (Choose two.)

- ☐ A. The **log** keyword can be used but the **log-input** keyword must not be used in policing.
- ☐ B. Access lists that are used in policies for control plane policing must not use the **log** keyword
- ☐ C. Control plane policing will affect only traffic that is destined to the route processor.
- ☐ D. Access lists that use the deny rule in control plane policing do not progress to the next class.

BC

56.

Item 56 of 100 (Choice, Q56)

Which command can you enter to prevent a router from displaying addresses on the terminal during a telnet session?

- ☐ A. **ip telnet hidden hostname**
- ☐ B. **no ip domain-lookup**
- ☐ C. **ip telnet quiet**
- ☐ D. **ip telnet hidden address**
- ☐ E. **server telnet-zeroidle**

D

57.

Item 57 of 100 (Choice, Q57)

When EIGRP Auto-Summary is enabled, what does Auto Summarization do in EIGRP?

- ☐ A. Summarizes networks from different network boundaries crossing different major boundary
- ☐ B. Summarizes all network boundaries
- ☐ C. Summarize networks from the same network boundaries
- ☐ D. Summarizes networks form different network boundaries crossing the same major boundary

A

58.

Item 58 of 100 (Choice, Q58)

Which two statements about IPv4 and IPv6 networks are true? (Choose two.)

- ☐ A. IPv6 uses a UDP checksum to verify packet integrity.
- ☐ B. In IPv6, hosts perform fragmentation.
- ☐ C. In IPv6, routers perform fragmentation.
- ☐ D. In IPv4, fragmentation is performed by the source of the packet.
- ☐ E. IPv4 uses all optional checksum at the transport layer.
- ☐ F. IPv6 uses a required checksum at the network layer.

AB

59.

Item 59 of 100 (Choice, Q59)

Which two statements about native VLANs are true? (Choose two)

- ☐ A. They are configured under the trunk interface.
- ☐ B. They are configured in VLAN database mode.
- ☐ C. They are used to forward untagged traffic only.
- ☐ D. They require VTPv3.
- ☐ E. They are used to forward both tagged and untagged traffic.
- ☐ F. They are used to forward tagged traffic only.

AC

60.

Item 60 of 100 (Choice, Q60)

In a DMVPN solution, which component can the GRE tunnel source and destination generate automatically?

- ☐ A. crypto ACLs
- ☐ B. policy maps
- ☐ C. QoS markings
- ☐ D. pre-shared keys

A

61.

Item 61 of 100 (Choice, Q61)

Which two statements about IP SLA are true? (Choose two)

- ☐ A. SNMP access is not supported
- ☐ B. It uses NetFlow for passive traffic monitoring
- ☐ C. It uses active traffic monitoring
- ☐ D. The IP SLA responder is a component in the source Cisco device
- ☐ E. It is Layer 2 transport-independent
- ☐ F. It can measure MOS

CE

62.

Item 62 of 100 (Choice, Q62)

Which statement describes the operation of the Generalized TTL Security Mechanism (GTS), used by routing protocols to prevent some types of attack?

- ☐ A. The TTL in a received packet must be a high value (typically 254 - 255)
- ☐ B. An MD5 hash of the received TTL, source IP, destination IP, protocol, and shared key must match
- ☐ C. The TTL in a received packet must be a low value (typically 1 - 2)
- ☐ D. Both end systems compute an MD5 hash based on the TTL and a shared secret. If the received and local value differ, the packet is dropped

A

63.

Item 63 of 100 (Choice, Q63)

When you implement CoPP on your network, what is its default action?

- ☐ A. Drop management ingress traffic to the control plane.
- ☐ B. Rate-limit bidirectional traffic to the control plane.
- ☐ C. Block all traffic
- ☐ D. Permit all traffic
- ☐ E. Monitor ingress and egress traffic to the control plane by using access groups that are applied to the interface

D

64.

Item 64 of 100 (Choice, Q64)

```
interface FastEthernet0/0
 ip address 192.168.12.1 255.255.255.224
router eigrp 100
 passive-interface FastEthernet0/0
 network 192.168.12.0
 no auto-summary
```

Refer to the exhibit. What are two effects of the given configuration? (Choose two.)

- ☐ A. The router will manually summarize the 192.168.12.0/27 network
- ☐ B. Auto-summarization will be enabled to the F0/0 interface
- ☐ C. The router will fail to form neighbor adjacencies over all EIGRP interfaces except F0/0
- ☐ D. The router will fail to form neighbor adjacencies over interfaces F0/0
- ☐ E. The router will install the 192.168.12.0/27 network into its EIGRP topology table

DE

65.

Item 65 of 100 (Choice, Q65)

Show Answer

A 1Gbps router interface to a nearby data center is showing tens of thousands of egress drops per day. The round trip time is 2ms and the average packet size is 1000 bytes. An analysis shows that the traffic is TCP-based business application traffic. All traffic is import, so QoS won't help. You decide to increase egress buffers, keeping in mind that the TCP retransmit timer is 2*SRTT. What is the maximum amount of buffering that can be used to reduce the impact on the applications without impacting application throughput?

- ☐ A. Increase the number of buffers until the drops decreases to an acceptable level
- ☐ B. Increase the number of buffers to hold the amount of data in the TCP retransmit timer, (2 times the SRTT or 4ms) of data at 1Gbps (500 packets)
- ☐ C. The default number of buffers is sufficient, the network is performing as it should
- ☐ D. Increase the number of buffers to hold the amount of data in the Bandwidth Delay Product (BDP), or 2ms of data at 1 Gbps (250 packets)

B

66.

Item 66 of 100 (Choice, Q66)

```
interface Ethernet0/0
 ip pim sparse-dense-mode
 ip multicast boundary 10 filter-autorp
 ip pim send-rp-announce loopback0 scope 60 group-list 15
 ip pim send-rp-discovery loopback1 scope 60
```

Refer to the exhibit. Which two effects of this configuration are true? (Choose two.)

- ☐ A. It sets announcement interval to 60 seconds.
- ☐ B. It prevents the device from falling back to dense mode.
- ☐ C. It creates an administratively scoped boundary for ACL 60.
- ☐ D. It configures the router as the rendezvous point.
- ☐ E. It sets the TTL for discovery messages to 60 hops.

DE

67.

Item 67 of 100 (Choice, Q67)

Which two conditions must be met by default to implement the BGP multipath feature? (Choose two)

- ☐ A. MPLS must be enabled.
- ☐ B. Route reflectors must be enabled.
- ☐ C. The next-hop routers must be different.
- ☐ D. The next-hop routers must be the same.
- ☐ E. All attributes must have the same values.

CE

68.

Item 68 of 100 (Choice, Q68)

```
R1
ip community-list 10 permit 64512:100 64512:200 64512:41650 64513:1220
route-map INTERNET-OUT permit 10
 match community 10
router bgp 64512
 no synchronization
 neighbor INTERNET peer-group
 neighbor INTERNET remote-as 64513
 neighbor INTERNET password cisco
 neighbor 192.168.250.50 peer-group INTERNET
 address-family ipv4
  no synchronization
  neighbor INTERNET send-community both
  neighbor INTERNET route-map INTERNET-OUT out
R1#show bgp 172.29.224.0

BGP routing table entry for 172.29.224.0/24, version 607252621
Paths: (1 available, best #1, table default)
  Multipath: eBGP iBGP
  Advertised to update-groups:
    3
  53739
    10.10.153.12 from 10.10.153.120 (10.10.153.12)
      Origin IGP, metric 0, localpref 130, valid, external, best
      Community: 64512:555 64513:200 64513:59090 64512:64002 64513:64090
```


Refer to the exhibit. Which two actions can you take to allow the network 172.29.224.0/24 to be reachable from peer 192.168.250.53? (Choose two)

- ☐ A. Modify the inbound route map to permit all additional traffic.
- ☐ B. Configure additional address families to peering 192.168.250.53.
- ☐ C. Modify the community list to match community 64513:64090 attached to 172.29.224.0/24.
- ☐ D. Modify the outbound route map to permit all additional traffic.
- ☐ E. Configure soft reconfiguration to peering 192.168.250.53.

CD

69.

Item 69 of 100 (Choice, Q69)

How is the MRU for a multilink bundle determined?

- ☐ A. It is negotiated by LCP.
- ☐ B. It is negotiated by NCP.
- ☐ C. It is negotiated by IPCP.
- ☐ D. It is manually configured on all physical interfaces of a multilink bundle.
- ☐ E. It is manually configured on the multilink bundle.

A

70.

Item 70 of 100 (Choice, Q70)

Which two statements about private VLAN communications are true? (Choose two)

- ☐ A. Isolated ports communicate with other isolated ports.
- ☐ B. Promiscuous ports communicate with all other ports.
- ☐ C. Primary VLAN traffic is passed across trunk interfaces.
- ☐ D. Promiscuous ports connect only to routers.

BC

71.

Item 71 of 100 (Choice, Q71)

When is it useful to disable split horizon on an EIGRP interface?

- ☐ A. Disable it when you want to provide additional backup paths in your network.
- ☐ B. Disable it when you want to send routes that are learned from another routing protocol to peer on the same interface.
- ☐ C. Disable it when you need to send updates to peers on the interface on which the updates were received.
- ☐ D. It is never advisable to disable split horizon on an EIGRP interface.

C

72.

Item 72 of 100 (Choice, Q72)



Refer to the exhibit. The PC is experiencing intermittent connectivity failures to the internet. If ADSL-R1 uses a PPPoE connection, what action can you take to correct the problem?

- ☐ A. Configure a system MTU of 1512 on ADSL-R1.
- ☐ B. Configure the same OSPF process on HomeR1 and HomeS1.
- ☐ C. Configure an MTU of 1492 on the dialer interface on ADSL-R1.
- ☐ D. Replace the dialer interface with a virtual template.
- ☐ E. Configure OSPF on the connection between PC1 and HomeS1.

C

73.

Item 73 of 100 (Choice, Q73)

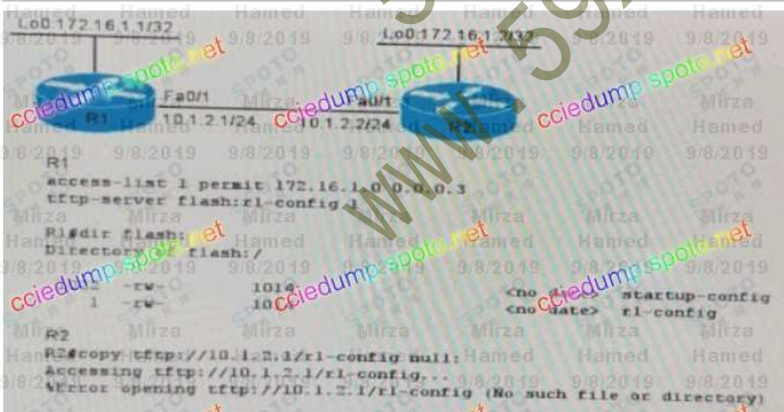
Which two statements about PBR are true? (Choose two)

- ☐ A. It supports split tunneling and spoke-to-spoke links.
- ☐ B. It always prefers the least cost path.
- ☐ C. It provides intelligent route control on a per-application basis.
- ☐ D. It manages traffic classes.
- ☐ E. It provides a narrower scope of route control than OER.

CD

74.

Item 74 of 100 (Choice, Q74)



Refer to the exhibit. R2 attempted to copy a file from the TFTP server, it received this error message. Which action can you take to correct the problem?

- ☐ A. Configure the **ip tftp source-interface Fa0/1** command on R1.
- ☐ B. Configure the **ip tftp source-interface Loopback0** command on R1.
- ☐ C. Configure the **ip tftp source-interface Loopback0** command on R2.
- ☐ D. Change the **access-list** configuration on R1 to **access-list 1 permit 172.16.1.0 0.0.0.255**
- ☐ E. Configure the **ip tftp source-interface Fa0/1** command on R2.

C

75.

Item 75 of 100 (Choice, Q75)

Which two statements about LDP are true? (Choose two.)

- ☐ A. It enables LSRs to communicate label bindings
- ☐ B. It uses a 16-byte identifier
- ☐ C. It sends hello messages as UDP packets via unicast
- ☐ D. LDP sessions are established between LSRs
- ☐ E. It sends hello messages over TCP
- ☐ F. It supports only directed-connected neighbors

AD

76.

Item 76 of 100 (Choice, Q76)

Show Answer

You have been asked to connect a remote network with different DSCP mappings to the primary network of your organization. How can you configure the network devices so that the two networks work together seamlessly?

- ☐ A. Configure a mutation map on the devices on the primary network that connect to the network
- ☐ B. Configure the **mls qos trust** command on the trunk ports that interconnect two networks
- ☐ C. Configure an aggregate policer on the ingress interfaces of the trunk ports that interconnect the two networks
- ☐ D. Configure VLAN-based Qos on all switches on both networks

B

77.

Item 77 of 100 (Choice, Q77)

Which two statements about a flat single-hub DMVPN with NHRP are true? (Choose two.)

- ☐ A. The spoke routers act as the NHRP servers.
- ☐ B. NHRP dynamically provides information about the spoke routers to the hub.
- ☐ C. NHRP disables multicast.
- ☐ D. NHRP shortens the configuration of the hub router.
- ☐ E. The hub router uses NHRP to initiate the GRE tunnel with spokes.

BD

78.

Item 78 of 100 (Choice, Q78)

Which two statements about OSPFv3 are true? (Choose two.)

- ☐ A. It supports the use of a cluster ID for loop prevention.
- ☐ B. It supports unicast address families for IPv4 and IPv6.
- ☐ C. It supports only one address family per instance.
- ☐ D. It supports multicast address families for IPv6 only.
- ☐ E. It supports unicast address families for IPv6 only.
- ☐ F. It supports multicast address families for IPv4 and IPv6.

BC

79.


```

R1
interface FastEthernet0/0
ip address 192.168.12.1 255.255.255.0

router rip
version 2
network 192.168.12.0

R2
interface FastEthernet0/0
ip address 192.168.12.2 255.255.255.0
ip summary-address rip 172.16.32.0 255.255.240.0

interface FastEthernet0/1
ip address 172.16.33.2 255.255.255.0

router rip
version 2
network 172.16.0.0
network 192.168.12.0

```

Refer to the exhibit. After you apply the given configurations to R1 and R2, which networks does R2 advertise to R1?

- ☐ A. 172.16.0.0/16 only
- ☐ B. 172.16.33.0/24 only
- ☐ C. 172.16.32.0/20 only
- ☐ D. both 172.16.32.0/20 and 172.16.33.0/24

A

80.

Item 80 of 100 (Choice, Q80)

What is the reason to send EIGRP SIA reply to a peer?

- ☐ A. to respond to an SIA query that the router is still waiting on replies from its peers
- ☐ B. to respond to a query reporting that the prefix has gone stuck-in-active
- ☐ C. to respond to a reply reporting that the prefix has gone stuck-in-active
- ☐ D. to respond to an SIA query with the alternative path requested

A

81.

Item 81 of 100 (Choice, Q81)

Company A has two remote sites, which are connected to a common ISP by BGP. At each site, company A is using the same autonomous system number. Which BGP feature can you implement to enable routing between the two sites?

- ☐ A. AS path prepending
- ☐ B. peer groups
- ☐ C. communities
- ☐ D. allowas-in

Show Answer

D

82.

Item 82 of 100 (Choice, Q82)

Which two statements about 6to4 tunnels are true? (Choose two.)

- ☐ A. They allow IPv4 packets to travel over IPv6 infrastructure without modification.
- ☐ B. They support OSPF and EIGRP traffic.
- ☐ C. They support point-to-point traffic.
- ☐ D. They generate an IPv6 prefix using a common IPv4 address.
- ☐ E. They encapsulate IPv6 packets, which allows the packets to travel over IPv4 infrastructure.
- ☐ F. They support point-to-multipoint traffic.

EF

83.

Item 83 of 100 (Choice, Q83)

Which two statements about OSPF route filtering are true? (Choose two)

- ☐ A. It can be based on distance.
- ☐ B. It can be based on the source router ID.
- ☐ C. It can be based on the external route tag.
- ☐ D. It can be based on the as-path.
- ☐ E. It affects LSA flooding.

BC

84.

Item 84 of 100 (Choice, Q84)

What does the DIS on a LAN periodically transmit in multicast to ensure that the IS-IS link-state database is accurate?

- ☐ A. LIP
- ☐ B. CSNP
- ☐ C. ISH
- ☐ D. IIH
- ☐ E. PSNP

B

85.

Item 85 of 100 (Choice, Q85)

Which two statements about Cisco IOS XE are true? (Choose two)

- ☐ A. It uses a service blade outside Cisco IOS XE to integrate and run applications.
- ☐ B. Separate images are required for platform-dependent code.
- ☐ C. Its functions run as multiple separate processes in the OS.
- ☐ D. It is deployed in a Linux-based environment.
- ☐ E. The FED feature provides separation between the control plane and the data plane.

CD

86.

Item 86 of 100 (Choice, Q86)

Which description correctly describes Git?

- ☐ A. Git is a version control system for tracking changes in files
- ☐ B. Git is a configuration management tool that automates provisioning
- ☐ C. Git is a command-line utility for creating archives of files
- ☐ D. Git is a web-based repository for sharing files

A

87.

Item 87 of 100 (Choice, Q87)

What is used to acknowledge the receipt of LSPs on a point-to-point network in IS-IS?

- ☐ A. CSNP
- ☐ B. IIH
- ☐ C. hello
- ☐ D. PSNP
- ☐ E. CSH

D

88.

Item 88 of 100 (Choice, Q88)

Which aspect is a significant disadvantage of containers?

- ☐ A. Time to deploy
- ☐ B. Reduced operational overhead
- ☐ C. Resource consumption
- ☐ D. Inefficiency
- ☐ E. Security

E

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89.

Item 89 of 100 (Drag&Drop, Q1)

Show Answer

Drag and Drop: Select and Place

Assured Forwarding	DSCP field that uses the DSCP value to apply PHB
Best Effort	PHB that provides low delay and guaranteed bandwidth
Classifier	PHB with a minimum bandwidth and drop threshold component
Class Selector	eight different DSCPs with the last three bits set to 0
Expedited Forwarding	traffic with the most significant bits set to 000

Classifier

Expedited Forwarding

Assured Forwarding

Class Selector

Best Effort

90.

Select and Place

label

implicit-null

explicit-null

penultimate hop popping

FEC

virtual circuit

instructs the router to keep the label when forwarding

groups IP packets so that they are given the same forwarding treatment

identifies the group to which an IP packet belongs

instructs the penultimate router to pop the label before

identifies a layer 2 MPLS connection from one device to

pops an MPLS label off one hop before its final destination

explicit-null

FEC

label

implicit-null

virtual circuit

penultimate hop popping

91.

ntp master	Configures an external time zone
ntp orphan	Configures the device as an authoritative time server
ntp peer	Configures the device to simulate a UTC source when real-time time sources are inaccessible
ntp refclock	Configures the device to synchronize its time against a time server
ntp server	Configures the device to synchronize its time against another device

ntp refclock
ntp master
ntp orphan
ntp server
ntp peer

92.

Community
Atomic-Aggregate
Aggregator
Cluster List
Next-Hop
MED

BGP Well-known Mandatory Attribute
BGP Well-known Discretionary Attribute
BGP Optional Nontransitive Attribute

Community
Aggregator
Next-Hop
Atomic-Aggregate
Cluster List
MED

BGP Well-known Mandatory Attribute
BGP Well-known Discretionary Attribute
BGP Optional Nontransitive Attribute

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Router LSA (Type 1)	advertises an internal network or set of networks to routers in other areas
Network LSA (Type 2)	associates a group of prefixes for transit networks or stub networks
Interarea-prefix LSA for ABRs (Type 3)	indicates whether the router is part of a virtual link
Interarea-router LSA for ASBRs (Type 4)	collects link-state information and cost information for the
Autonomous system external LSA (Type 5)	provides the link-local address of a router to other routers on
Link LSA (Type 8)	redistributes external routes
Intra-Area-Prefix LSAs (Type 9)	enables routers to determine the best path to an external network

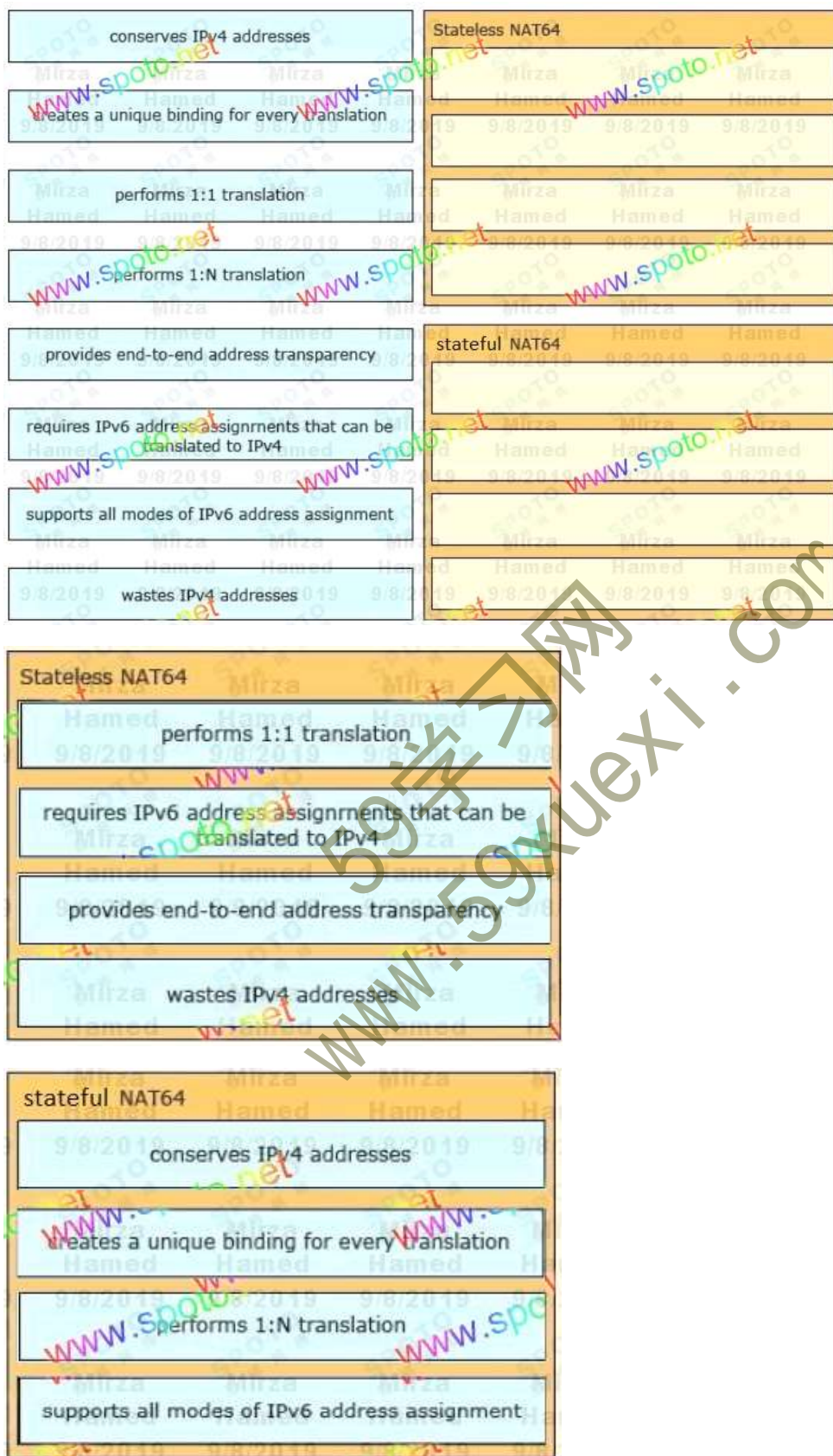
Interarea-prefix LSA for ABRs (Type 3)
Intra-Area-Prefix LSAs (Type 9)
Router LSA (Type 1)
Network LSA (Type 2)
Link LSA (Type 8)
Autonomous system external LSA (Type 5)
Interarea-router LSA for ASBRs (Type 4)

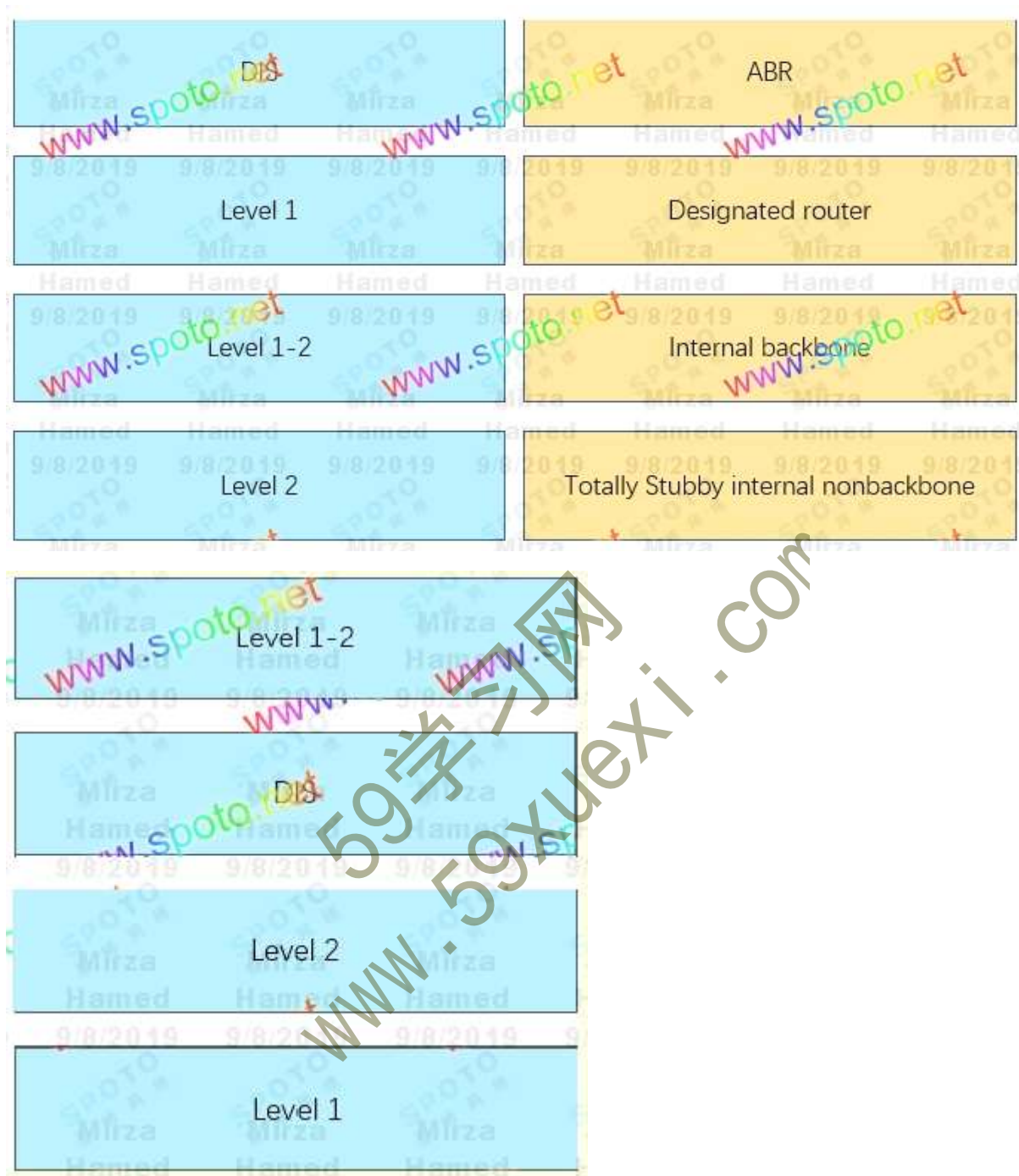
94.

10.120.75.10/14	10.112.0.0
10.121.55.10/18	10.120.0.0
10.121.100.50/12	10.121.0.0
10.121.221.30/17	10.121.128.0
10.125.20.101/18	10.125.0.0
10.125.80.150/18	10.125.64.0

10.121.100.50/12
10.120.75.10/14
10.121.55.10/18
10.121.221.30/17
10.125.20.101/18
10.125.80.150/18

95.





97.

Edge device	Elected by the OTV to provide loop-free multihoming
Join interface	Connects VLANs to be extended
Internal interface	Receives local OTV hello messages
Overlay interface	Provides an uplink to the overlay network
Site VLAN	Encapsulates layer 2 frames within an IP header
Authoritative edge device	Connects a site to an overlay network

Authoritative edge device
Internal interface
Site VLAN
Join interface
Overlay interface
Edge device

98.

peer session templates	applies configuration commands to a group of neighbors in all address families
peer policy templates	separates updates from configurations, which allows groups to belong to different address families
peer groups	supports the configuration of a group of neighbors by defining a prefix range instead of a single neighbor address
BGP dynamic update peer-groups	applies configuration commands to a group of neighbors within specific address families
BGP dynamic neighbors	creates a group of neighbors in the same address family that share the same outbound routing policies

peer session templates
BGP dynamic update peer-groups
BGP dynamic neighbors
peer policy templates
peer groups

99.

BGP	Has low resource usage and can be configured to send either unicast or multicast updates
IS-IS	Has high resource usage and requires the administrator to modify routing behavior to limit the information that is sent to non-backbone levels.
OSPF	Has high resource usage and supports a proprietary Cisco option to perform primary route calculation.
RIPv2	Has high resource usage and uses TVL to incorporate features.

RIPv2
OSPF
BGP
IS-IS

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100.

Reported metric to the neighbor router	Reported distance
Best metric along a path to the destination including the metric to the neighbor	Feasible distance
Best metric along a path to the feasible successor	Feasible successor
Path with a reported distance lower than the feasible distance	
Total metric along path to the destination as advertised by the upstream neighbor	

Reported metric to the neighbor router	Total metric along path to the destination as advertised by the upstream neighbor
Best metric along a path to the feasible successor	Best metric along a path to the destination including the metric to the neighbor
	Path with a reported distance lower than the feasible distance

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