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Cisco

400-101

CCIE Routing and Switching (v5.1)

Version: 50.0

[Total Questions: 337]

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Exam Topic Breakdown

Exam Topic	Number of Questions
<u>Topic 1 : Exam Set A</u>	100
<u>Topic 2 : Exam Set B</u>	100
<u>Topic 3 : Exam Set C</u>	137
TOTAL	337



Topic 1, Exam Set A

Question #:1 - [\(Exam Topic 1\)](#)

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

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

Answer: A C

Question #:2 - [\(Exam Topic 1\)](#)

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

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

Answer: B C

Question #:3 - [\(Exam Topic 1\)](#)

Which three types of Layer 2 Isolation do private VLANs provide? (Choose three)

- A. Community
- B. Promiscuous
- C. Blocking
- D. Private
- E. Group

- F. Isolated

Answer: A B F**Question #:4 - ([Exam Topic 1](#))**

Which command can you enter to configure a Cisco router running OSPF to propagate the static default route 0.0.0.0 0.0.0.0 172.31.15.1 within the OSPF process?

- A. default-information originate
- B. redistribute static subnets
- C. redistribute static metric 1 subnets
- D. redistribute static

Answer: A**Question #:5 - ([Exam Topic 1](#))**

What are three of the key fields that define a unique NetFlow flow? (Choose three.)

- A. Input logical interface
- B. Canonical Format Identifier
- C. Source MAC address
- D. Layer 3 protocol type
- E. Cyclic Redundancy Check
- F. Type of service

**Answer: A D F****Question #:6 - ([Exam Topic 1](#))**

Which statement about a Cisco APIC controller versus a more traditional SDN controller is true?

- A. APIC uses a policy agent to translate policies into instructions.
- B. APIC supports OpFlex as a Northbound protocol.
- C. APIC does support a Southbound REST API.
- D. APIC uses an imperative model.

Answer: A**Question #:7 - [\(Exam Topic 1\)](#)**

What are the two variants of NTPv4? (Choose two)

- A. client/server
- B. broadcast
- C. multicast
- D. asymmetric
- E. unicast

Answer: A B**Question #:8 - [\(Exam Topic 1\)](#)**

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

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

Answer: C D**Question #:9 - [\(Exam Topic 1\)](#)**

Refer to the exhibit.

R1

```
ip community-list 10 permit 64512:100 64512:200 645212:41650 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 c1sC0
  neighbor 192.168.250.53 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 1BGP
  Advertised to update-groups:
    3           4           7
    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 64513:53090 64512:64002 64513:64090
```

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

Answer: A C

Question #10 - [\(Exam Topic 1\)](#)

Refer to Exhibit.

```
interface GigabitEthernet0/0
description *** Site Backbone ***
ip address 10.1.114.5 255.255.255.248
service-policy input marking
!
policy-map marking
class in-voice
class in-streaming
  set ip dscp af41
class in-time-sensitive
  set ip dscp af31
class class-default
  set ip dscp af21
!
class-map match-any in-streaming
match access-group name streaming
match access-group name tp-rooms
class-map match-any in-voice
match access-group name voice
class-map match-any in-time-sensitive
match access-group name time-sensitive
!
ip access-list extended voice
deny ip any any fragments
permit udp any 10.192.0.0-0.15.255.255
permit udp 10.192.0.0-0.15.255.255 any
permit udp any any range 51100-51140
permit udp any range 51100-51140 any
permit udp any range 17384-17484 any range 17384-17484
```

How is voice traffic entering this router on interface GigabitEthernet0/0 being handled by the shown marking policy?

- A. Any traffic matching access-list voice is trusted and marking is not changed.
- B. All voice is being set to DSCP 0.
- C. All voice is being set to AF21.
- D. Any traffic matching access-list voice is set to EF

Answer: A

Question #:11 - [Exam Topic 1](#)

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

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

Answer: A D

Question #:12 - [\(Exam Topic 1\)](#)

Which three fields are part of a TCN BPDU? (Choose three.)

- A. protocol ID
- B. versionC. type
- C. max-age
- D. flags
- E. message age

Answer: A B C**Question #:13 - [\(Exam Topic 1\)](#)**

Which IPv6 migration method relies on dynamic tunnels that use the 2002::/16 reserved address space?

- A. 6RD
- B. 6to4
- C. ISATAP
- D. GRE

Answer: B**Question #:14 - [\(Exam Topic 1\)](#)**

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

- A. ip nbar port-map VNC hex OxAA Ox1B
- B. ip nbar custom-map VNC tcp-udp 5900 5901
- C. ip nbar port-to-application seq 5 VNC tcp 5900 5901
- D. ip nbar application-map VNC udp 5900 5901
- E. ip nbar port-map VNC tcp 5900 5901

Answer: E**Question #:15 - [\(Exam Topic 1\)](#)**

Refer to the exhibit.

%CFIB-7-CFIB_EXCEPTION: FIB TCAM exception. Some entries will be software switched

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

Answer: A

Question #16 - [\(Exam Topic 1\)](#)

Which three options are three of the valid message types for DHCPv6? (Choose three)

- A. Offer
- B. Request
- C. Leave
- D. Solicit
- E. Discover
- F. Advertise

Answer: B D F

Question #17 - [\(Exam Topic 1\)](#)

Which three protocols are permitted by IEEE 802.1x port-based authentication before the client is successfully authenticated by the RADIUS server?(Choose three)

- A. IP
- B. CDP
- C. EAPOL

- D. STP
- E. TCP
- F. BOOTP

Answer: B C D

Question #:18 - [\(Exam Topic 1\)](#)

Which feature can you implement to most effectively protect customer traffic in a rate-limited WAN Ethernet service?

- A. HCBWFQ
- B. IntServ with RSVP
- C. DiffServ
- D. The IPsec VTI qos pre-classify command
- E. Q-in-Q

Answer: A

Question #:19 - [\(Exam Topic 1\)](#)

Which two factors contribute to traffic starvation when TCP and UDP flows are included in a single traffic class? (Choose tow)

- A. UDP flows continually lower their transmission rates when congestion is detected.
- B. TCP flows continually lower their transmission rates when congestion occurs on a link.
- C. TCP flows continually reduce the window size wen congestion occurs on a link.
- D. UDP flows continually reduce the window size when congestion occurs on a link.
- E. TCP flows maintain a consistent transmission rate when congestion occurs on a link.
- F. UDP flows maintain a consistent transmission rate when congestion occurs on a link.

Answer: B F

Question #:20 - [\(Exam Topic 1\)](#)

Refer to the exhibit.

MC#sh pfr master border detail						
Border	Status	UP/DOWN		AuthFail	Version	
10.1.1.1	ACTIVE	UP	00:52:21	0	3.0	
Et0/0	INTERNAL	UP				
Et0/1	EXTERNAL	UP				
External Interface	Capacity (kbps)		Max BW (kbps)	BW Used (kbps)	Load (%)	Status Exit Id
Et0/1	Tx	500	450	192	39	UP 2
	Rx		500	49	9	
Border	Status	UP/DOWN		AuthFail	Version	
10.1.1.2	ACTIVE	UP	00:52:21	0	3.0	
Et0/0	INTERNAL	UP				
Et0/1	EXTERNAL	UP				
External Interface	Capacity (kbps)		Max BW (kbps)	BW Used (kbps)	Load (%)	Status Exit Id
Et0/1	Tx	500	450	175	33	UP 1
	Rx		500	0	0	

Which statement is true?

- A. The Cisco PfR state is UP; however, the external interface Et0/1 of border router 10.1.1.1 has exceeded the maximum available bandwidth threshold.
- B. The Cisco PfR state is UP; however, an issue is preventing the border router from establishing a TCP session to the master controller.
- C. The Cisco PfR state is UP and is able to monitor traffic flows; however, MD5 authentication has not been successful between the master controller and the border routers.
- D. The Cisco PfR State is UP; however, the receive capacity was not configured for inbound traffic.
- E. The Cisco PfR state is UP, and the link utilization out-of-policy threshold is set to 90 percent for traffic exiting the external links.

Answer: E

Question #:21 - [Exam Topic 1](#)

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

- A. Separate images are required for platform-dependent code.

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

Answer: B D

Question #:22 - [\(Exam Topic 1\)](#)

Which two options are examples of Northbound and Southbound protocols? (Choose two)

- A. ISIS
- B. JSON
- C. OpenStack
- D. NETCONE
- E. BGP-LS

Answer: D E

Question #:23 - [\(Exam Topic 1\)](#)

Which technology can be used to secure the edge of an STP domain?

- A. root guard
- B. BPDU guard
- C. UplinkFast
- D. BPDU filter

Answer: B

Question #:24 - [\(Exam Topic 1\)](#)

Which GDOI key is responsible for encrypting control plane traffic?

- A. the traffic encryption key.
- B. the preshared key.

- C. the key encryption key.
- D. the key-chain.

Answer: C**Question #:25 - [\(Exam Topic 1\)](#)**

Refer to the exhibit.

```
R2#sh version | i uptime
R2 uptime is 3 hours, 55 minutes
Enter configuration commands, one per line. End with CNTL/Z.
R2(config)#^Z
R2#
03:55:23: %SYS-5-CONFIG_I: Configured from console by console
```

Which configuration must you apply to router so that it can generate a log message in the given format?

- A. Service alignment logging
- B. Service timestamps log datetime
- C. Service timestamps log uptime
- D. Service sequence-numbers

Answer: C**Question #:26 - [\(Exam Topic 1\)](#)**

Which two values are required to implement an EIGRP named configurations? (Choose two)

- A. address-family
- B. process-id
- C. subnet-mask
- D. virtual-instance-name
- E. router-id

Answer: A D

Question #:27 - [\(Exam Topic 1\)](#)

Which option describes how a router responds if LSA throttling is configured and it receives the identical LSA before the interval is set?

- A. The LSA is added to the OSPF database and a notification is sent to the sending router to slow down its LSA packet updates.
- B. The LSA is added to the OSPF database.
- C. The LSA is ignored.
- D. The LSA is ignored and a notification is sent to the sending router to slow down its LSA packet updates

Answer: C**Question #:28 - [\(Exam Topic 1\)](#)**

Which two events occur when a packet is decapsulated in a GRE tunnel? (Choose two.)

- A. The destination IPv4 address in the IPv4 payload is used to forward the packet.
- B. The TTL of the payload packet is decremented.
- C. The source IPv4 address in the IPv4 payload is used to forward the packet.
- D. The TTL of the payload packet is incremented.
- E. The version field in the GRE header is incremented.
- F. The GRE keepalive mechanism is reset

Answer: A B**Question #:29 - [\(Exam Topic 1\)](#)**

Refer to the exhibit.

`https://mydevice.mycompany.com/getstuff?queryName=error&queryResults=yes`

Which network script automation option or tool is used in the exhibit?

- A. EEM
- B. Python

- C. Bash script
- D. NETCONF
- E. REST

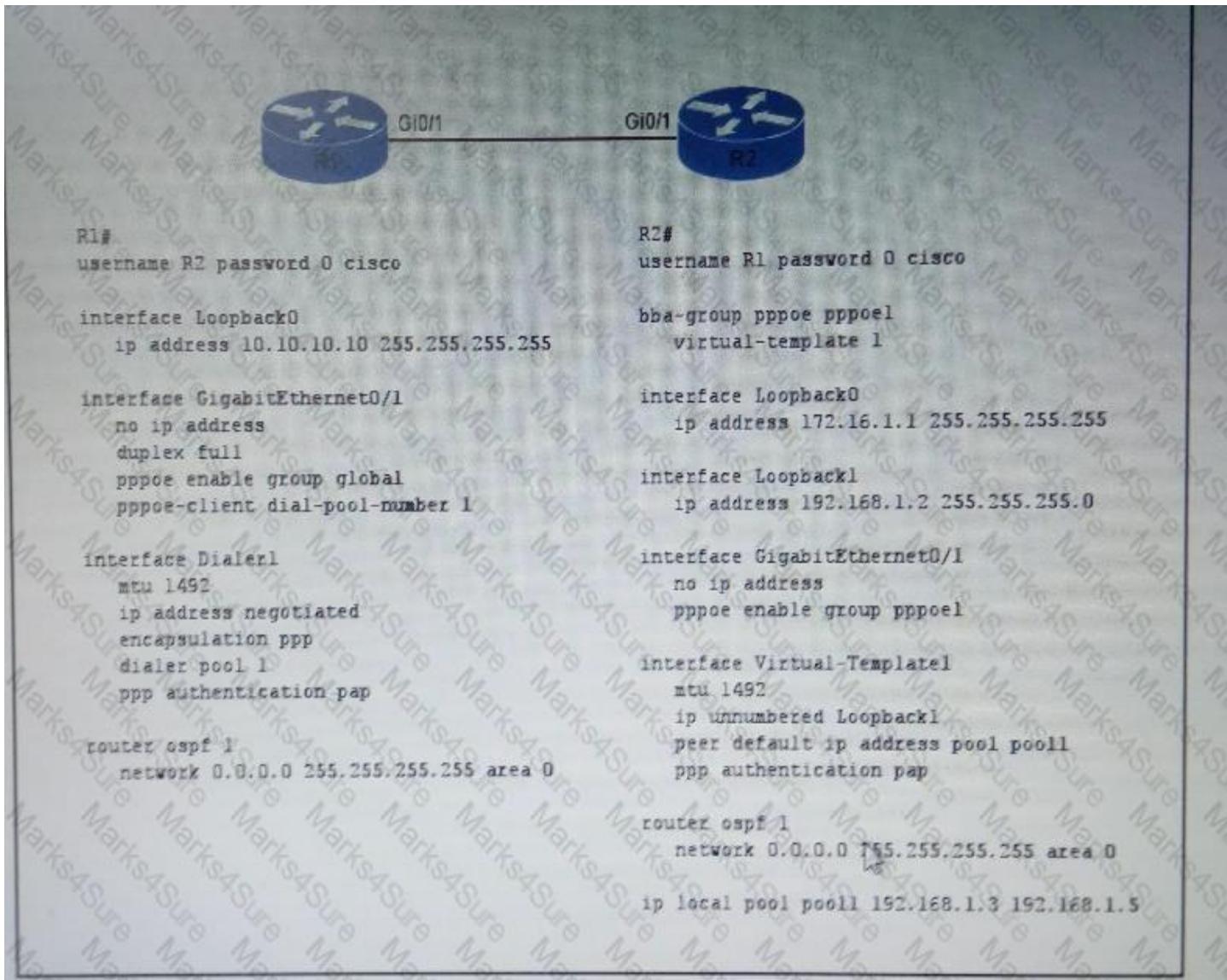
Answer: E**Question #:30 - ([Exam Topic 1](#))**

Which option describes the effect of the command ip route vrf DMZ 192.168.0.0 255.255.0.0 172.16.5.5 global?

- A. It creates a static route in the global routing table for 192.168.0.0 255.255.0.0, and the next hop is in the VRF DMZ.
- B. It creates a static route in the global routing table for 192.168.0.0 255.255.0.0 and the next hop is in the global routing table.
- C. It creates a static default route in the VRF DMZ; and the next hop is in the global routing table.
- D. It creates a static route in the VRP DMZ for 192.168.0.0 255.255.0.0, and the next hop is in the VRF DMZ.
- E. It creates a static route in the VRF DMZ for 192.168.0.0 255.255.0.0, and the next hop is in the global routing table.

Answer: E**Question #:31 - ([Exam Topic 1](#))**

Refer to the exhibit.



If R1 and R2 cannot establish an OSPF neighbor relationship, which two combined actions must you take to resolve the problem? (Choose two)

- A. Configuration PPP authentication under the R2 Gigabitethernet 0/1 interface.
- B. Change the IP local pool command on R2 to IP local pool pool1 192.168.1.2 192.168.1.5.
- C. Configuration R1 to send the PAP username and password on the Dialer 1 interface.
- D. Change the PPP authentication to CHAP authentication.
- E. Configure PPP encapsulation under the R1 virtual-template interface.

Answer: C E

Question #:32 - [\(Exam Topic 1\)](#)

What command can you enter to enable client auto configuration over an ISA TAP tunnel?

- A. tunnel mode ipv6ip isatap
- B. no ipv6 nd ra suppress
- C. ipv6 nd ra suppress
- D. tunnel mode ipv6ip 6rd

Answer: B

Question #:33 - [\(Exam Topic 1\)](#)

Which two are features of DMVPN are true? (Choose two.)

- A. It does not support spoke routers behind dynamic NAT.
- B. It requires IPsec encryption.
- C. It only supports remote peers with statically assigned addresses.
- D. It supports multicast traffic.
- E. It offers configuration reduction.

Answer: D E

Question #:34 - [\(Exam Topic 1\)](#)

Refer to the exhibit.

```
R1
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
```

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

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

Answer: C

Question #:35 - ([Exam Topic 1](#))

Which two statements about SNMP inform requests are true? (Choose two)

- A. For a particular event, an SNMP inform may be sent more than once.
- B. SNMP informs consume less bandwidth than SNMP trap.
- C. SNMP informs are sent to the SNMP manager without acknowledgement.
- D. SNMP informs are sent to the SNMP agent without acknowledgement.
- E. For a particular event, an SNMP inform is sent only once.
- F. SNMP informs are sent to the SNMP manager and acknowledgement.

Answer: A F

Question #:36 - ([Exam Topic 1](#))

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

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

Answer: A B

Question #:37 - ([Exam Topic 1](#))

What command can you enter on a Cisco router so that it can both poll a time server and be polled by a time server?

- A. ntp server
- B. ntp broadcast client
- C. ntp broadcast destination
- D. ntp peer

Answer: D

Question #:38 - ([Exam Topic 1](#))

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

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

Answer: A B

Question #:39 - ([Exam Topic 1](#))

For which feature is the address family "rtfilter" used?

- A. Enhanced Route Refresh
- B. MPLS VPN filtering
- C. Route Target Constraint
- D. Unified MPLS

Answer: C

Question #:40 - ([Exam Topic 1](#))

Which three security controls would you take into consideration when implementing IoT capabilities? (Choose three.)

- A. Privacy Impact Assessment.
- B. Implement Intrusion Detection Systems on IoT devices.
- C. Place security above functionality.
- D. Change passwords every 90 days.
- E. Define lifecycle controls for IoT devices.
- F. Layered Security Approach.

Answer: A E F

Question #41 - [\(Exam Topic 1\)](#)

When is it use full 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.

Answer: C

Question #42 - [\(Exam Topic 1\)](#)

Which two statements about static routing are true? (Choose two)

- A. It is highly scalable as networks grow.
- B. It requires less bandwidth and fewer CPU cycles than dynamic routing protocols.
- C. It reduces configuration errors.
- D. It can be implemented more quickly than dynamic routing.
- E. It provides better security than dynamic routing.

Answer: B E

Question #:43 - [\(Exam Topic 1\)](#)

On a network using DiffServ, which option refers to the actions that applied to a packet as it moves through the network?

- A. DSCP
- B. PHB
- C. Codepoint
- D. IP-precedence

Answer: B**Question #:44 - [\(Exam Topic 1\)](#)**

In an MPLS-VPN environment, what is the effect of configuring an identical set of route targets for a particular VRF but then configuring a nonidentical RD across multiple PE devices?

- A. The routes are rejected by the remote PE because they have a different RD than its routes.
- B. The routes are correctly managed by the control plane, but there are instances where routes take up twice as much memory.
- C. The routes are not sent to any remote PE with a different RD.
- D. The routes propagate to the remote PE, but the PE never installs them in its forwarding table.

Answer: B**Question #:45 - [\(Exam Topic 1\)](#)**

In which 802.1 D port state are the root bridge, the root port, and the designated ports elected?

- A. Listening
- B. Forwarding
- C. Learning
- D. Disabled
- E. Blocking

Answer: A**Question #:46 - [\(Exam Topic 1\)](#)**

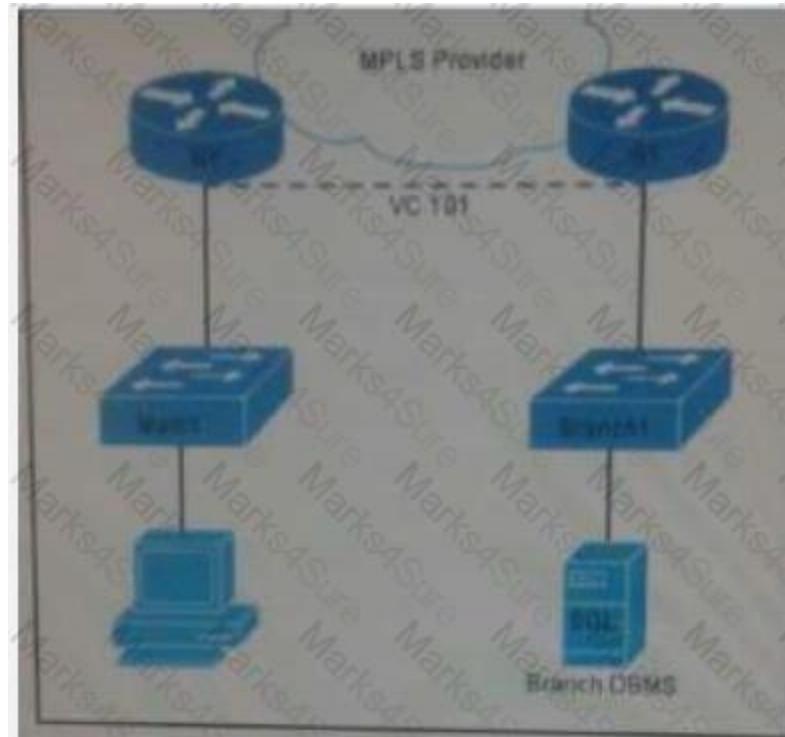
Which two statement about the EIGRP Over the Top feature are true? (Choose two)

- 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.

Answer: C E

Question #:47 - [\(Exam Topic 1\)](#)

Refer to the exhibit.



The Main1 and Branch1 switches are connected directly over an MPLS pseudo wire and both run UDLD. After router B1 reloads because of a power failure, the pseudo wire 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. Issue the shutdown and no shutdown commands on both the Branch1 switch's uplink to the B1 router and the Main1 switch's uplink to the M1 router.
- B. Enable UDLD recovery on both the Main1 and Branch 1 switches.

- C. Configure a backup GRE tunnel between the Main1 and Branch1 switches.
- D. Enable errdisable recovery on both the Main1 and Branch1 switches
- E. Configure a backup pseudo wire between the Main1 and Branch1 switches

Answer: A D

Question #:48 - ([Exam Topic 1](#))

Which two statements about Cisco Express Forwarding load balancing are true? (Choose two.)

- A. Cisco Express Forwarding can load-balance over a maximum of two destinations
- B. It combines the source IP address subnet mask to create a hash for each destination
- C. Each hash maps directly to a single entry in the RIB
- D. Each hash maps directly to a single entry in the adjacency table
- E. It combines the source and destination IP addresses to create a hash for each destination

Answer: D E

Question #:49 - ([Exam Topic 1](#))

An NSSA area has two ABRs connected to Area 0. Which statement is true?

- A. Both ABRs translate Type-7 LSAs to Type-5 LSAs.
- B. The ABR with the highest router ID translates Type-7 LSAs to Type-5 LSAs.
- C. No LSA translation is needed.
- D. Both ABRs forward Type-5 LSAs from the NSSA area to backbone area.

Answer: B

Question #:50 - ([Exam Topic 1](#))

Which option describes how a VTPv3 device responds when it detects a VTPv2 device on a trunk port?

- A. It sends VTPv3 packets only.
- B. It sends VTPv2 packets only.
- C. It sends VTPv3 and VTPv2 packets.

- D. It sends a special packet that contains VTPv3 and VTPv2 packet information.

Answer: C

Question #:51 - [\(Exam Topic 1\)](#)

Which three statements about BGP soft reconfiguration are true? (Choose three)

- A. Outbound soft reconfiguration stores an additional copy of the routes advertised to a neighbor before routing policies take effect.
- B. Inbound soft reconfiguration stores an additional copy of the routes received from a neighbor before routing policies take effect.
- C. Outbound soft reconfiguration requires additional configuration on the BGP neighbor.
- D. Inbound soft reconfiguration requires additional configuration on the BGP neighbor.
- E. Outbound soft reconfiguration requires additional memory.
- F. Inbound soft reconfiguration requires additional memory.

Answer: B D F

Question #:52 - [\(Exam Topic 1\)](#)

What are the two EEM event subscribers? (Choose two)

- A. CLI
- B. Script
- C. applet
- D. none
- E. syslog

Answer: B C

Question #:53 - [\(Exam Topic 1\)](#)

Which option describes the characteristics of a public Infrastructure as a Service cloud service model?

- A. It is a way of delivering cloud-computing infrastructure (servers, storage, network, and operating systems) as an on-demand service.

- B. It is a cloud-computing platform that facilitates the creation of web applications without the need to maintain the supporting software applications.
- C. It is a cloud service where the underlying hardware is managed by the cloud service provider.
- D. It is a cloud-computing platform that facilitates the creation of web applications without the need to maintain the supporting software operating systems.

Answer: A**Question #:54 - (Exam Topic 1)**

Refer to the exhibit.

```
R1
interface Loopback0
  ip address 172.16.1.1 255.255.255.255
  ip router isis
  ipv6 address 2001:DB8:1111::1/128
  ipv6 router isis

interface FastEthernet0/0
  ip address 192.168.10.1 255.255.255.0
  ip router isis
  ipv6 address 2001:DB8:10::1/48
  ipv6 router isis

  router isis
  net 01.0001.0000.0000.0001.00
```

What type of IS-IS is configured on R1?

- A. VRF-aware IS-IS
- B. Multi-process IS-IS
- C. Single-topology IS-IS
- D. IS-IS version 2

Answer: C**Question #:55 - (Exam Topic 1)**

Refer to the exhibit.

BGP as-path filters

```
!
router bgp 65500
neighbor LocalSite peer-group
neighbor LocalSite password 7 13579ACE45580A12
neighbor LocalSite ebgp-multipath 2
neighbor LocalSite update-source Loopback0
neighbor LocalSite next-hop-self
neighbor LocalSite route-map CheckCommunity in
neighbor LocalSite route-map CPodPeer out
!
route-map CPodPeer permit 10
match as-path 1
!
route-map CPodPeer permit 15
match as-path 33
!
route-map CPodPeer deny 20
!
ip as-path access-list 1 permit ^$_
ip as-path access-list 33 permit _65006_
!
end
```

Considering a stable neighbor ship has been established with multiple eBGP peers, which routers are advertised by the router?

- A. BGP routes that passed through AS 65006 and BGP routes sourced on this router
- B. A1 routes
- C. Only BGP routes sourced on this router
- D. Only BGP routes from AS 65006

Answer: A

Question #:56 - ([Exam Topic 1](#))

Which two statements about marking fields are true? (Choose two)

- A. The IP Precedence field is in the IP header and is 4 bits long.
- B. The Frame Relay DE field is in the IP header and is 1 bit long.
- C. The 3 priority bits are in 802.1Q/P.
- D. The IP DSCP field is in the IP header and is 6 bits long.
- E. The ToS 6 bits are in the IP header.

Answer: C D

Question #:57 - [\(Exam Topic 1\)](#)

Which command can you enter to disable logging for VTY lines?

- A. no logging monitor
- B. no logging count
- C. no logging buffer
- D. no logging console
- E. no logging trap

Answer: A

Question #:58 - [\(Exam Topic 1\)](#)

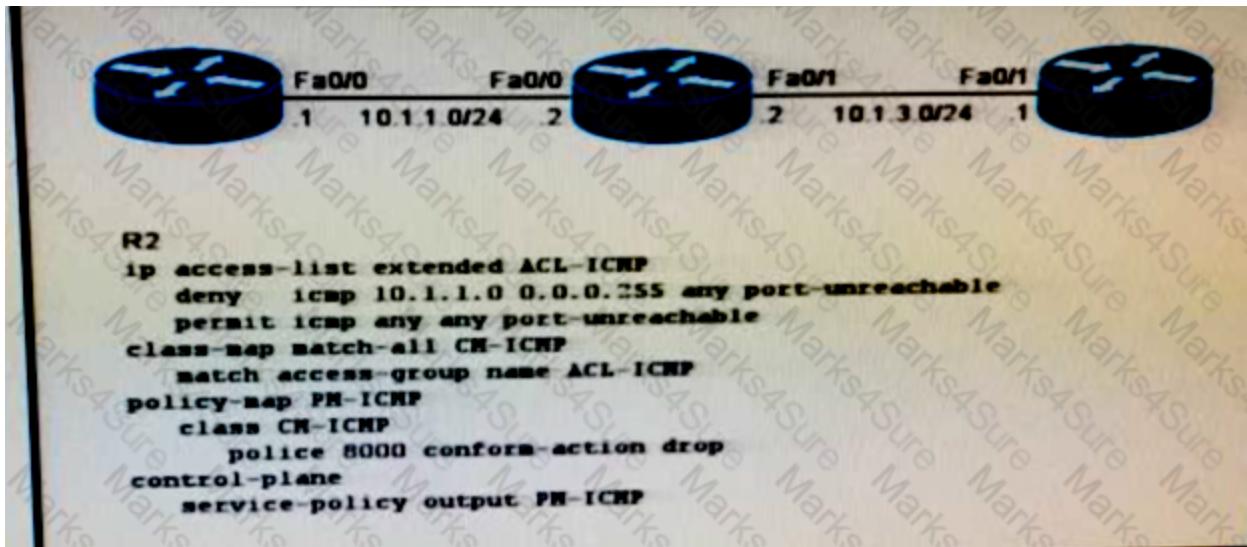
Which OpenStack component implements role-based access control?

- A. Horizon
- B. Nova
- C. Neutron
- D. Keystone

Answer: D

Question #:59 - [\(Exam Topic 1\)](#)

Refer to the exhibit.



Which two statements about this network are true? (Choose two)

- A. It allows successful traceroute operations from R1 to R2
- B. It is configured with control-plane policing in silent mode.
- C. It is configured as distributed as control-plane services
- D. It generates syslog messages for all discarded packets
- E. It allows successful traceroute operations from R3 to R2

Answer: A E

Question #:60 - [\(Exam Topic 1\)](#)

Which two BGP attributes are optional, non-transitive attributes? (Choose two.)

- A. AS path
- B. local preference
- C. MED
- D. weight
- E. cluster list

Answer: C E

Question #:61 - [\(Exam Topic 1\)](#)

For which reason can two OSPF neighbor routers on the same LAN segment be stuck in the two-way state?

- A. The two routers have different MTUs on the interface.
- B. The two routers are configured with different priorities.
- C. The interface priority is set to zero on both routers.
- D. Both routers have the same OSPF router ID.

Answer: C

Question #:62 - [\(Exam Topic 1\)](#)

Which LSA type is associated with the default route in a totally stubby area?

- A. interarea-prefix LSA for ABRs (Type 3)
- B. autonomous system external LSA (Type 5)
- C. router LSA (Type 1)
- D. interarea-router LSAs for ASBRs (Type 4)

Answer: A

Question #:63 - [\(Exam Topic 1\)](#)

Which two improvements do SIA-Query and SIA-Reply messages add to EIGRP? (Choose two.)

- A. Stuck-in-active conditions are solved faster.
- B. They prevent a route from going into the stuck-in-active state,
- C. They help in the localization of the real failure in the network.
- D. The EIGRP adjacency between two neighbors never goes down.

Answer: A C

Question #:64 - [\(Exam Topic 1\)](#)

Refer to the Following.

interface ethernet 0/0

ip policy route-map PBR

route-map PBR

```
match ip address 144  
set ip next-hop 172.16.12.5  
set ip next-hop recursive 192.168.3.2
```

Which statement correctly describes a router with this configuration? The configuration treats packets that match access-list 144 if it does not know a path to 172.16.12.5, and does not know a path to 192.168.3.2?

- A. It sends an ICMP source quench message.
- B. It routes the packet based on the packet's destination using the routing table.
- C. It routes the packet into a loop and drops it when the TTL reaches zero.
- D. It drops the packet immediately.

Answer: B

Question #:65 - [\(Exam Topic 1\)](#)

Which two statements about VTPv3 are true? (Choose two)

- A. Extended VLANs prevent VTPv3 switches from becoming VTPv2
- B. VTPv3 must receive VTPv2 packets before it can send VTPv2 packets
- C. VTPv3 accepts configuration information only from VTPv2 devices
- D. VTPv3 sends VTPv2 packets when they are detected on a trunk port
- E. VTPv3 regions can communicate in server mode only over a VTPv2 region

Answer: A B

Question #:66 - [\(Exam Topic 1\)](#)

Refer to the exhibit.

```
R1#show ip ospf interface FastEthernet0/0.12
FastEthernet0/0.12 is up, line protocol is up
  Internet Address 10.1.12.1/24, Area 0
  Process ID 2, Router ID 10.1.1.1, Network Type
    NON BROADCAST, Cost: 10
  Transmit Delay is 1 sec, State DR, Priority 1
  Designated Router (ID) 10.1.1.1, Interface address 10.1.12.1
  No backup designated router on this network
  Timer intervals configured, Hello 30, Dead 120, Wait 120,
    Retransmit 5
  oob-resync timeout 120
  Hello due in 00:00:19
  Supports Link-local Signaling (LLS)
  Cisco NSF helper support enabled
  IETF NSF helper support enabled
  Index 2/2, flood queue length 0
  Next 0x0(0)/0x0(0)
  Last flood scan length is 1, maximum is 1
  Last flood scan time is 0 msec, maximum is 0 msec
  Neighbor Count is 0, Adjacent neighbor count is 0
  Suppress hello for 0 neighbor(s)
```

R1#

```
R2#show ip ospf interface FastEthernet0/0.12
FastEthernet0/0.12 is up, line protocol is up
  Internet Address 10.1.12.2/24, Area 0
  Process ID 1, Router ID 10.2.2.2, Network Type
    BROADCAST, Cost: 10
  Transmit Delay is 1 sec, State DR, Priority 1
  Designated Router (ID) 10.2.2.2, Interface address 10.1.12.2
  No backup designated router on this network
  Timer intervals configured, Hello 10, Dead 40, Wait 40,
    Retransmit 5
  oob-resync timeout 40
  Hello due in 00:00:02
  Supports Link-local Signaling (LLS)
  Cisco NSF helper support enabled
  IETF NSF helper support enabled
  Index 2/2, flood queue length 0
  Next 0x0(0)/0x0(0)
  Last flood scan length is 1, maximum is 2
  Last flood scan time is 0 msec, maximum is 0 msec
  Neighbor Count is 0, Adjacent neighbor count is 0
  Suppress hello for 0 neighbor(s)
```

R2#

OSPF is configured on R1 and R2 as shown. Which action can you take to allow a neighbor relationship to be established.

- A. Configure R1 and R2 as neighbors using interface addresses.
- B. On R1 set the network type of the FastEthernet0/0.12 interface to broadcast
- C. On R1, change the process ID to 1
- D. Configure R1 and R2 as neighbors using router IDs.

Answer: B

Question #:67 - [\(Exam Topic 1\)](#)

If you configure a router interface both IPv4 and IPv6 on an IS-IS network in single-topology mode, what additional configurations required?

- A. IPv4 and IPv6 addresses must be configured with the same prefix length.
- B. IPv4 and IPv6 must be configured on different routing protocols.
- C. IPv4 and IPv6 must be configured with different metric types.
- D. IPv4 and IPv6 must be configured to nm the same IS-IS level.

Answer: D**Question #:68 - [\(Exam Topic 1\)](#)**

Which two conditions are required for tracking the interface IP routing state? (Choose two)

- A. A VRF must be enabled on the interface.
- B. IP routing must be disabled on the interface.
- C. Cisco Express Forwarding must be disabled oil the interface.
- D. The interface line protocol must be up.
- E. A known IP address must be configured on the interface.

Answer: D E**Question #:69 - [\(Exam Topic 1\)](#)**

Which statement about Auto-RP is true?

- A. All interfaces must be configured in sparse mode.
- B. All interfaces must be configured in sparse-dense mode.
- C. All interfaces must be configured in dense mode
- D. All RP that it tied to a loopback address must be configured.

Answer: D**Question #:70 - [\(Exam Topic 1\)](#)**

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

- A. It forwards multicast packets on a source tree.
- B. It requires an RP.
- C. It forwards multicast packets on a shared distribution tree,
- D. It floods multicast packets to neighbors that have requested the data.
- E. It floods multicast packets throughout the network.
- F. It forwards multicast packets to neighbors that have requested the data.

Answer: A E

Question #:71 - ([Exam Topic 1](#))

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

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

Answer: A D

Question #:72 - ([Exam Topic 1](#))

Refer to the exhibit.

```
Oct 1 13:08:10.635: OSPF-1 HELLO Fa0/0: Send hello to 224.0.0.5 area 0 from 172.16.1.1
Oct 1 13:08:11.095: OSPF-1 HELLO Fa0/0: Send hello to 172.16.1.2 area 0 from 172.16.1.1
Oct 1 13:08:11.098: OSPF-1 HELLO Fa0/0: Mismatched hello to 172.16.1.2 area 0 from 172.16.1.2
Oct 1 13:08:11.099: OSPF-1 HELLO Fa0/0: Send R 40 C 40, Hello R 10 C 10 Mask R 255.255.255.248 C
255.255.255.240
Oct 1 13:08:12.407: OSPF-1 ADJ   Fa0/0: end of wait on interface
Oct 1 13:08:12.407: OSPF-1 ADJ   Fa0/0: DR/BDR election
Oct 1 13:08:12.407: OSPF-1 ADJ   Fa0/0: Elect BDR 172.16.1.1
Oct 1 13:08:12.411: OSPF-1 ADJ   Fa0/0: Elect DR 172.16.1.1
Oct 1 13:08:12.411: OSPF-1 ADJ   Fa0/0: Elect BDR 0.0.0.0
Oct 1 13:08:12.411: OSPF-1 ADJ   Fa0/0: Elect DR 172.16.1.1
Oct 1 13:08:12.411: OSPF-1 ADJ   Fa0/0: DR: 172.16.1.1 (ld) BDR: none
Oct 1 13:08:19.751: OSPF-1 HELLO Fa0/0: Send hello to 224.0.0.5 area 0 from 172.16.1.1
Oct 1 13:08:21.490: OSPF-1 HELLO Fa0/0: Send hello to 172.16.1.2 area 0 from 172.16.1.1
Oct 1 13:08:21.015: OSPF-1 HELLO Fa0/0: Mismatched hello to 172.16.1.2 area 0 from 172.16.1.2
```

After observing that an OSPF neighbor relationship failed to form you executed a debug that returned the given output. Which configuration issue prevented the OSPF neighbor relationship from forming?

- A. The stub flag is set on the neighboring device
- B. The hello and hold timers are mismatched
- C. The devices are on different subnets
- D. The area IDs are mismatched

Answer: B

Question #:73 - [\(Exam Topic 1\)](#)

Which topology allows the split-horizon rule to be safely disabled when using EIGRP?

- A. full mesh
- B. partial mesh
- C. hub and spoke
- D. ring

Answer: C

Question #:74 - [\(Exam Topic 1\)](#)

Which keychain cryptographic algorithm is supported by the IS-IS routing protocol?

- A. HMAC-SHA1-12
- B. HMAC-MD5
- C. MD5
- D. HMAC-SHA1-20

Answer: B

Question #:75 - [\(Exam Topic 1\)](#)

Refer to the exhibit

```
Router#sh ip ospf 1
  Routing Process "ospf 1" with ID 1.0.0.102
  Start time: 00:00:09.225, Time elapsed: 00:02:54.859
  Supports only single TOS(TOS0) routes
  Supports opaque LSA
  Supports Link-local Signaling (LLS)
  Supports area transit capability
  Supports NSSA (compatible with RFC 3101)
  Event-log enabled, Maximum number of events: 1000, Mode: cyclic
  It is an area border and autonomous system boundary router
  Redistributing External Routes from,
    connected, includes subnets in redistribution
  Router is not originating router-LSAs with maximum metric
  Initial SPF schedule delay 100 msec
  Minimum hold time between two consecutive SPFs 200 msec
  Maximum wait time between two consecutive SPFs 10000 msec
  Incremental-SPF disabled
  Initial LSA throttle delay 50 msec
  Minimum hold time for LSA throttle 100 msec
  Maximum wait time for LSA throttle 5000 msec
  Minimum LSA arrival 80 msec
  LSA group pacing timer 240 secs
  Interface flood pacing timer 33 msec
  Retransmission pacing timer 66 msec
  Number of external LSA 0. Checksum Sum 0x00000000
  Number of opaque AS LSA 0. Checksum Sum 0x00000000
  Number of DCbitless external and opaque AS LSA 0
  Number of DoNotAge external and opaque AS LSA 0
  Number of areas in this router is 2. 2 normal 0 stub 0 nssa
  Number of areas transit capable is 0
  External flood list length 0
  IETF NSF helper support enabled
  Cisco NSF helper support enabled
  BFD is enabled
  Reference bandwidth unit is 100 mbps
```

Which statement is true?

- A. BFD, SPF and LSA timers are tuned for faster convergence
- B. Fast convergence is not configured
- C. BFD and SPF throttling are configured
- D. Only BFD is enabled

Answer: A

Question #:76 - [\(Exam Topic 1\)](#)

Which two statements about the passive-interface command EIGRP are true? (Choose two)

- A. It configures the device to advertise only connected interfaces to neighbors with EIGRP.
- B. It configures the interface to use unicast messages to establish EIGRP neighbor relationships.
- C. It allows incoming routing updates to be received but disables outgoing routing updates.
- D. It disables processing of incoming hello messages.
- E. If it is enabled globally under EIGRP on the device, it can be disabled for individual interfaces to allow those interfaces to remain active.

Answer: D E**Question #:77 - [\(Exam Topic 1\)](#)**

With which protocol is CoAP designed to be used?

- A. TCP
- B. UDP
- C. XMPP
- D. SNMP

Answer: B**Question #:78 - [\(Exam Topic 1\)](#)**

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

- A. The cost is calculated automatically based on the delay only
- B. It is the only IS-IS metric supported on Cisco devices
- C. A default cost of 1 is automatically assigned to all interfaces
- D. The cost is calculated automatically based on the interface bandwidth and delay
- E. A default cost of 10 is automatically assigned to all interfaces
- F. The cost is calculated automatically based on the interface bandwidth only

Answer: E F**Question #:79 - [\(Exam Topic 1\)](#)**

Which two configuration options are available for PIM snooping? (Choose two)

- A. on a specific interface on the device
- B. under the SVI for the corresponding VLAN
- C. on a range of interfaces on the device
- D. under the VLAN in VLAN configuration mode
- E. globally on the device

Answer: B E**Question #:80 - [\(Exam Topic 1\)](#)**

How can you reduce latency on a VoIP network?

- A. Implement low-latency queuing.
- B. Implement fast retransmission.
- C. Implement a congestion-avoidance algorithm.
- D. Set the IP SLA timeout to 1000 milliseconds.
- E. Configure an SLA to collect information on packets loss.

Answer: A**Question #:81 - [\(Exam Topic 1\)](#)**

Which two statements about asymmetric routing are true? (Choose two)

- A. It can cause packet loss over stateful ICMP and UDP connections.
- B. It can cause packet loss when a stateful firewall is in use.
- C. It can cause TCP connections to close.
- D. It can cause packet loss when NAT is in use.
- E. It is uncommon in large networks.

Answer: B D**Question #:82 - ([Exam Topic 1](#))**

Which two statements about IGMP filters that are operating in access mode are true? (Choose Two)

- A. They can be applied on the access port only.
- B. A filter that is applied on the SVI must use the same settings as a filter that is applied to the trunk port.
- C. The port filter is always checked first.
- D. They can be applied on both the SVI and the access port.
- E. The SVI filter is always checked first

Answer: C D**Question #:83 - ([Exam Topic 1](#))**

Which two options are requirements for Control-Plane Policing? (Choose two.)

- A. Cisco Express Forwarding must be enabled globally.
- B. Cisco Discovery Protocol must be disabled in the control plane.
- C. A crypto policy must be installed.
- D. A loopback address must be configured for device access.
- E. A class map must be configured to identify traffic.

Answer: A E**Question #:84 - ([Exam Topic 1](#))**

Refer to the exhibit.

Router A must reach router X. Which option describes how router A decides which interface to use to forward packets?

- A. Router A relies on FIB to select the desired interface.
- B. Router A does per-flow load-balance across the two interfaces

- C. Router A relies on RIB to select the desired interface.
- D. Router A does per-packet load-balance across the two interfaces.

Answer: C**Question #:85 - ([Exam Topic 1](#))**

Which trunking configuration between two Cisco switches can cause a security risk?

- A. configuring different native VLANs on the switches
- B. configuring different trunk modes on the switches
- C. configuring mismatched VLANs on the trunk
- D. disabling DTP on the trunk ports
- E. configuring incorrect channel-groups on the switches

Answer: A**Question #:86 - ([Exam Topic 1](#))**

Which value does VPLS use to make forwarding decisions?

- A. destination IP address of the packet
- B. destination MAC of the Ethernet Frame
- C. source IP address of the packet
- D. source MAC of the Ethernet frame

Answer: B**Question #:87 - ([Exam Topic 1](#))**

Which IGMP snooping feature tracks IGMPv3 hosts on a per-port basis?

- A. IGMPv3 querier
- B. IGMPv3 static-group
- C. fast-leave
- D. explicit tracking

- E. membership report

Answer: A

Question #:88 - [\(Exam Topic 1\)](#)

Which option is an example of SaaS?

- A. Google Apps
- B. Amazon AWS
- C. Google App Engine
- D. Microsoft Azure

Answer: A

Question #:89 - [\(Exam Topic 1\)](#)

Which DHCP message type does the DHCP server send to client to confirm its allocated IP address?

- A. DHCPDISCOVER
- B. DHCPOFFER
- C. DHCPREQUEST
- D. DHCPACK

Answer: D

Question #:90 - [\(Exam Topic 1\)](#)

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

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

Answer: C D

Question #:91 - [\(Exam Topic 1\)](#)

Which two statements about CEF polarization are true? (Choose two)

- A. The AND operation is performed on the higher-order bits of the source and destination IP address
- B. A single link is chosen for all flows
- C. The AND operation is performed on the lower-order bits of the source and destination IP address
- D. After the XOR process, the flow is processed in the distribution Layer with a different hashing algorithm
- E. It can be prevented by alternating the hashing inputs
- F. When enabled, it allows all links to be used efficiently for different traffic flows

Answer: B E

Question #:92 - ([Exam Topic 1](#))

Which two statements about the Client-identifier in a DHCP pool are true? (Choose two.)

- A. It specifies a unique identifier that is used only for DHCP requests.
- B. It is specified by appending 01 to the MAC address of a DHCP client
- C. It specifies a hardware address for the client
- D. It specifies a unique identifier that is used only for BOOTP requests.
- E. It requires that you specify the hardware protocol.

Answer: A B

Question #:93 - ([Exam Topic 1](#))

Refer to the exhibit.

```
router bgp 64496
  no synchronization
  bgp log-neighbor-changes
  aggregate-address 10.0.0.0 255.0.0.0 as-set summary-only
  neighbor 192.168.1.2 remote-as 64497
  neighbor 192.168.2.2 remote-as 64498
  neighbor 192.168.3.2 remote-as 64499
  no auto-summary
```

Which option describes the purpose of the as-set argument of the aggregate-address command?

- A. It provides an AS path in the aggregate advertisement that contains only the local AS number.

- B. It provides a predefined AS path in the aggregate advertisement that is used to indicate an aggregate prefix.
- C. It provides an AS path in the aggregate advertisement that includes the AS numbers of the component members.
- D. It provides a list of AS numbers top which the aggregate is advertised.

Answer: C

Question #:94 - [\(Exam Topic 1\)](#)

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

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

Answer: D

Question #:95 - [\(Exam Topic 1\)](#)

What are three ways to increase traceroute performance? (Choose three.)

- A. Force the traceroute to use TCP.
- B. Use the same value for both the minimum and maximum TTL
- C. Set a timeout value of less than 3 seconds
- D. Disable DNS lookups
- E. Use a probe count of 2 or lower
- F. Set a timeout value of 0 seconds

Answer: C D E

Question #:96 - [\(Exam Topic 1\)](#)

Which option is a core event publisher for EEM?

- A. Timer
- B. Policy Director
- C. Applet
- D. Script

Answer: A

Question #:97 - [\(Exam Topic 1\)](#)

How is the MRU for a multilink bundle determined?

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

Answer: A

Question #:98 - [\(Exam Topic 1\)](#)

Which two items must be confined to capture packet data with the Embedded Packet Capture feature? (Choose two)

- A. The capture point
- B. the capture buffer
- C. the capture file export location
- D. the capture filter
- E. the capture rate
- F. the buffer memory size

Answer: A B

Question #:99 - [\(Exam Topic 1\)](#)

What is the initial BFD state?

- A. Down
- B. Init
- C. Up
- D. Admin Down

Answer: A

Question #:100 - [\(Exam Topic 1\)](#)

Which two statements about the host address 10.88.100.10/13 are true? (Choose two)

- A. The network address is 10.64.0.0
- B. The broadcast address is 10.95.255.255
- C. The network address is 10.88.0.0
- D. The broadcast address is 10.64.255.255
- E. The broadcast address is 10.88.255.255
- F. The network address is 10.88.100.0

Answer: B C

Topic 2, Exam Set B

Question #:101 - [\(Exam Topic 2\)](#)

Which BGP feature allows a router to maintain its current BGP configuration while it advertises a different AS number to new connections?

- A. local-AS
- B. next-hop-self
- C. allow-AS in
- D. soft reset

Answer: B C

Question #:102 - [\(Exam Topic 2\)](#)

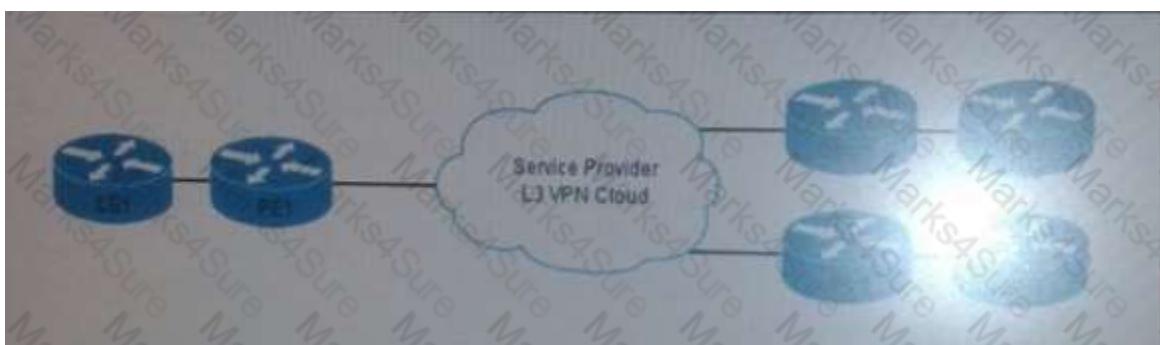
What is the modified EUI-64 value corresponding to MAC address 0032.F4C5.7781 as used in IPv6?

- A. FFFE.0032.F4C5.7781
- B. C577.81FF.FE00.32F4
- C. 0032.F4C5.7781.FFFE
- D. 0032.F4FF.FEC5.7781

Answer: D

Question #:103 - [\(Exam Topic 2\)](#)

Refer to the exhibit.



How can you configure this network so that customers can transparently extend their networks through the

provider?

- A. Configure eBGP peering among the CE routers.
- B. Configure EIGRP OSPF on the CE routers.
- C. Configure eBGP peering between the CE and PE routers.
- D. Configure OSPF peering between the CE and PE routers.

Answer: B

Question #:104 - [\(Exam Topic 2\)](#)

Which two EtherChannel modes can create an LACP EtherChannel? Choose two

- A. on
- B. active
- C. passive
- D. auto
- E. desirable

Answer: B C

Question #:105 - [\(Exam Topic 2\)](#)

Which two statements about TCP tail drop are true? (choose two)

- A. It increases the congestion window after each acknowledgement
- B. It uses bandwidth efficiently along the entire link
- C. It causes TCP flows to be dropped at different intervals
- D. It decreases the congestion window after each acknowledgement
- E. It causes TCP global synchronization

Answer: C E

Question #:106 - [\(Exam Topic 2\)](#)

Which two options are interface requirements for turbo flooding? (Choose two)

- A. The interface is Ethernet
- B. The interface is configured for ARPA encapsulation
- C. The interface is PPP
- D. The interface is configured for GRE encapsulation
- E. The interface is configured for 802.1Q encapsulation

Answer: A B**Question #:107 - [\(Exam Topic 2\)](#)**

According to the networking best practices, which network device should be used for optimization and rate limiting?

- A. the provider core device
- B. the provider edge device
- C. the customer core device
- D. The customer edge device

Answer: D**Question #:108 - [\(Exam Topic 2\)](#)**

Which prefix list matches and permits all RFC 1918 network 10.0.0.0 routes that have masks of /16 through /24?

- A. ip prefix-list foo seq 10 permit 10.0.0.0/16 le24
- B. ip prefix-list foo seq 10 permit 10.0.0.0/8 ge 15 le 25
- C. ip prefix-list foo seq 10 permit 10.0.0.0/16 ge 15 le 25
- D. ip prefix-list foo seq 10 permit 10.0.0.0/8 ge 16 le 24

Answer: D**Question #:109 - [\(Exam Topic 2\)](#)**

Refer to the exhibit.

```

R5#show ip eigrp topology all
IP-EIGRP Topology Table for AS(100)/ID(192.168.45.5)
Codes: P - Passive, A - Active, U - Update, Q - Query, R - Reply,
       E - reply Status, N - Nbr Status

P 192.168.45.0/24, 1 successors, FD is 281600, metric 1
  via Connected, FastEthernet0/1
P 192.168.35.0/24, 1 successors, FD is 281600, metric 7
  via Connected, FastEthernet0/0
P 192.168.32.0/24, 2 successors, FD is 309760, metric 8
  via 192.368.35.3 (309760/281600), FastEthernet0/0
  via 192.168.45.4 (309760/281600), FastEthernet0/1
P 192.168.24.0/24, 1 successors, FD is 307200, metric 2
  via 192.168.45.4 (307200/281600), FastEthernet0/1
  via 192.368.35.2 (322800/307200), FastEthernet0/0
P 192.168.23.0/24, 1 successors, FD is 307200, metric 8
  via 192.368.35.2 (307200/281600), FastEthernet0/0
  via 192.168.45.4 (322800/307200), FastEthernet0/1
P 172.16.1.1/32, 2 successors, FD is 437760, metric 10
  via 192.368.35.3 (437760/432160), FastEthernet0/0
  via 192.168.45.4 (437760/432160), FastEthernet0/1

```

Which two statements about the 192.168.23.0/24 prefix are true? (Choose two)

- A. Router 192.168.45.4 cannot act as a feasible successor.
- B. Router 192.168.35.3 is the only successor
- C. Only router 192.168.45.4 is a feasible successors.
- D. Routers 192.168.35.3 and 192.168.45.4 are successors
- E. Routers 192.168.35.3 and 192.168.45.4 are feasible successors
- F. Only router 192.168.35.3 is a feasible successor.

Answer: A B

Question #:110 - [\(Exam Topic 2\)](#)

Which option describes how the IP address is assigned when you configure a Layer3 EtherChannel interface?

- A. You must assign the IP address to the tunnel interface.
- B. The last IP address added to the EtherChannel is used automatically.
- C. You must assign the IP address to a port channel logical interface.
- D. The first IP address added to the EtherChannel is used automatically

Answer: C

Question #:111 - [\(Exam Topic 2\)](#)

Which two loop-prevention mechanisms are implemented in BGP? (Choose two.)

- A. A route with its own AS in the AS_PATH is dropped automatically if the route reenters its own AS.

- B. A route with its own cluster ID in the CLUSTER_LLST is dropped automatically when the route reenters its own AS.
- C. The command bgp allowas-ill enables a route with its own AS_PATH to be dropped when it reenters its own AS.
- D. The command bgp bestpath as-path ignore enables the strict checking of AS_PATH so that they drop routes with their own AS in the ASPATH.
- E. The command bgp bestpath med missing-as-worst assigns the smallest possible MED, which directly prevents a loop

Answer: A B

Question #:112 - [\(Exam Topic 2\)](#)

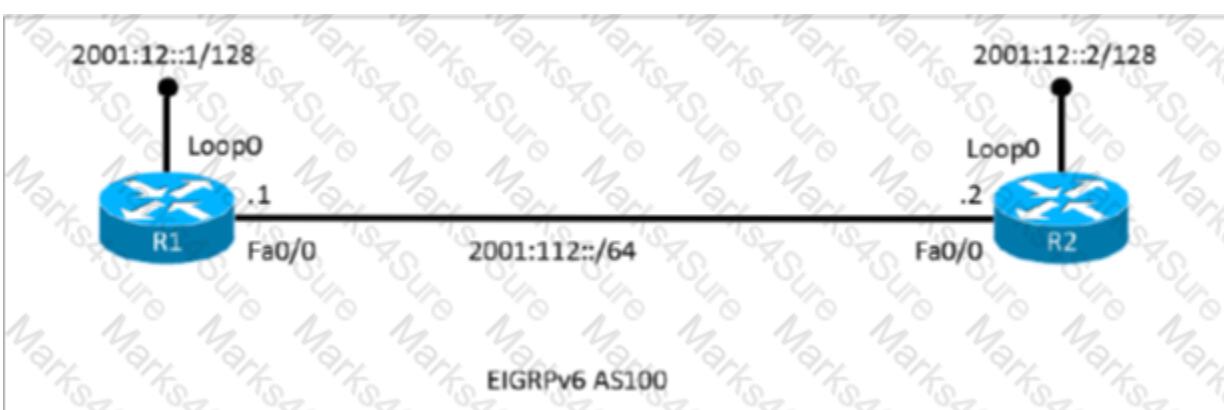
Which two roles are used by devices for building multicast trees using bidirectional PIM? (Choose two)

- A. Pruning Router
- B. Designated Forwarder
- C. Rendezvous Point
- D. Mapping Agent
- E. Candidate Rendezvous Point
- F. Bootstrap Router

Answer: B C

Question #:113 - [\(Exam Topic 2\)](#)

Refer to the exhibit.

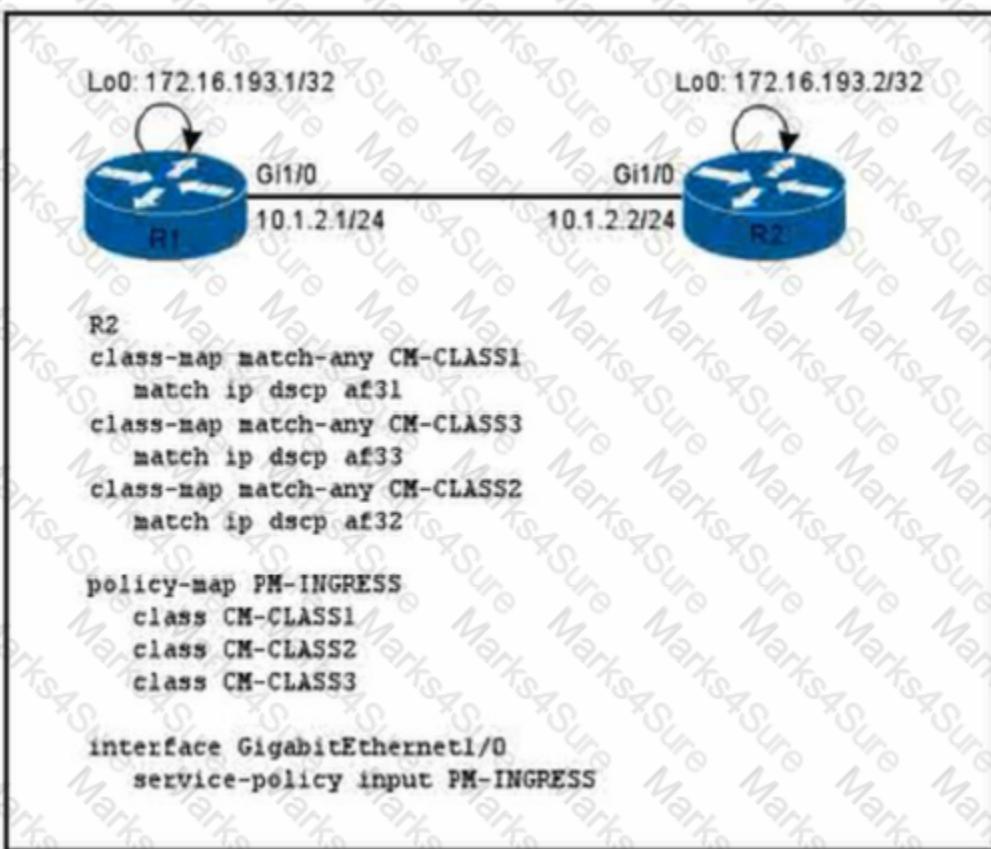


Which EIGRP routes will appear in the routing table of R2 ?

- A. 2001:12:: 1/64
- B. 2001:112::/64 .2001:12::1/128
- C. 2001:112::/64 ,2001:12::1/64
- D. 2001:12::1/128

Answer: C**Question #:114 - (Exam Topic 2)**

Refer to the exhibit.



If router R1 sends traffic marked with IP precedence 3 to R2's Loopback 0 address. Which class would the traffic match on R2's Gi1/0 interface?

- A. CM-CLASS-1
- B. class-default
- C. CM-CLASS-2

D. CM-CLASS-3

Answer: B

Question #:115 - [\(Exam Topic 2\)](#)

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

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

Answer: A

Question #:116 - [\(Exam Topic 2\)](#)

Refer to the exhibit.

`https://mydevice.mycompany.com/getstuff?queryName=errors&query`

Which network script automation option or tool is used in the exhibit?

- A. EEM
- B. Python
- C. Bash script
- D. NETCONF
- E. REST

Answer: E

Question #:117 - [\(Exam Topic 2\)](#)

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 router FIB table maintains a prefix for the subnet instead of individual hosts.

- C. The adjacency database is used to gather specific prefixes when packets are destined to a specific host
 - D. Packets destined for the interface can be dropped, which provide a form of access filtering.
 - E. Packets destined for the interface are discarded and the prefix check is skipped

Answer: B C

Question #:118 - [Exam Topic 2](#)

What is the source MAC address of a BPDU frame that is sent out of a port ?

- A. The lowest MAC address on the switch
 - B. The highest MAC address on the switch
 - C. The MAC address of the individual port that is sending the BPDU
 - D. The same as the MAC address in the bridge ID

Answer: C

Question #:119 - [Exam Topic 2](#)

Refer to the exhibit.



How can you configure R6 so that traffic returns to subnet 172.16.6.0/24 via R5?

- A. Configure the neighbor 10.5.6.5 send-community standard command
 - B. Advertise prefix 172.16.6.0/24 to neighbor R5 with metric 80.
 - C. Advertise prefix 172.16.6.0/24 to neighbor R5 with AS 65006 prepended.

- D. Set the local preference for all prefixes received from neighbor R5 to 200

Answer: C

Question #:120 - [\(Exam Topic 2\)](#)

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

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

Answer: A C

Question #:121 - [\(Exam Topic 2\)](#)

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

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

Answer: E

Question #:122 - [\(Exam Topic 2\)](#)

Which statement is true about trunking?

- A. Cisco switches that run PVST+ do not transmit BPDUs on nonnative VLANs when using a dot1q trunk.
- B. When removing VLAN 1 from a trunk, management traffic such as CDP is no longer passed in that VLAN.

- C. DTP only supports autonegotiation on 802.1q and does not support autonegotiation for ISL.
- D. DTP is a point-to-point protocol.

Answer: D**Question #:123 - [\(Exam Topic 2\)](#)**

Which two features are incompatible with Loop Guard on a port? (Choose two.)

- A. Root Guard
- B. PortFast
- C. UplinkFast
- D. BackboneFast
- E. BPDU skew detection

Answer: A B**Question #:124 - [\(Exam Topic 2\)](#)**

Refer to the exhibit.

```
username admin password 0 notsecure
aaa new-model
aaa authentication login default group tacacs+ local
aaa authorization exec default group tacacs+ local
banner motd ^C
Authorized users only.
^C
line con 0
  exec-timeout 5 0
  privilege level 15
  no vacant-message
  activation-character 124
```

If a console port is configured as shown. Which response is displayed when you connect to the console port.

- A. a blinking cursor
- B. The message "Authorized user only"
- C. The username prompt
- D. Three username name prompts followed by a timeout message

- E. The message "Connection refused"

Answer: A

Question #:125 - [\(Exam Topic 2\)](#)

What are two features that distance-vector routing protocols can use to address the count-to-infinity problem? (Choose two.)

- A. split horizon
- B. adjacency dead timers
- C. route tagging
- D. triggered updates
- E. route poisoning

Answer: A E

Question #:126 - [\(Exam Topic 2\)](#)

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

Answer: E

Question #:127 - [\(Exam Topic 2\)](#)

In which way does the Bridge Assurance mechanism modify the default spanning-tree behavior in an effort to prevent bridging loops?

- A. Received BPDUs are looped back toward the sender to ensure that the link is bidirectional.
- B. If BPDUs are no longer received on a port, the switch immediately scuds out a TCN BPDU.
- C. Extended topology information is encoded into all BPDUs.
- D. BPDUs are sent bidirectional on all active network ports, including blocked and alternate ports.

Answer: D**Question #:**128 - [\(Exam Topic 2\)](#)

Which two statements about IPv6 6to4 tunnels are true? (Choose two)

- A. Sites use addresses from the 2002::/16 prefix
- B. Sites use addresses from link-local scope
- C. They are point-to-multipoint tunnels
- D. They are point-to-point tunnels
- E. They rely on GRE encapsulation

Answer: A C**Question #:**129 - [\(Exam Topic 2\)](#)

Refer to the exhibit.

```
Router#show management-interface
Management interface GigabitEthernet0/1
Protocol          Packets processed
  Ssh              983
  Snmp             1275
```

Which two statements about the device configuration are true? (Choose two)

- A. The device has control-plane protection enabled.
- B. The device implicitly allows Telnet connections
- C. The GigabitEthernet 0/1 interface of the device allows incoming SSH and SNMP connections.
- D. The device has management-plane protection enabled.

- E. The device allows SSH connections to its loopback interface.

Answer: C D

Question #:130 - [\(Exam Topic 2\)](#)

Refer to the exhibit.

```
!  
router bgp 65500  
neighbor LocalSite peer-group  
neighbor LocalSite ebgp-multihop 2  
neighbor LocalSite update-source Loopback0  
neighbor LocalSite next-hop-self  
neighbor LocalSite route-map CheckCommunity in  
neighbor LocalSite route-map CPodPeer out  
route-map CheckCommunity permit 8  
match community 8  
set local-preference 80  
route-map CheckCommunity permit 10  
match community 1  
set local-preference 110  
route-map CheckCommunity permit 30  
community-list 1 permit 1000:110
```

The router sets local-preference to which option when it receives a BGP route with a community string 1000:130 from a neighbor in the LocalSite peer-group?

- A. 80
- B. 110
- C. 130
- D. no setting
- E. the default value

Answer: E

Question #:131 - [\(Exam Topic 2\)](#)

What is the function of the rendezvous point in PIM?

- A. It acts as a shared root for a multicast tree.
- B. It is the main source of the multicast traffic
- C. It redistributes the multicast configuration to its connected neighbors.
- D. It will redistribute the unicast routes to avoid an RPF failure

Answer: A

Question #:132 - [\(Exam Topic 2\)](#)

What are the three required attributed in a BGP update message? (Choose three.)

- A. AS_PATH
- B. COMMUNITY
- C. AGGREGATOR
- D. MED
- E. NEXT-HOP
- F. ORIGIN

Answer: A E F

Question #:133 - [\(Exam Topic 2\)](#)

Which three statements about bridge assurance are true? (Choose three)

- A. Bridge assurance must be enable on both ends of a link
- B. Bridge assurance can be enable on one end of a link or on both ends
- C. Bridge assurance is enable on STP point-to-point link only
- D. Bridge assurance is enable on STP multipoint links only
- E. If a bridge assurance port fails to receive a BPDU after a timeout, the port is put into a blocking state.
- F. If a bridge assurance port fails to receive a BPDU after a timeout, the port is put into an error disable state

Answer: A C E**Question #:134 - [\(Exam Topic 2\)](#)**

A network engineer implements ISIS for IPv6 and then discovers that ISIS adjacencies are going down. Which action can be taken to fix this problem?

- A. Enable multitopology on the ISIS domain
- B. Configure link local IPv6 address on ISIS interface
- C. Change the is-type on all ISIS routers to level-2-only
- D. Enable ISIS for IPv6 on loopback interfaces

Answer: D**Question #:135 - [\(Exam Topic 2\)](#)**

For what reason might you choose to use an SVTI interface instead of a crypto map on a tunnel interface?

- A. SVTIs support dynamic routing protocols without GRE headers.
- B. SVTIs can support multiple IPsec SAs.
- C. SVTIs can carry non-IP traffic.
- D. SVTIs support CEF-switched traffic shaping.

Answer: A**Question #:136 - [\(Exam Topic 2\)](#)**

Refer to the exhibit.

```
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
```

What are two effects of the given configuration. (Choose two)

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

Answer: B D

Question #:137 - [\(Exam Topic 2\)](#)

Which action does route poisoning take that servers as a loop-prevention method?

- A. It immediately sends routing updates with an unreachable metric to all devices.
- B. It immediately sends routing updates with a metric of 255 to all devices.
- C. It prohibits a router from advertising back onto the interface from which it was learned.
- D. It advertises a route with an unreachable metric back onto the interface from which it was learned.
- E. It poisons the route by tagging it uniquely within the network

Answer: A

Question #:138 - [\(Exam Topic 2\)](#)

Which way to influence path selection with EIGRP is preferred?

- A. changing the bandwidth, because that is what Cisco recommends
- B. Changing the bandwidth, because that is what Cisco recommends
- C. Changing the bandwidth, because it must be done only on one interface along the path
- D. changing the delay, even if it must be done on multiple interfaces

Answer: D

Question #:139 - [\(Exam Topic 2\)](#)

What is the default IS-IS interface metric on a Cisco router?

- A. 10

- B. 64
- C. 128
- D. 255

Answer: A

Question #:140 - [\(Exam Topic 2\)](#)

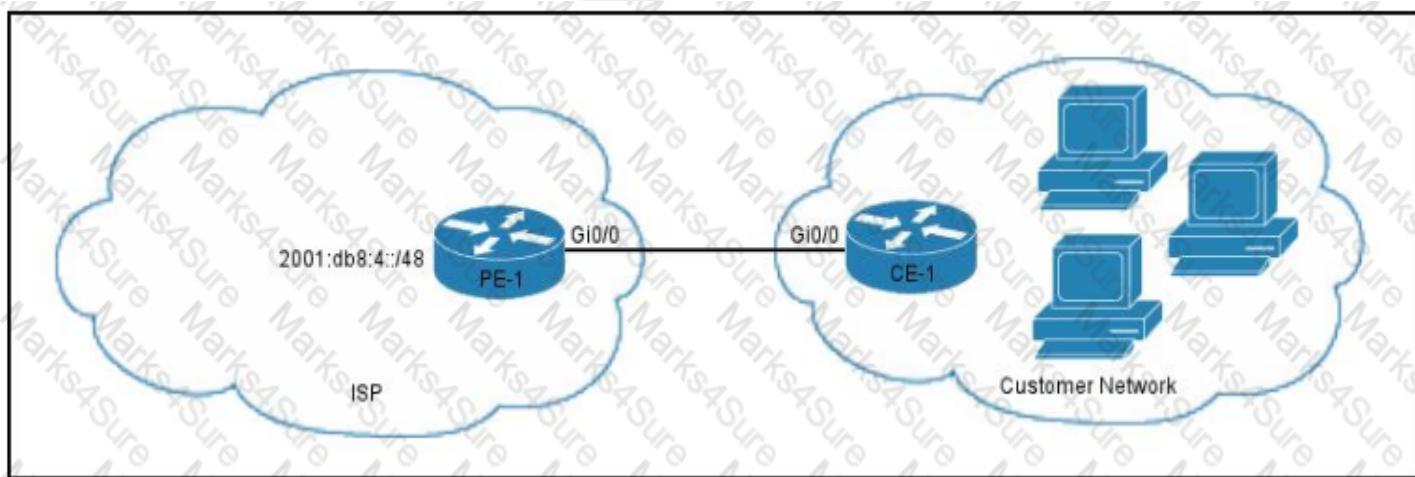
Which measure does ISIS use to avoid sending traffic with a wrong MTU configuration?

- A. ISIS does not protect from MTU mismatch.
- B. MTU value is communicated in ISIS Sequence Number PDUs (SNP), and ISIS adjacency is not established if an MTU mismatch is detected.
- C. ISIS uses path MTU discovery as specified in RFC 1063.
- D. ISIS uses padding of hello packets to fulfill MTU.

Answer: D

Question #:141 - [\(Exam Topic 2\)](#)

Refer to the exhibit.



Which configuration can you implement on PE-1 to allow CE-1 to receive delegated IPv6 prefixes?

- A. ipv6 local pool CE-1 2001:db8:4::8888/48 56
- Ipv6 dhcp pool CE-1-DHCP
- Interface GigabitEthernet0/0

Ipv6 address 2001:db8:4:822::1/64

Ipv6 dhcp server CE-1-DHCP

B. Ipv6 local pool CE-1 2001:db8:4:8888/49 56

Ipv6 dhcp pool CE-1-DHCP

Interface GigabitEthernet0/0

Ipv6 address 2001:db8:4:822::1/64

Ipv6 dhcp server CE-1-DHCP

C. Ipv6 local pool CE-1 2001:db8:4:8888/56 48

Ipv6 dhcp pool CE-1-DHCP

Interface GigabitEthernet0/0

Ipv6 address 2001:db8:4:822::1/64

Ipv6 dhcp server CE-1-DHCP

D. Ipv6 local pool CE-1 2001:db8:4:8888/48 32

Ipv6 dhcp pool CE-1-DHCP

Interface GigabitEthernet0/0

Ipv6 address 2001:db8:4:822::1/64

Ipv6 dhcp server CE-1-DHCP

E. Ipv6 local pool CE-1 2001:db8:4:8888/64 48

Ipv6 dhcp pool CE-1-DHCP

Interface GigabitEthernet0/0

Ipv6 address 2001:db8:4:822::1/64

Ipv6 dhcp server CE-1-DHCP

Answer: A

Question #:142 - [\(Exam Topic 2\)](#)

Which BGP attribute is used to influence inbound traffic?

- A. Weight
- B. origin
- C. multi-exit discriminator
- D. local preference

Answer: C

Question #:143 - [\(Exam Topic 2\)](#)

Which condition must be satisfied before a Cisco router running RIP can poison a route?

- A. The invalid timer must expire
- B. The hold down timer must expire
- C. The flush timer must expire
- D. The flush timer must reach 240 seconds
- E. The metric must equal 16

Answer: A

Question #:144 - [\(Exam Topic 2\)](#)

On which port type would you configure STP PortFast BPDU guard?

- A. root ports
- B. designated ports
- C. host ports
- D. alternate ports

Answer: C

Question #:145 - [\(Exam Topic 2\)](#)

Which two statements about route summarization are true? (Choose two)

- A. EIGRP learned routes are automatically summarized
- B. Routes are automatically summarized to their classful boundary with OSPF

- C. When a packet is routed to a destination, the router chooses the most specific prefix from the routing table
- D. It is recommended for use on discontiguous networks
- E. BGP scuds both specific and aggregate routes unless the keyword "summary- only" is configured

Answer: A C**Question #:146 - [\(Exam Topic 2\)](#)**

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

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

Answer: A B**Question #:147 - [\(Exam Topic 2\)](#)**

What does reverse path forwarding ensure in a multicast network?

- A. It ensures that any multicast host can receive the multicast stream.
- B. It ensures that the source of the multicast can forward the multicast stream.
- C. It ensures a loop-free multicast network.
- D. It ensures that multicast hosts can join the intended multicast groups.

Answer: C**Question #:148 - [\(Exam Topic 2\)](#)**

Refer to the exhibit.

```
ip sla 12
  icmp-echo 10.12.34.5
  timeout 2000
  frequency 2
ip sla schedule 12 life forever start-time now
track 12 ip sla 12 state
ip route 0.0.0.0 0.0.0.0 10.12.34.5 track 12
ip route 0.0.0.0 0.0.0.0 192.168.1.153 200
```

After you configure the given IP SLA on a Cisco router, you note that the device is unable to failover to a backup route even when pings to 10.12.34.5 fail. What action can you take to correct the problem?

- A. Change the ip route 0.0.0.0 0.0.0.0 192.168.1.153 200 command to ip route 0.0.0.0 0.0.0.0 192.168.1.153 12.
- B. Change the ip sla schedule 12 life forever start-time now command to ip sla schedule 12 life forever start-time 00:12:00.
- C. Change the track 12 ip sla 12 state command to track 12 ip sla 12 reachability.
- D. Change the frequency 2 command to frequency 12.

Answer: C

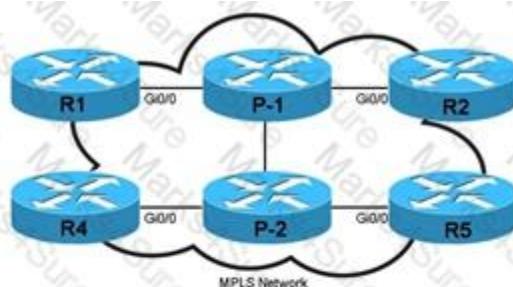
Question #:149 - [\(Exam Topic 2\)](#)

Which two options are restrictions of BGP ORF? (Choose two)

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

Answer: C D**Question #:150 - (Exam Topic 2)**

Which two options are two problems that can occur with this configuration? (Choose two)



```
R1
ip access-list standard LOOPBACK-ONLY
  permit 172.16.1.0 0.0.0.255
interface loopback0
  ip address 172.16.1.1 255.255.255.255
interface GigabitEthernet0/0
  ip address 10.0.0.1 255.255.255.0
  load-interval 30
  mpls ip
router ospf 1
  router-id 172.16.1.1
  network 10.0.0.1 0.0.0.0 area 0
  network 172.16.1.1 0.0.0.0 area 0
  mpls ldp neighbor 172.16.99.1 password cisco
  mpls ldp discovery targeted-hello accept
  mpls ldp advertise-labels for LOOPBACK-ONLY

R5
ip access-list standard LOOPBACK-ONLY
  permit 172.16.1.0 0.0.0.255
  permit 10.0.0.0 0.255.255.255
int loopback0
  ip address 172.16.99.1 255.255.255.255
interface GigabitEthernet0/0
  ip address 10.0.0.2 255.255.255.0
  load-interval 30
  mpls ip
router ospf 1
  router-id 172.16.99.1
  network 10.0.0.1 0.0.0.0 area 0
  network 172.16.99.1 0.0.0.0 area 0
  mpls ldp neighbor 172.16.1.1 password cisco
  mpls ldp discovery targeted-hello accept
  mpls ldp advertise-labels for LOOPBACK-ONLY
```

- A. The MPLS path from R1 to R5 becomes unreachable
- B. R1 and R5 are unable to establish an LDP relationship
- C. The label for the loopback address is filtered from other MPLS routers
- D. The label for the R5 loopback address is filtered from other MPLS routers
- E. MPLS traffic from R1 to R5 takes a suboptimal path

Answer: A D**Question #:151 - (Exam Topic 2)**

Which command sequence must you enter to configure SSH access to a Cisco router?

- A. ip ssh version ip domain-lookup crypto key zeroize
- B. hostname ip domain-lookup crypto key generate rsa

- C. hostname ip domain-name crypto key zeroize
- D. hostname ip domain-name crypto key generate rsa
- E. ip ssh version ip domain-name crypto key generate rsa
- F. ip ssh version ip domain-name crypto key zeroize

Answer: D**Question #:152 - (Exam Topic 2)**

Refer to the exhibit.

```
router eigrp 28
network 172.28.100.0 0.0.0.255
redistribute bgp 64999 route-map wan2site
passive-interface default
no passive-interface GigabitEthernet 0/0/0.4

RT1>show route-map wan2site
route-map wan2site, deny, sequence
Match clauses:
Set clauses:
Policy routing matches: 0 packets 0 bytes
route-map wan2site, permit, sequence
Match clauses:
ip address (access-lists): default-only
Set clauses:
metric 100000 8 1 1
tag 42
Policy routing matches: 0 packets 0 bytes

RT1>show access-list default-only
Standard IP access list default-only
 10 permit 0.0.0.0
```

The route-map wan2site is being used for redistributing BGP routes into the eigrp 28 process. Which option best describes the resulting redistribution of routes?

- A. policy routing matches: 0 packets means that there are no matches and no routes are being redistributed
- B. all routes are being redistributed with a metric and a tag
- C. The deny, sequence 5 is preventing any routes from and a tag
- D. A default routes is being redistributed with a metric and a tag

Answer: C

Question #:153 - [\(Exam Topic 2\)](#)

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

- A. The default metric style is narrow
- B. The default metric for the IS-IS interface is 63
- C. The default metric style is wide
- D. The default metric for the IS-IS interface is 64
- E. The default metric for the IS-IS interface is 10

Answer: A E**Question #:154 - [\(Exam Topic 2\)](#)**

Which two statements about MLD are true? (choose two)

- A. MLD is a subprotocol of ICMPV6
- B. When a single link supports multiple interfaces, only one interface is required to send MLD messages.
- C. MLD is a subprotocol of PIMV6
- D. When a single link supports multiple interfaces, all supported interface are required to send MLD messages.
- E. There are three subtypes of MLD query messages.
- F. The code section in the MLD message is set to 1 by the sender and ignored by receivers.

Answer: A B**Question #:155 - [\(Exam Topic 2\)](#)**

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

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

Answer: E**Question #:156 - [\(Exam Topic 2\)](#)**

Which command can you enter to prevent a router from displaying Telnet connection messages on the terminal?

- A. service telnet-zeroldle
- B. ip telnet hidden hostname
- C. ip telnet hidden address
- D. no ip domain-lookup
- E. ip telnet quiet

Answer: E**Question #:157 - [\(Exam Topic 2\)](#)**

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

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

Answer: A C**Question #:158 - [\(Exam Topic 2\)](#)**

Which neighbor-discovery message type is used to verify connectivity to a neighbor when the link-layer address of the neighbor is known?

- A. neighbor solicitation
- B. neighbor advertisement
- C. router advertisement
- D. router solicitation

Answer: A**Question #:159 - (Exam Topic 2)**

Which two statements about IP source guard are true? (Choose two.)

- A. It must be applied to EtherChannel port members.
- B. It is available only on L2 ports.
- C. It is supported in software only.
- D. It is not supported on private VLANs.
- E. It blocks DHCP packets

Answer: B D**Question #:160 - (Exam Topic 2)**

Refer to the exhibit.

```
!
ip access-list extended list1
deny tcp any any
permit ip any any
!
route-map foo permit 50
match ip address list1
set ip df 0
!
interface GigabitEthernet0/0/0.1000
description *** VLAN 1000 ***
encapsulation dot1Q 1000 native
ip address 10.1.1.3 255.255.255.0
ip policy route-map foo
service-policy input marking
!
```

What happens to a TCP packet that is received on interface GigabitEthernet 0/0/0.100, which has DF bit set to 1, and packet has a valid destination?

- A. The packet is not matched by route-map foo and the DF bit is left as it was
- B. The packet is matched by route-map foo and the DF bit is left as it was

- C. The packet is matched by route-map foo and the DF bit is set to 0
- D. The packet is not matched by route-map foo and the DF bit is set to 0

Answer: A**Question #:161 - [\(Exam Topic 2\)](#)**

Which authentication types does OSPF support?

- A. MD5 and clear text
- B. clear text only
- C. null (or no authentication), clear text, and MD5
- D. MD5 only
- E. null (or no authentication) and clear text

Answer: C**Question #:162 - [\(Exam Topic 2\)](#)**

Which three steps are required to enable SSH access on a Cisco router? (Choose three.)

- A. generating an RSA or DSA cryptographic key
- B. configuring the version of SSH
- C. configuring a domain name
- D. configuring VTY lines for use with SSH
- E. configuring the port for SSH to listen for connections
- F. generating an AES or SHA cryptographic key

Answer: A C D**Question #:163 - [\(Exam Topic 2\)](#)**

Which two statements about Metro Ethernet services are true? (Choose two.)

- A. EPL is a point-to-point service from one customer site to another across an MPLS backbone.
- B. EVPL is a multipoint service that emulates a LAN over an MPLS backbone.

- C. EPLAN is a multipoint service that emulates a LAN over an MPLS backbone.
- D. EVPL is a point-to-point service from one customer site to another across an MPLS backbone.
- E. ELAN is a point-to-point service from one customer site to another across an MPLS backbone.
- F. EVPL is a multipoint service with a root node that is suitable for multicast services.

Answer: A C

Question #:164 - [\(Exam Topic 2\)](#)

On which three options can Cisco PfR base its traffic routing? (Choose three)

- A. Time of day
- B. An access list with permit or deny statements
- C. Load-balancing requirements
- D. Network performance
- E. User-defined link capacity thresholds
- F. Router LOS version

Answer: C D E

Question #:165 - [\(Exam Topic 2\)](#)

Which enhancement does IGMP version 3 offer over IGMP version 2?

- A. support for Source Specific Multicast
- B. a mechanism to decrease leave latency
- C. authentication of multicast streams
- D. backward compatibility with IGMP version 1

Answer: A

Question #:166 - [\(Exam Topic 2\)](#)

Which attribute is not part of the BGP extended community when a PE creates a VPN-IPv4 route while running OSPF between PE-CE?

- A. OSPF domain identifier
- B. OSPF route type
- C. OSPF router ID
- D. MED
- E. OSPF network type

Answer: E

Question #:167 - [\(Exam Topic 2\)](#)

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

- A. It is designed to support many-to-many applications within a PIM domain.
- B. It requires IGMPv3 for source filtering.
- C. It uses (*, G) multicast routing entries to make forwarding decisions.
- D. It can work in conjunction with the ISM service.
- E. It uses the group address range 233.0.0.0-233.255.255.255 by default.

Answer: B D

Question #:168 - [\(Exam Topic 2\)](#)

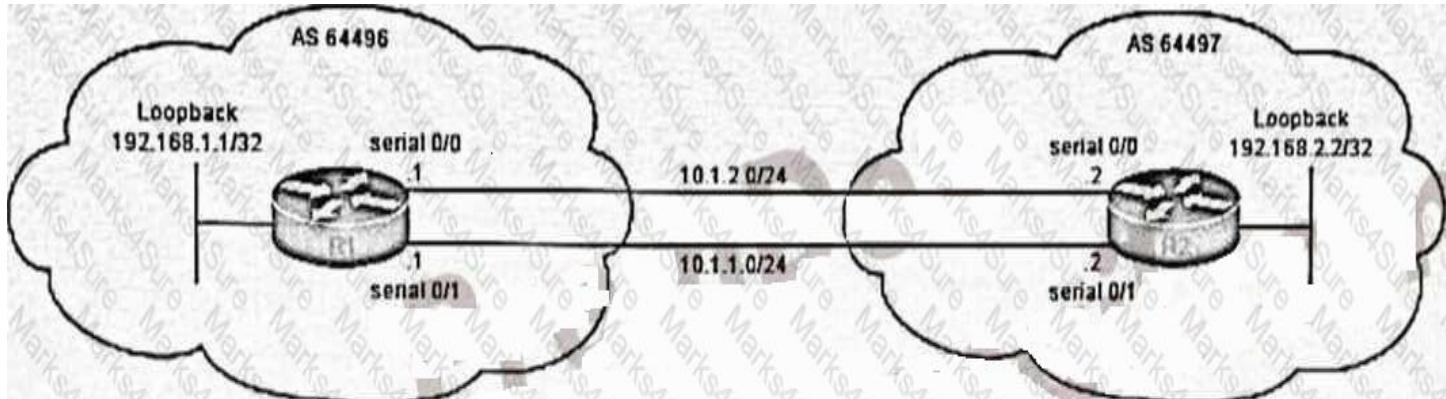
Which two statements about single-hub DMVPN are true? (Choose two.)

- A. Cisco best practices recommend that dynamic spoke-to-spoke tunnel connections use wildcard preshared keys for ISAKMP authentication
- B. DMVPN networks support GRE tunnel keepalives on point-to-point GRE tunnels.
- C. DMVPN networks support GRE tunnel keepalives on multipoint GRE tunnels.
- D. Dynamic spoke-to-spoke tunnel connections support IKE certificates for ISAKMP authentication.
- E. Two spokes that are behind different NAT devices that both use PAT can establish a spoke-to-spoke connection.
- F. Each DMVPN spoke requires a unique IP address after NAT translation.

Answer: C D

Question #:169 - [\(Exam Topic 2\)](#)

Refer to the exhibit.



R1

```

interface loopback0
 ip address 192.168.1.1 255.255.255.255

router bgp 64512
 neighbor 192.168.2.2 remote-as 64513
 neighbor 192.168.2.2 ebgp-multihop
 neighbor 192.168.2.2 update-source loopback0
 network 192.168.100.0

ip route 192.168.2.2 255.255.255.255 serial10/0
ip route 192.168.2.2 255.255.255.255 serial10/1
  
```

R2

```

interface loopback0
 ip address 192.168.2.2 255.255.255.255

router bgp 64513
 neighbor 192.168.1.1 remote-as 64512
 neighbor 192.168.1.1 ebgp-multihop
 neighbor 192.168.1.1 update-source loopback0
 network 192.168.101.0

ip route 192.168.1.1 255.255.255.255 serial0/0
ip route 192.168.1.1 255.255.255.255 serial0/1
  
```

Which two options are two benefits of this configuration?

- A. increased security
- B. redundancy
- C. reduced jitter
- D. reduced latency
- E. load sharing

Answer: B E

Question #:170 - [\(Exam Topic 2\)](#)

Refer to the exhibit.

```
ip as-path access-list 1 permit ^64496_(0-9)* $
```

Which AS paths are matched by this access list?

- A. the origin AS 64496 only
- B. the origin AS 64496 and any ASs after AS 64496
- C. the directly attached AS 64496 and any ASs directly attached to AS 64496
- D. the directly attached AS 64496 and any longer AS paths

Answer: C

Question #:171 - [\(Exam Topic 2\)](#)

Which technology does Cisco PfR use to collect passive monitoring statistics?

- A. NBAR
- B. SNMP
- C. Syslog
- D. NetFlow

Answer: D

Question #:172 - [\(Exam Topic 2\)](#)

Which IPv6 tunneling mechanism requires a service provider to use one of its own native IPv6 blocks to guarantee that its IPv6 hosts will be reachable?

- A. 6rd tunneling
- B. automatic 6to4 tunneling
- C. NAT-PT tunneling
- D. ISA TAP tunneling
- E. manual ipv6ip tunneling
- F. automatic 4to6 tunneling

Answer: A

Question #:173 - [\(Exam Topic 2\)](#)

Refer to the exhibit.



Between which routers is an LDP session established?

- A. R1 and R3
- B. R1, R2 and R3
- C. R2 and R3
- D. R1 and R2

Answer: D

Question #:174 - [\(Exam Topic 2\)](#)

Which type of ACL can be applied only to Layer 2 ports?

- A. port ACLs
- B. reflexive ACLs
- C. reflexive ACLs
- D. dynamic ACLs
- E. VLAN ACLs

Answer: A

Question #:175 - [\(Exam Topic 2\)](#)

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

- A. The average of the component metrics
- B. A default fixed value

- C. The lowest metric among the component routes
- D. The highest metric among the component routes

Answer: C**Question #:176 - [\(Exam Topic 2\)](#)**

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

- A. In IPv6, hosts perform fragmentation.
- B. IPv6 uses a UDP checksum to verify packet integrity.
- 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.

Answer: A B**Question #:177 - [\(Exam Topic 2\)](#)**

Which options is the implicit access rule for IPV6 ACLs?

- A. permit all
- B. permit neighbor discovery, deny everything else
- C. deny all
- D. permit all ICMP, deny everything else

Answer: B**Question #:178 - [\(Exam Topic 2\)](#)**

You are backing up a server with a 1 Gbps link and a latency of a 2 ms. Which two statements about the are true?(Choose two)

- A. The bandwidth delay product is 2 Mb.
- B. The default TCP send window size is the limiting factor
- C. The default TCP receive window size is the limiting factor
- D. The bandwidth delay product is 50 Mb.

- D. The bandwidth delay product is 500 Mb.

Answer: A C

Question #:179 - (Exam Topic 2)

Refer to the following.

R1#sh ip eigrp top all

IP-EIGRP Topology Table for AS (192.168.13.1)

Codes: P - Passive, A - Active, U - Update, Q- Query, R - Reply,

r - reply Status, s - sia Status

P 10.0.0.0/8, 1 successors, FD is 3586560, serno 8

via 192.168.1.5 (3586560/3074560), Serial0/0

P 192.168.100.0/24, 2 successors, FD is 409600, serno 5

via 192.168.13.3 (409600/128256), FastEthernet0/1

via 192.168.12.3 (435200/409600), FastEthernet0/0

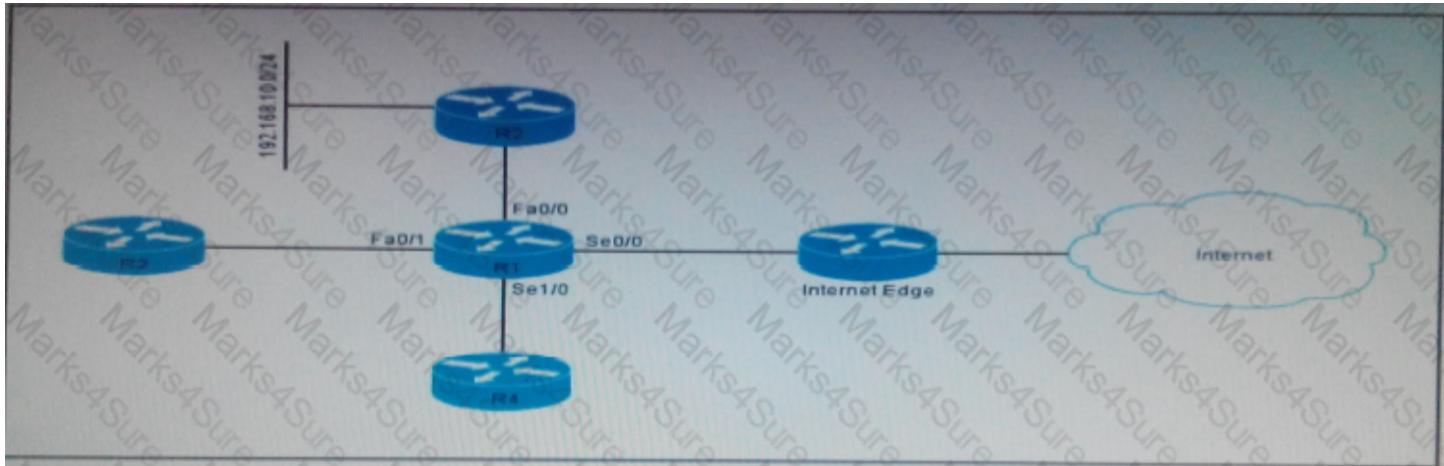
Which statement about the 192 168.100 0/24 destination network is true?

- A. The Reported Distance for the Successor is 128256.
- B. The Reported Distance for the Feasible Successor is 409600.
- C. The metric installed into the route table is 128256.
- D. The metric installed into the route table is 435200.

Answer: A

Question #:180 - (Exam Topic 2)

Refer to the exhibit.



If R1 uses EIGRP to learn router 192.168.10.0/24 from R2, which interface on R1 uses split horizon for router 192.168.10.0/24?

- A. Se0/0
- B. Fa0/0
- C. Se1/0
- D. Fa0/1

Answer: B

Question #181 - [\(Exam Topic 2\)](#)

How does MSTP maintain compatibility with RSTP?

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

Answer: C

Question #182 - [\(Exam Topic 2\)](#)

Which three actions are required when configuring NAT-PT? (Choose three.)

- A. Enable NAT-PT globally.
- B. Specify all IPv4-to-IPv6 translation

- C. Specify an IPv6-to-IPv4 translation
- D. Specify a ::/96 prefix that will map to an IPv4 address.
- E. Specify a ::/48 prefix that will map to a MAC address.
- F. Specify a ::/32 prefix that will map to an IPv6 address.

Answer: B C D

Question #:183 - (Exam Topic 2)

Refer to the exhibit.



You are configuration the S1 switch for the switch port that connects to the client computer.

Which configuration blocks users on the port from using more than 6 Mbps of traffic and marks the traffic for a class of service of 1 ?

- A. Class-map match-all cos1

Match any

policy-map cos1

Class cos1

Set cos1

Police cir 6000000 bc 1125000 be 2250000 confirm-action

Set-dscp-transmit cs1 exceed-action drop

Violate-action drop

- B. Class-map match-any cos1

Match any

policy-map cos1

Class cos1

Set cos1

Police cir 6000000 bc 1125000 be 2250000 confirm-action

Set-dscp-transmit cs1 exceed-action drop

Violate-action drop

C. Class-map match-all cos1

Match any

policy-map cos1Class cos1

Set cos1

Policy cir 6000000 conform-action set-dscp-transmit cs1

Set-dscp-transmit cs1 exceed-action drop

Violate-action drop

D. Class-map match-all cos1

Match any

policy-map cos1

Class cos1

Set cos1

Policy cir 6000000 conform-action transmit exceed-action

Set-dscp-transmit cs1 exceed-action drop

Violate-action drop

Answer: A

Question #:184 - [\(Exam Topic 2\)](#)

What are three core features of GET VPN? (Choose three.)

- A. cooperative key servers
- B. the rekey mechanism

- C. AES
- D. time-based anti-replay
- E. MPLS
- F. partial mesh

Answer: A B D**Question #:185 - [\(Exam Topic 2\)](#)**

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

- A. IS-IS can be used only in the service provider network.
- B. IS-IS can be used to route both IP and CLNP.
- C. IS-IS has three different levels of authentication: interface level, process level, and domain level.
- D. IS-IS is an IETF standard.
- E. IS-IS has the capability to provide address summarization between areas.

Answer: B C D**Question #:186 - [\(Exam Topic 2\)](#)**

Which is the requirement for BFD static route support?

- A. CEF must be configured on all routers that will carry traffic.
- B. BFD must be configured on all Ethernet, virtual-template, and dialer interfaces that will carry traffic.
- C. All routers that will carry traffic must have the same software version.
- D. All routers that will carry traffic must be the same model.

Answer: A**Question #:187 - [\(Exam Topic 2\)](#)**

What are the minimum requirements for Cisco PfR to provide routing control?

- A. one master controller, two border routers, two internal interfaces, and two external interfaces.
- B. one master controller, one border router, one internal interface, and two external interfaces.

- C. one master controller, two border router, one internal interface, and one external interface.
- D. one master controller, one border router, two internal interfaces, and one external interface.
- E. two master controllers, one border router, one internal interface, and one external interface.

Answer: B**Question #:188 - [\(Exam Topic 2\)](#)**

You are configuring Cos-to-DSCP mappings with three requirements

- * COS 1 must be translated into AP13
- * COS 2 must be translated into AF22
- * COS 5 must be translated into EF

Which configuration command can you use to implement the requirements?

- A. Mls qos map cos-dscp 0 14 20 24 32 46 48 56
- B. Mls qos map cos-dscp 0 12 18 24 32 46 48 56
- C. Mls qos map cos-dscp 0 12 18 24 32 40 48 56
- D. Mls qos map cos-dscp 0 12 18 24 32 46 48 56

Answer: A**Question #:189 - [\(Exam Topic 2\)](#)**

Which IS-IS process is responsible for flooding local link information to adjacent routers?

- A. decision
- B. receive
- C. forward
- D. update

Answer: D**Question #:190 - [\(Exam Topic 2\)](#)**

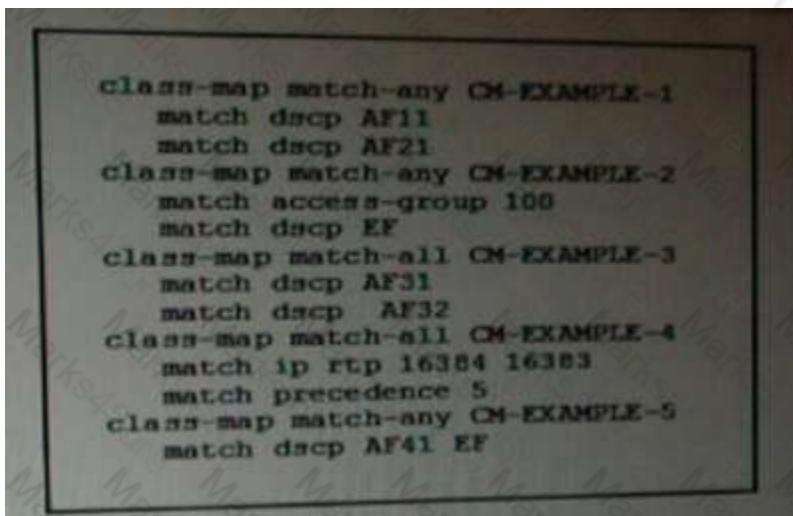
Which three statements about the route preference of IS-IS are true? (Choose three.)

- A. An L1 path is preferred over an L2 path.
- B. An L2 path is preferred over an L1 path.
- C. Within each level, a path that supports optional metrics is preferred over a path that supports only the default metric.
- D. Within each level of metric support, the path with the lowest metric is preferred.
- E. The Cisco IS-IS implementation usually performs equal cost path load balancing on up to eight paths.
- F. Both L1 and L2 routes will be installed in the routing table at the same time.

Answer: A C D

Question #:191 - [\(Exam Topic 2\)](#)

Refer to the exhibit.



```
class-map match-any CM-EXAMPLE-1
  match dscp AF11
  match dscp AF21
class-map match-any CM-EXAMPLE-2
  match access-group 100
  match dscp EF
class-map match-all CM-EXAMPLE-3
  match dscp AF31
  match dscp AF32
class-map match-all CM-EXAMPLE-4
  match ip rtp 16384 16383
  match precedence 5
class-map match-any CM-EXAMPLE-5
  match dscp AF41 EF
```

If you apply this configuration to a device on your network, which class map cannot match traffic?

- A. CM-EXAMPLE-1
- B. CM-EXAMPLE-2
- C. CM-EXAMPLE-3
- D. CM-EXAMPLE-4
- E. CM-EXAMPLE-5

Answer: C

Question #:192 - [\(Exam Topic 2\)](#)

Refer to the Exhibit.

Entry1: AS (PATH) 400 , med 150, external , rid 2.2.2.2

Entry2: AS (PATH) 100 , med 200, external , rid 1.1.1.1

Entry3: AS (PATH) 400. med 100. external . rid 3.3.3.3

With BGP always-compare enabled, which BGP entry is installed in the RIB?

- A. Entry 3 because it has the lowest MED.
- B. Entry 1 because it has the best MED of the external routes.
- C. Entry 1 because it was installed first (oldest_ in the BGP table).
- D. Entry 2 because it has the lowest router ID.

Answer: A**Question #:193 - [\(Exam Topic 2\)](#)**

Which two discovery mechanism does LDP support? (choose two)

- A. strict
- B. extended
- C. loose
- D. targeted
- E. basic

Answer: B E**Question #:194 - [\(Exam Topic 2\)](#)**

Which feature monitors network events and takes automated action based on scripts configured by the administrator?

- A. EPC
- B. EEM
- C. Performance Monitor

D. NetFlow

Answer: B

Question #:195 - (Exam Topic 2)

Refer to the exhibit.

```
R1#show mpls l2transport vc 100 detail
Local interface: Fa2/6 up, line protocol up, Ethernet up
  Destination address: 2.2.2.3, VC ID: 100, VC status: up
    Preferred path: Tunnel1, active
    Default path: ready
    Tunnel label: 12307, next hop point2point
    Output interface: Tul, 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 1
      MTU: local 1500, remote 1500
      Remote interface description:
      Sequencing: receive disabled, send disabled
      VC statistics:
        packet totals: receive 1, send 6
        byte totals: receive 368, send 0
        packet drops: receive 0, send 0
```

Which statement is true?

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

Answer: D

Question #:196 - (Exam Topic 2)

Which statement about Cisco Express Forwarding are true?

- A. The FIB table resides on the route processor and the adjacency table resides on the line cards when Cisco Express Forwarding is enabled.

- B. The FIB table and the adjacency table reside on the line cards when Cisco Express Forwarding is enabled.
- C. Layer 2 next-hop address information is maintained in the adjacency table.
- D. Layer 2 next-hop address information is maintained in the FIB table.

Answer: C

Question #:197 - [\(Exam Topic 2\)](#)

Which feature can you implement to reduce global synchronization?

- A. policing
- B. WRED
- C. NBAR
- D. marking

Answer: B

Question #:198 - [\(Exam Topic 2\)](#)

How many address families can a single OSPFv3 instance support?

- A. 1
- B. 2
- C. 5
- D. 10

Answer: A

Question #:199 - [\(Exam Topic 2\)](#)

Which routing protocol is used on PE routers to exchange VPNv4 routes?

- A. EIGRP
- B. MP-BGP
- C. OSPF
- D. OSPFv3

Answer: B**Question #:200 - (Exam Topic 2)**

Refer to the exhibit.

```
RP1#show ipv6 mroute
Multicast Routing Table
Flags: D - Dense, S - Sparse, B - Bidir Group, s - SSM Group,
       C - Connected, L - Local, I - Received Source Specific Host Report,
       P - Pruned, R - RP-bit set, F - Register flag, T - SPT-bit set,
       J - Join SPT
Timers: Uptime/Expires
Interface state: Interface, State
(*, FF7E:200:2A02:B111:FC02:1:11FF:11EE), 00:00:35/never, RP
2A02:B111:FC02:1::1, flags: SCLJ
  Incoming interface: Null
  RPF nbr: ::

  Immediate Outgoing interface list:
    Ethernet2/0, Forward, 00:00:35/never
```

Which statement is true?

- A. The output shows an IPv6 multicast address with link-local scope.
- B. The output shows an IPv6 multicast address that is used for unique local sources only.
- C. The output shows an IPv6 multicast address that can be used for BIDIR-PIM only.
- D. The output shows an IPv6 multicast address with embedded RP.

Answer: D

Topic 3, Exam Set C

Question #:201 - [\(Exam Topic 3\)](#)

Refer to the following.

Interface fastethernet 0/0

Ip address 10.1.1.1 255.255.255.0

Ip ospf authentication message-digest

Ip ospf network point-to-point

Ip ospf priority 2

Ip ospf area 1

Which change must you make to this configuration to enable the router to participate in a DR election?

- A. Configure the interface to be in area 0
- B. Increase the OSPF priority for the interface
- C. Remove authentication
- D. Change the OSPF network type

Answer: D

Question #:202 - [\(Exam Topic 3\)](#)

Which two statements about BGP PIC are true? (Choose two)

- A. PIC Core supports fast convergence with external neighbor links.
- B. It is prefix-dependent for Internet routes
- C. When the path to a distant PE router changes, PIC is independent of the number of VRFs on the router.
- D. It achieves subsecond convergence in the BGP FIB
- E. PIC Edge provides fast convergence when an external neighbor node fails.

Answer: A D

Question #:203 - [\(Exam Topic 3\)](#)

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

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

Answer: C E F

Question #:204 - [\(Exam Topic 3\)](#)

Which command can you enter on an interface so that the interface will notify the sender of a packet that the packet that the path is sub-optimal?

- A. ip nhrp record
- B. ip nhrp set-unique-bit
- C. ip nhrp shortcut
- D. ip nhrp redirect
- E. ip nhrp cost 65535

Answer: D

Question #:205 - [\(Exam Topic 3\)](#)

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

- A. When BGP traffic is redistributed into OSPF, the metric is set to 1 unless the metric is defined.
- B. When EIGRP routes on a CE are redistributed through a PE into BGP, the Cost Community POI is set automatically.
- C. When OSPF traffic is redistributed into BGP, internal and external routes are redistributed.
- 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 traffic is redistributed into BGP, a default metric is required.

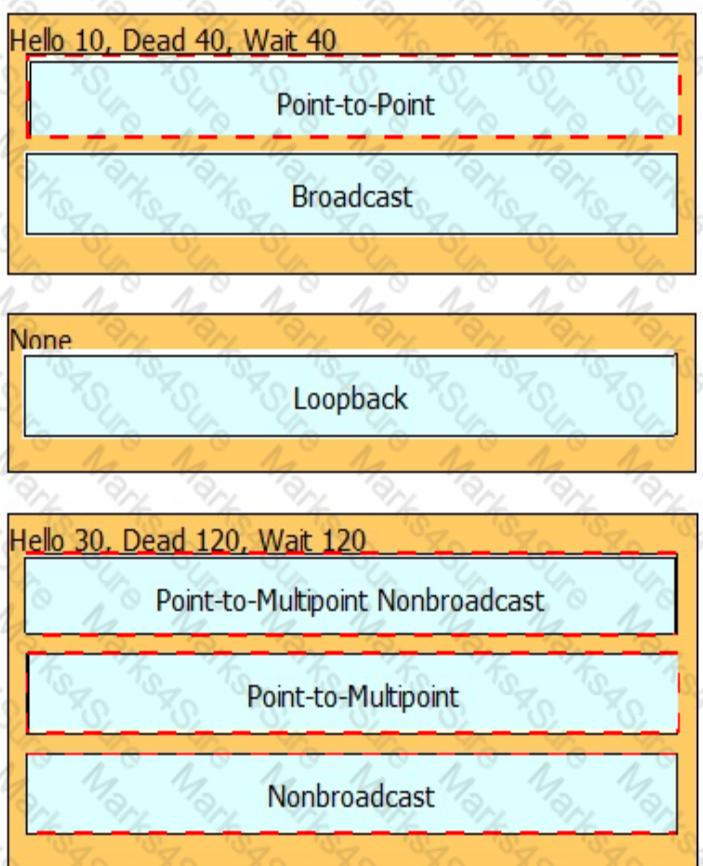
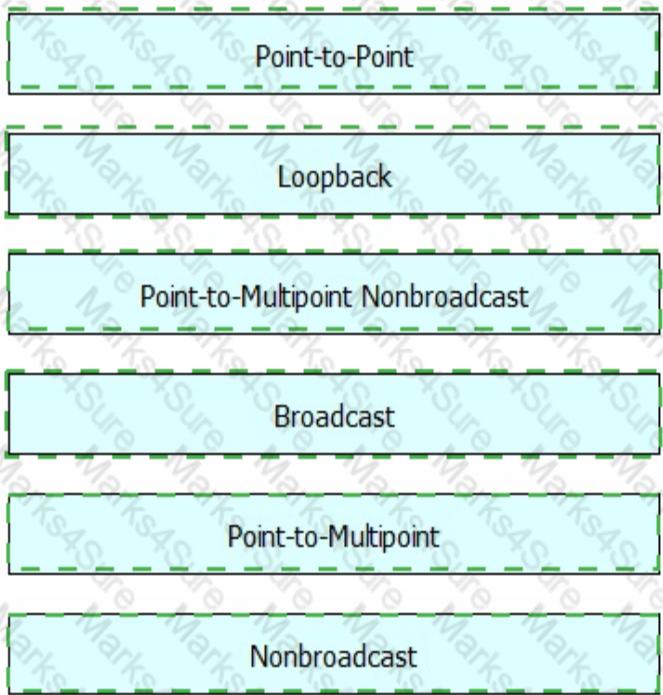
Answer: A B**Question #:**206 - [\(Exam Topic 3\)](#)

Drag and drop the OSPF network type on the left to the correct category of timers on the right.

- Point-to-Point
- Loopback
- Point-to-Multipoint Nonbroadcast
- Broadcast
- Point-to-Multipoint
- Nonbroadcast

- Hello 10, Dead 40, Wait 40**
 - 1
 - 2
- None**
 - 1
- Hello 30, Dead 120, Wait 120**
 - 1
 - 2
 - 3

Answer:



Explanation

Hello 10, Dead 40, Wait 40

Point-to-Point

Broadcast

None

Loopback

Hello 30, Dead 120, Wait 120

Point-to-Multipoint Nonbroadcast

Point-to-Multipoint

Nonbroadcast

Question #:207 - [\(Exam Topic 3\)](#)

Which feature can be used to allow hosts with routes in the global routing table to access hosts in a VRF?

- A. address families
- B. extended communities
- C. route target communities
- D. route leaking

Answer: D

Question #:208 - [\(Exam Topic 3\)](#)

Which three session tables does NA T64 maintain? (Choose three)

- A. 6rd
- B. TCP
- C. 464XLAT

- D. ICMP Query
- E. SIP
- F. UDP

Answer: B D F**Question #:209 - [\(Exam Topic 3\)](#)**

Which interior gateway protocol is based on open standards uses a shortest-path first algorithm, provides native protocols, and operates at the data link layer?

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

Answer: A**Question #:210 - [\(Exam Topic 3\)](#)**

When you implement PFR, which IP SLA probe is used to determine the MOS?

- A. jitter
- B. latency
- C. packet loss
- D. throughput

Answer: A**Question #:211 - [\(Exam Topic 3\)](#)**

Which command address learning oil the configures port security on a switch to enable permanent MAC interface?

- A. switchport port-security mac-address-learning enable
- B. switchport port-security mac-address timer 0
- C. switchport port-security mac-address sticky

- D. switchport port-security mac-address maximum 1 sticky
- E. switchport port-security mac-address permanent

Answer: C**Question #:212 - [\(Exam Topic 3\)](#)**

Which two statements are correct about route redistribution? (Choose two)

- A. Redistributing the entire BGP table from the Internet works well when using multiple OSPF areas.
- B. iBGP is used within the AS to carry eBGP attributes that otherwise would be lost if eBGP was redistributed into IGP.
- C. The unequal cost multipath load-balancing characteristic is lost when redistributing OSPF into EIGRP.
- D. IS-LS does not support Layer 2 routes leaking into a Layer 1 domain.
- E. Mutual redistribution at multiple points can create a routing loop.

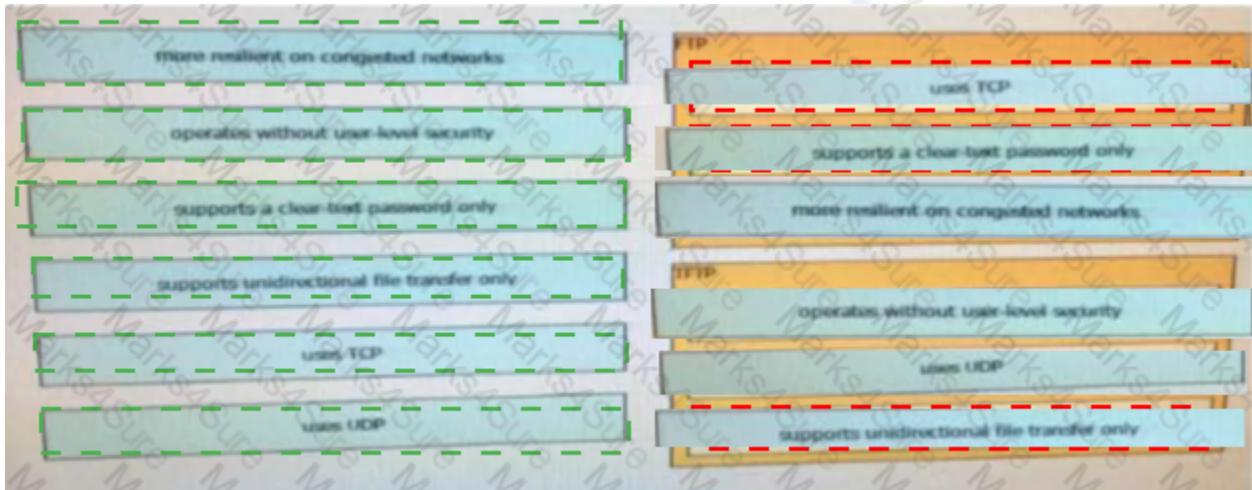
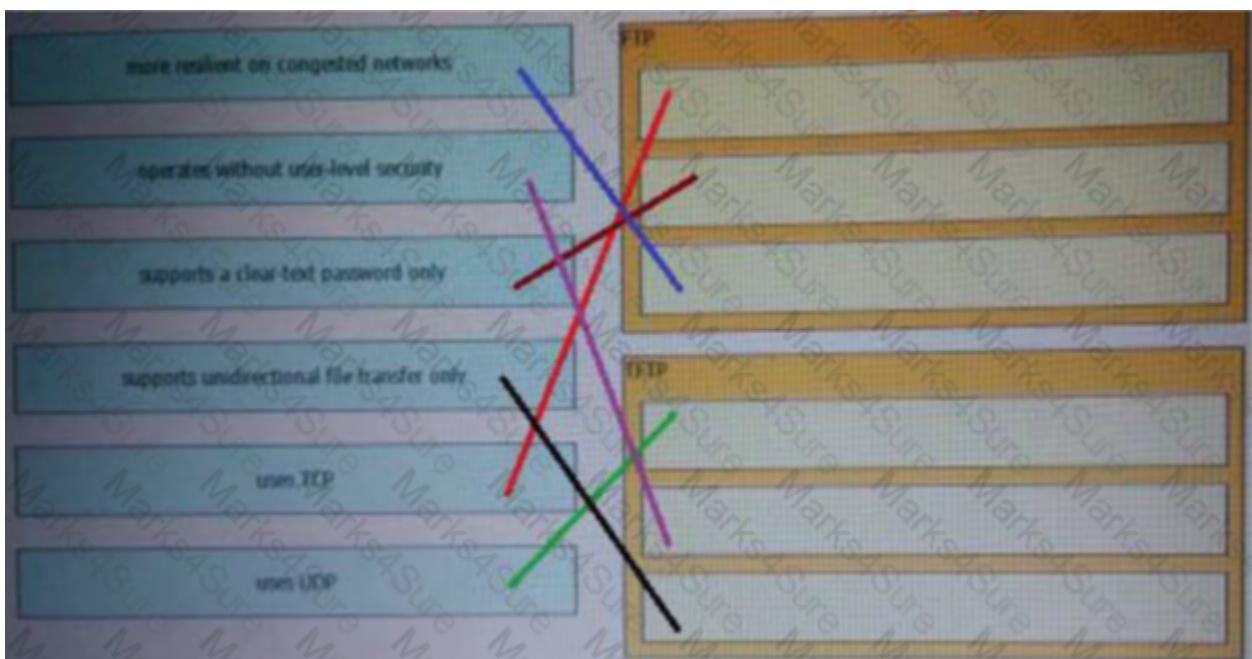
Answer: B E**Question #:213 - [\(Exam Topic 3\)](#)**

A host on an Ethernet segment has a different subnet mask than the default gateway. What can be done to allow it to communicate with devices outside of this subnet?

- A. Configure a static route for the host on the default gateway.
- B. Configure a static ARP entry on the default gateway for the host IP address.
- C. Enable gratuitous ARP on the host.
- D. Enable proxy ARP on the default gateway.

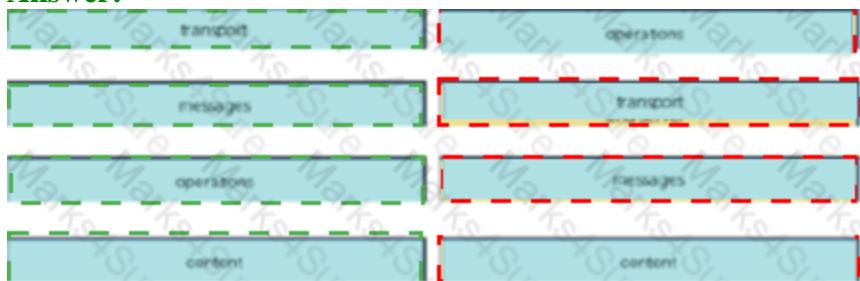
Answer: A**Question #:214 - [\(Exam Topic 3\)](#)**

Drag each statement about file-transfer protocols on the left to the matching file-transfer technology on the right.

**Answer:****Explanation**

Question #:215 - [\(Exam Topic 3\)](#)

Drag and drop the NETCONF layers on the left onto their appropriate description on the left.

**Answer:****Explanation****Question #:**216 - [\(Exam Topic 3\)](#)

Refer to the exhibit.

```
ip prefix-list ccie1 seq 5 permit 172.16.0.0/17 le 24
ip prefix-list ccie2 seq 5 permit 172.16.128.0/17 le 24
ip prefix-list ccie3 seq 5 permit 172.17.128.0/17 le 24

route-map ccie permit 10
  match ip address prefix-list ccie1
  set tag 10
route-map ccie permit 20
  match ip address prefix-list ccie2
  set tag 20
route-map ccie permit 30
  match ip address prefix-list ccie3
  set tag 30
route-map ccie permit 40
  set tag 40
```

Which tag will be applied to the 172.16.50.0/24 route?

- A. 10
- B. 20
- C. 30
- D. 40

Answer: A

Question #:217 - [\(Exam Topic 3\)](#)

An engineer is troubleshooting why a MAC address was not listed in the MAC table and discovers that the VLAN was enabled only on the interface that data is coming in on. Which change fixes this problem?

- A. Enable outgoing interfaces.
- B. Disable sticky MAC on the access switch.
- C. Remove loop detection on interfaces.
- D. Flush the MAC address table.

Answer: A

Question #:218 - [\(Exam Topic 3\)](#)

Drag and drop each EIGRP packet type from the left onto the matching description on the right

hello

a packet that establishes and maintains neighbor adjacencies

query

a packet that is sent to inform neighbors of the presence of a feasible successor

reply

a packet that is sent to neighbors following the loss of a feasible successor

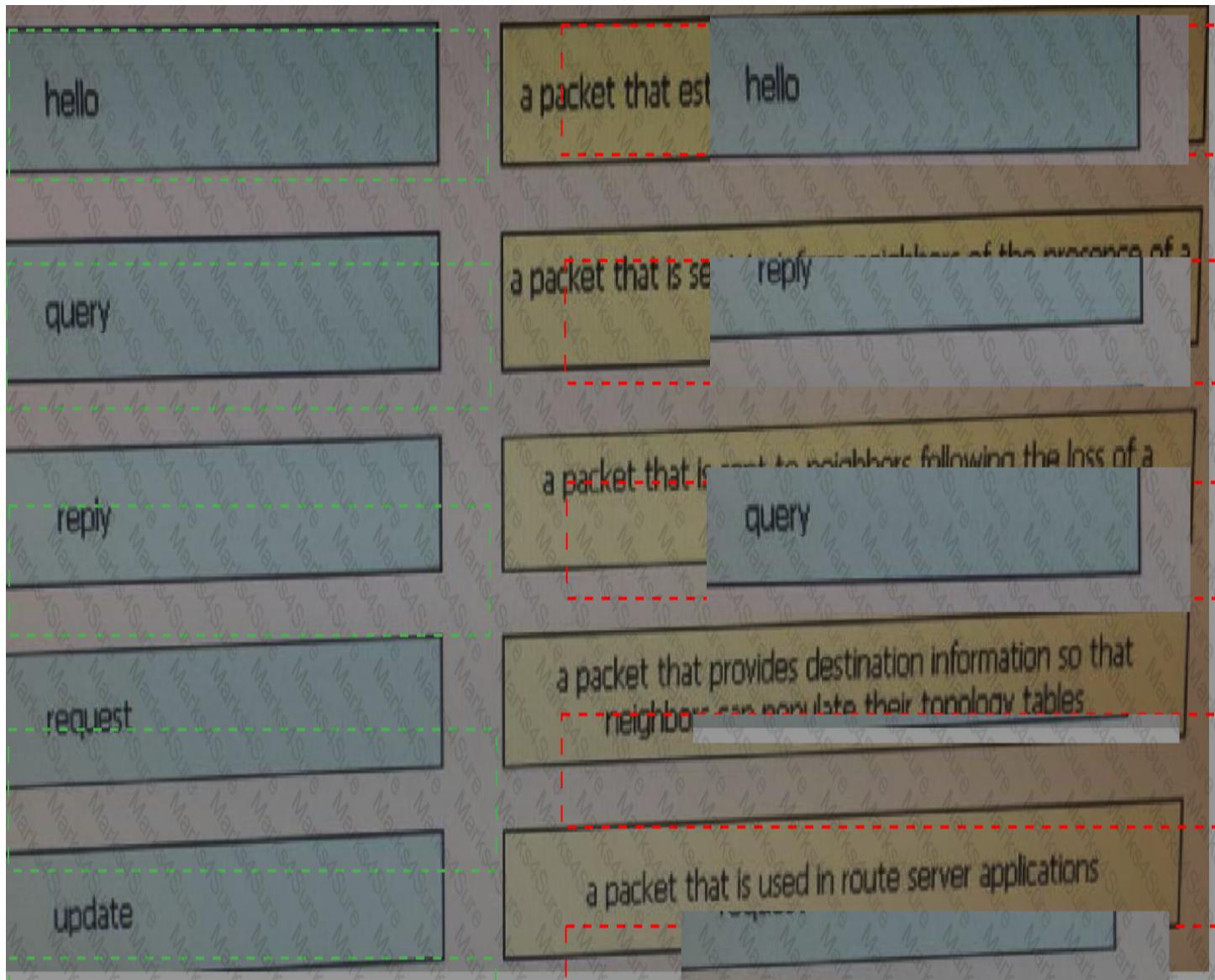
request

a packet that provides destination information so that neighbors can populate their topology tables

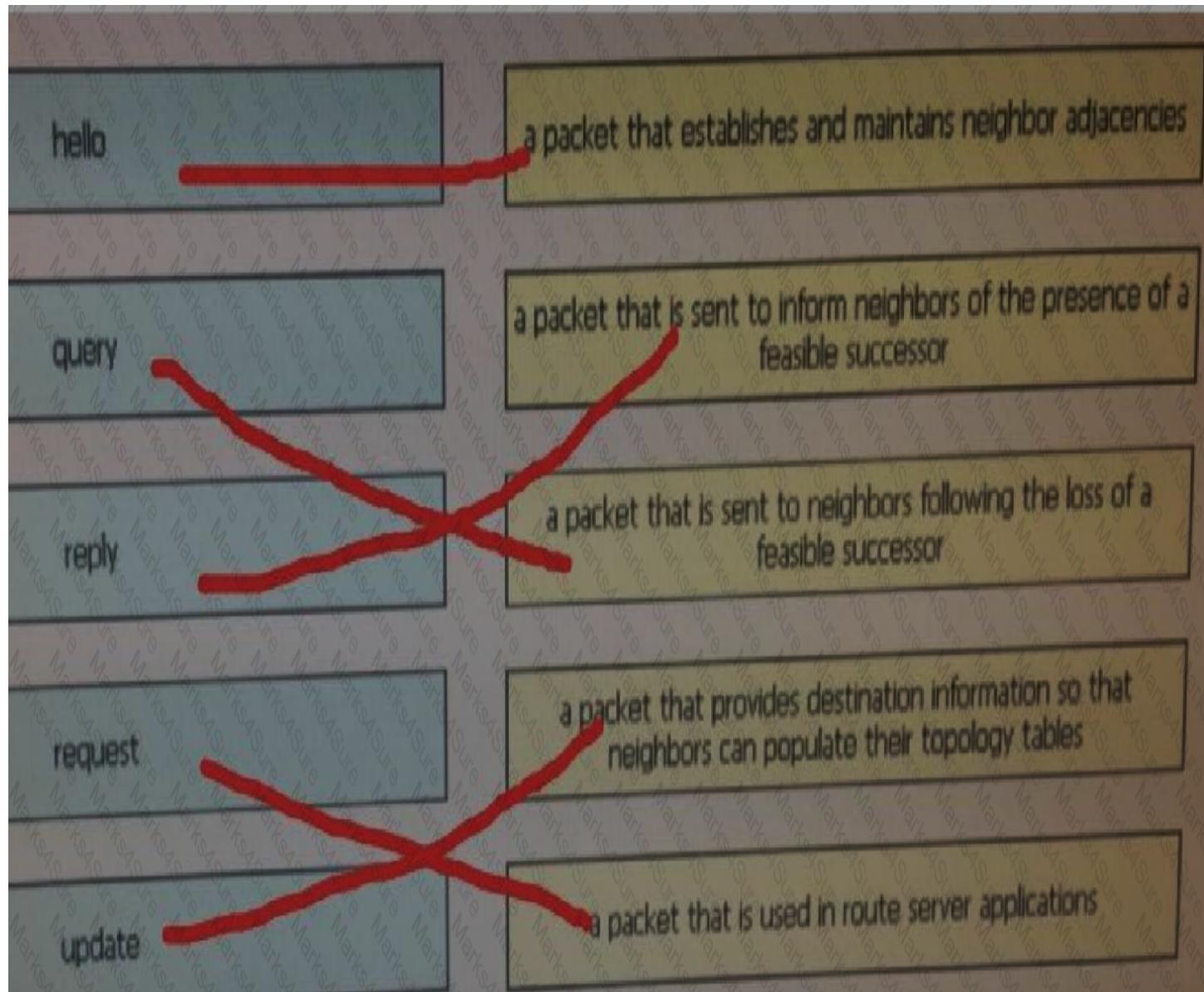
update

a packet that is used in route server applications

Answer:



Explanation

**Question #:219 - [\(Exam Topic 3\)](#)**

Which two operating modes does VPLS support? (Choose two.)

- A. transport mode
- B. strict mode
- C. port mode
- D. loose mode
- E. VLAN mode
- F. dynamic mode

Answer: C E**Question #:220 - [\(Exam Topic 3\)](#)**

Which three pieces of information are carried on OSPF type-3 LSAs? (Choose three)

- A. metric
- B. authentication type
- C. link state
- D. IP subnet
- E. external route tag
- F. subnet mask

Answer: A C F**Question #:221 - [\(Exam Topic 3\)](#)**

Drag each OSPFv2 SA parameter on the left to its corresponding description on the right.

Click and drag the command on the left to the associated task on the right.	
Authentication Algorithm	An 8-bit unsigned value that controls which SA the receiver
Authentication Key	The time at which the OSPF router will begin using the SA to encrypt packets.
Key ID	The time at which the OSPF router will stop processing packets from the SA.
Key Start Accept	A secret value used when encrypting packets.
Key Start Generate	The time at which the OSPF router will stop using the SA to encrypt packets.
Key Stop Accept	A value that controls the cryptographic mode.
Key Stop Generator	The time at which the OSPF router will begin processing packets from the SA.

Answer:



Explanation

KeyID

Key Start Generate

Key Stop Accept

Authentication Key

Key stop Generate

Authentication Algorithm

Key Start Accept

Question #:222 - [\(Exam Topic 3\)](#)

Which three modes are valid for forming an EtherChannel between the ports of two switches? (Choose three.)

- A. auto/auto
- B. desirable/on
- C. active/passive
- D. auto/desirable
- E. passive/passive

F. active/active

Answer: C D E

Question #:223 - [\(Exam Topic 3\)](#)

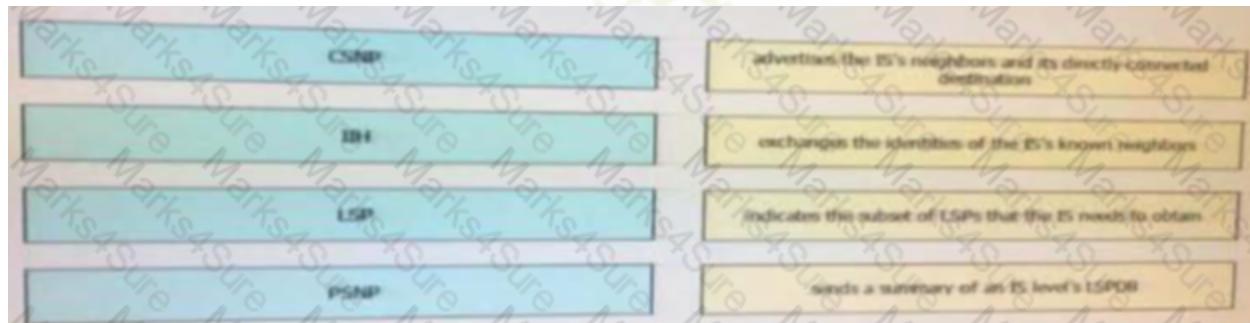
Which two statements about AAA authentication are true? (Choose two)

- A. RADIUS authentication queries the router's local username database.
- B. TACACS+ authentication uses an RSA server to authenticate users.
- C. Local usernames are case-insensitive.
- D. Local authentication is maintained on the router.
- E. KRB5 authentication disables user access when an incorrect password is entered.

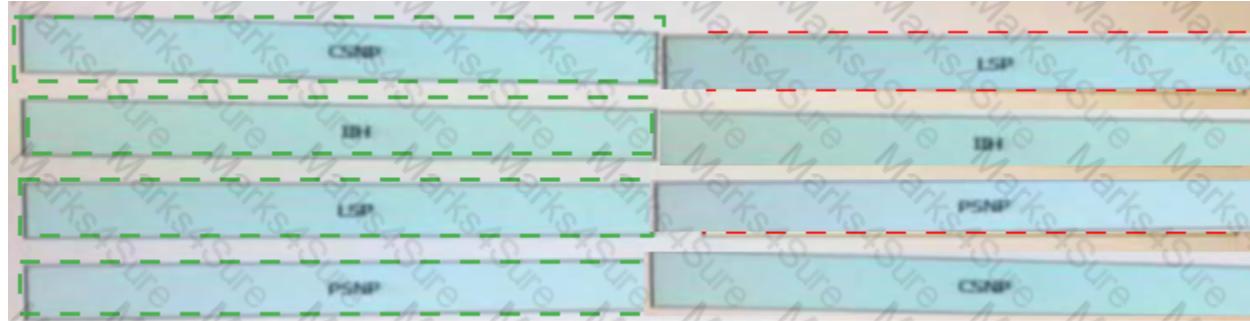
Answer: D E

Question #:224 - [\(Exam Topic 3\)](#)

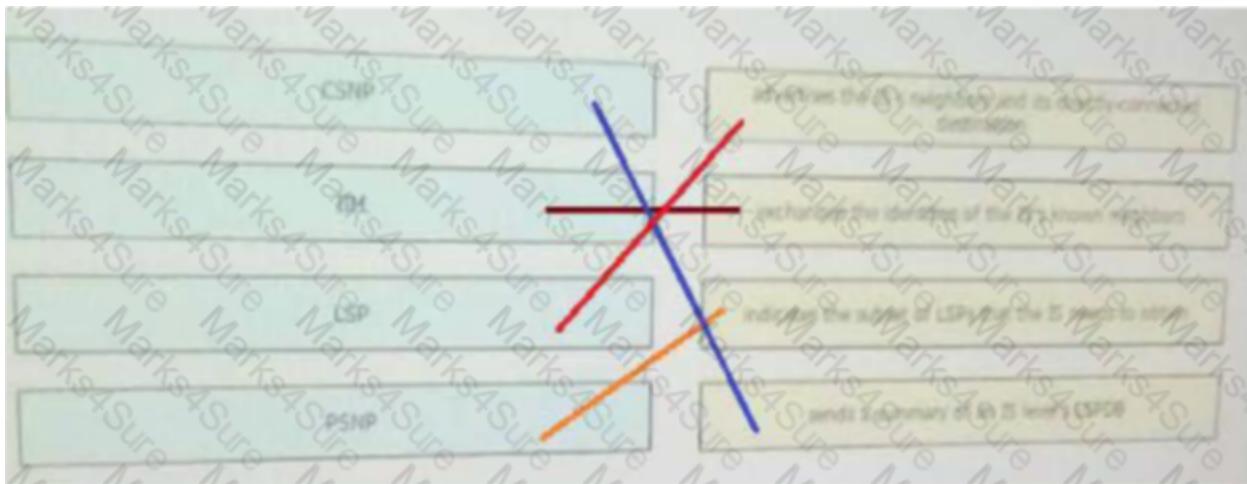
Drag and drop each IS-IS PDU type from the left onto its purpose on the right.



Answer:



Explanation

**Question #:**225 - [\(Exam Topic 3\)](#)

Drag and drop each statement about EtherChannel protocols on the left to the matching EtherChannel protocol on the right.

- A Cisco Proprietary protocol.
- Supports 8 ports in a port group, with all active.
- Supports auto and desirable configuration modes.
- Supported by the IEEE 802.3ad protocol.
- Supports 16 ports in a port group, with 8 active.
- Supports active and passive configuration modes.

- | | |
|-------------|---|
| PAgP | 1 |
| | 2 |
| | 3 |
| LACP | 1 |
| | 2 |
| | 3 |

Answer:

A Cisco Proprietary protocol.

Supports 8 ports in a port group, with all active.

Supports auto and desirable configuration modes.

Supported by the IEEE 802.3ad protocol.

Supports 16 ports in a port group, with 8 active.

Supports active and passive configuration modes.

PAgP

A Cisco Proprietary protocol.

Supported by the IEEE 802.3ad protocol.

Supports 8 ports in a port group, with all active.

LACP

Supports auto and desirable configuration modes.

Supports 16 ports in a port group, with 8 active.

Supports active and passive configuration modes.

Explanation

PAgP

A Cisco Proprietary protocol.

Supported by the IEEE 802.3ad protocol.

Supports 8 ports in a port group, with all active.

LACP

Supports auto and desirable configuration modes.

Supports 16 ports in a port group, with 8 active.

Supports active and passive configuration modes.

Question #:226 - [\(Exam Topic 3\)](#)

Which metric vectors are stored but are not used by default in EIGRP?

- A. reliability and delay
- B. bandwidth and delay
- C. load and reliability
- D. load and bandwidth

Answer: C**Question #:227 - [\(Exam Topic 3\)](#)**

Refer to the exhibit.

```
wrr-queue cos-map 1 2 3 4
```

Which two statements about this CoS mapping are true? (Choose two)

- A. It maps the second queue and first threshold to CoS 2.
- B. It maps the first queue and first threshold to CoS 2 and CoS 3.
- C. It maps CoS values to the transmit queue threshold
- D. It maps the second threshold to CoS 2 and CoS 3.
- E. It maps the second queue and first threshold to CoS 3.

Answer: C D

Question #:228 - [\(Exam Topic 3\)](#)

Drag and drop each statement about EtherChannel protocols on the left to the matching EtherChannel protocol on the right.

A Cisco Proprietary protocol.

Supports 8 ports in a port group, with all active.

Supports auto and desirable configuration modes.

Supported by the IEEE 802.3ad protocol.

Supports 16 ports in a port group, with 8 active.

Supports active and passive configuration modes.

PAgP

1

2

3

LACP

1

2

3

Answer:

A Cisco Proprietary protocol.

Supports 8 ports in a port group, with all active.

Supports auto and desirable configuration modes.

Supported by the IEEE 802.3ad protocol.

Supports 16 ports in a port group, with 8 active.

Supports active and passive configuration modes.

PAgP

A Cisco Proprietary protocol.

Supported by the IEEE 802.3ad protocol.

Supports 8 ports in a port group, with all active.

LACP

Supports auto and desirable configuration modes.

Supports 16 ports in a port group, with 8 active.

Supports active and passive configuration modes.

Explanation

PAgP

A Cisco Proprietary protocol.

Supported by the IEEE 802.3ad protocol.

Supports 8 ports in a port group, with all active.

LACP

Supports auto and desirable configuration modes.

Supports 16 ports in a port group, with 8 active.

Supports active and passive configuration modes.

Question #:229 - [\(Exam Topic 3\)](#)

Refer to the exhibit.

```
mls qos map cos-dscp 0 0 16 24 40 32 46 48
```

When traffic marked as CoS 5 arrives on the switch, what DSCP value does the switch apply?

- A. 0
- B. 32
- C. 40
- D. 46

E. 48

Answer: B

Question #:230 - [\(Exam Topic 3\)](#)

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

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

Answer: C E F

Question #:231 - [\(Exam Topic 3\)](#)

Refer to the exhibit.

```
interface GigabitEthernet0/0
description *** Site Backbone ***
ip address 10.1.114.5 255.255.255.248
service-policy input marking
!
policy-map marking
class in-voice
class in-streaming
  set ip dscp af41
class in-time-sensitive
  set ip dscp af31
class class-default
  set ip dscp af21
!
class-map match-any in-streaming
  match access-group name streaming
  match access-group name tp-rooms
class-map match-any in-voice
  match access-group name voice
class-map match-any in-time-sensitive
  match access-group name time-sensitive
```

Which traffic gets set to AF41 by the marking policy on interface GigabitEthernet 0/0?

- A. Any traffic matching access-list to-rooms and access-list streaming
- B. Only traffic matching access-list streaming
- C. Only traffic matching access-list tp-rooms
- D. No traffic gets set to AF41

Answer: A

Question #:232 - [\(Exam Topic 3\)](#)

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

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

Answer: C D

Question #:233 - [\(Exam Topic 3\)](#)

Which effect of configuring the passive-interface S0/0 command under the EIGRP routing process is true?

- A. It prevents EIGRP neighbor relationships from being formed over interface S0/0.
- B. It configures interface S0/0 to send hello packets with the passive-interface bit set.
- C. It configures interface S0/0 to suppress all outgoing routing updates
- D. It configures interface S0/0 to reject all incoming routing updates

Answer: A

Question #:234 - [\(Exam Topic 3\)](#)

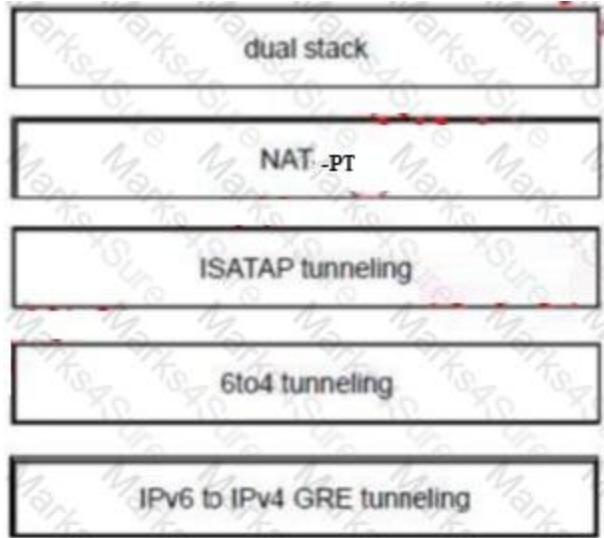
Drag and drop each IPv6 migration method from the left onto the matching description on the right. Select and Place:

6to4 tunneling	Configures parallel IPv4 and IPv6 network infrastructure and address
dual stack	Translates traffic between IPv4 and IPv6 addresses
IPv6 to IPv4 GRE tunneling	Uses any IPv6 unicast site address
ISATAP tunneling	uses IPv6 site address with in the 2002::/16 prefix
NAT-PT	Uses standard point-to-point encapsulation

Answer:

6to4 tunneling	dual stack
dual stack	NAT-PT
IPv6 to IPv4 GRE tunneling	ISATAP tunneling
ISATAP tunneling	6to4 tunneling
NAT-PT	IPv6 to IPv4 GRE tunneling

Explanation

**Question #:**235 - [\(Exam Topic 3\)](#)

Which statement about route summarization is true?

- A. EIGRP can summarize routes at the classful network boundary
- B. EIGRP and RIPv2 route summarization are configured with the summary-address command under the route process.
- C. It can be disabled in RIP, RIPv2, and EIGRP
- D. RIPv2 can summarize routes beyond the classful network boundary

Answer: A**Question #:**236 - [\(Exam Topic 3\)](#)

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

- A. An isolated VRF routing table is created for each VRF.
- B. A single customer VRF can support overlapping IP addresses
- 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. At least one physical interface must be configured to enable a VRF

Answer: A B**Question #:**237 - [\(Exam Topic 3\)](#)

Which two options are the two main phases of PPPoE? (Choose two.)

- A. Active Discovery Phase
- B. IKE Phase
- C. Main Mode Phase
- D. PPP Session Phase
- E. Aggressive Mode Phase
- F. Negotiation Phase

Answer: A D

Question #:238 - [\(Exam Topic 3\)](#)

Which two values are required to implement an EIGRP named configurations? (Choose two).

- A. address-family
- B. process-id
- C. subnet-mask
- D. virtual-instance-name
- E. router-id

Answer: A D

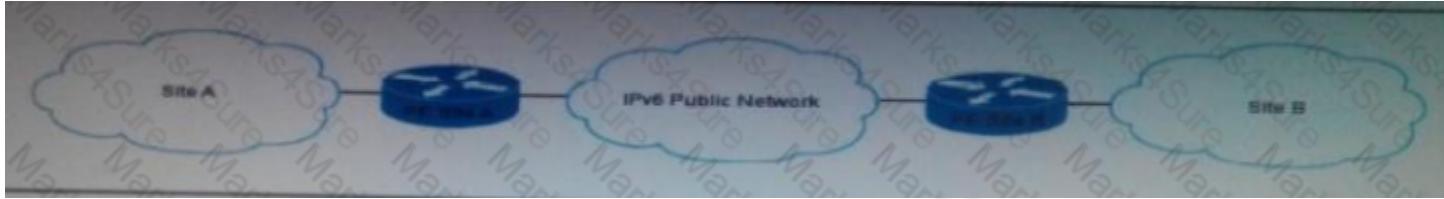
Question #:239 - [\(Exam Topic 3\)](#)

Which MLD message type does a host send to join multicast groups?

- A. Done
- B. Assert
- C. Query
- D. Hello
- E. Join/Prune
- F. Report

Answer: F**Question #:240 - [\(Exam Topic 3\)](#)**

Refer to the exhibit.



An Ipv6 tunnel is configured between site A and site B. Which feature does the tunnel support?

- A. Single policy
- B. Transport mode
- C. Site-to-site tunnel mode
- D. OSPFv2

Answer: C**Question #:241 - [\(Exam Topic 3\)](#)**

Which two statements about route poisoning are true? (Choose two)

- A. In RIP, a metric of 15 is assigned to the route
- B. It is supported on RIP, IGRP, and EIGRP networks
- C. It is used with distance-vector routing protocols
- D. It can be used in conjunction with holddowns to prevent routing loops
- E. It prohibits a route from being advertised out an interface from which it was learned

Answer: B D**Question #:242 - [\(Exam Topic 3\)](#)**

Refer to the exhibit.

```
interface Loopback0
```

```
  ip address 172.1.1.1 255.255.255.255
```

```
    ip pim dense-mode
```

```
interface FastEthernet0/0
```

```
  ip address 192.168.12.1 255.255.255.0
```

```
    ip pim dense-mode
```

```
interface FastEthernet0/1
```

```
  ip address 192.168.14.1 255.255.255.0
```

```
    ip pim dense-mode
```

```
ip pim bidir-enable
```

```
ip pim send-rp-announce Loopback0 scope 5 group-list 1 bidir
```

```
ip pim send-rp-discovery scope 5
```

```
access-list 1 deny 224.1.1.1
```

```
access-list 1 permit 239.0.0.0 0.255.255.255
```

What are two effects of the given configuration? (Choose two)

- A. Source for the 224.1.1.1 multicast stream will register with 172.1.1.1.
- B. It configures 172.1.1.1 as a sparse-mode rendezvous point.
- C. Multicast stream 224.1.1.1 will operate in sparse mode.
- D. It configures 172.1.1.1 as the Bidir-PIM rendezvous point.

- E. Multicast stream 224.1.1.1 will operate in dense mode.
- F. Sources for the 239.1.1.1 multicast stream will register with 172.1.1.1.

Answer: D F**Question #:243 - [\(Exam Topic 3\)](#)**

Which mechanism does get vpn use to preserve ip header information?

- A. GRE
- B. MPLS
- C. IPsec transport mode
- D. IPsec tunnel mode

Answer: D**Question #:244 - [\(Exam Topic 3\)](#)**

Drag each statement about EIGRP neighbor peering on the left to the matching peering type on the right

Forms a half-mesh topology through peers configured with the "unicast-listen" keyword.

Multicast

The default EIGRP peering method.

OTP point-to-point

Uses the "neighbor" statement on a non-passive interface with default options.

OTP route-reflector

Uses the "remote" keyword in the neighbor statement to form peerings.

Unicast

Answer:

Forms a half-mesh topology through peers configured with the "unicast-listen" keyword.

The default EIGRP peering method.

The default EIGRP peering method.

Uses the "remote" keyword in the neighbor statement to form peerings.

Uses the "neighbor" statement on a non-passive interface with default options.

Forms a half-mesh topology through peers configured with the "unicast-listen" keyword.

Uses the "remote" keyword in the neighbor statement to form peerings.

Uses the "neighbor" statement on a non-passive interface with default options.

Explanation

The default EIGRP peering method.

Uses the "remote" keyword in the neighbor statement to form peerings.

Forms a half-mesh topology through peers configured with the "unicast-listen" keyword.

Uses the "neighbor" statement on a non-passive interface with default options.

Question #:245 - [\(Exam Topic 3\)](#)

What is the initial BFD state?

- A. Admin Down
- B. Init
- C. Down
- D. Up

Answer: C

Question #:246 - [\(Exam Topic 3\)](#)

Drag and drop the OSPFv3 LSA type on the left to the functionality it provides on the right.

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

Answer:

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

Explanation

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)

Question #:247 - [\(Exam Topic 3\)](#)

Which IPv4 feature can limit indiscriminate flooding of multicast traffic on a VLAN?

- A. IGMP Filtering
- B. IGMP Snooping
- C. MLD Filtering
- D. PIM Snooping

Answer: B

Question #:248 - [\(Exam Topic 3\)](#)

When the BGP additional-paths feature is used, what allows a BGP speaker to Differentiate between the different available paths?

- A. The additional path information is encoded in an extended community.
- B. A route distinguisher is appended to the prefix by the receiving BGP speaker.

- C. A unique path identifier is encoded into a dedicated field to the NLRI.
- D. The remote BGP peer prepends its own next-hop address to the prefix.

Answer: A**Question #:249 - [\(Exam Topic 3\)](#)**

Refer to the following.

Router ospf 1

Router-id 1.1.1.1

Log adjacency-changes

Max-lsa 19000

Which statement about the functionality of this configuration is true?

- A. The router does not accept nonself-generated LSAs once a maximum of 19,000 is reached unless the router is an ABR
- B. The router does not accept nonself-generated LSAs once a maximum of 19,000 is reached
- C. The router does not accept nonself-generated LSAs once a maximum of 19,000 is reached, unless the router is in area 0
- D. The router does not accept nonself-generated LSAs once a maximum of 19,000 is reached, unless the router is an ASBR

Answer: B**Question #:250 - [\(Exam Topic 3\)](#)**

Which extended ping IP header option allows you to specify one or more hops over which the packets will travel without specifying the full path?

- A. verbose
- B. loose
- C. strict
- D. record

Answer: B

Question #:251 - [\(Exam Topic 3\)](#)

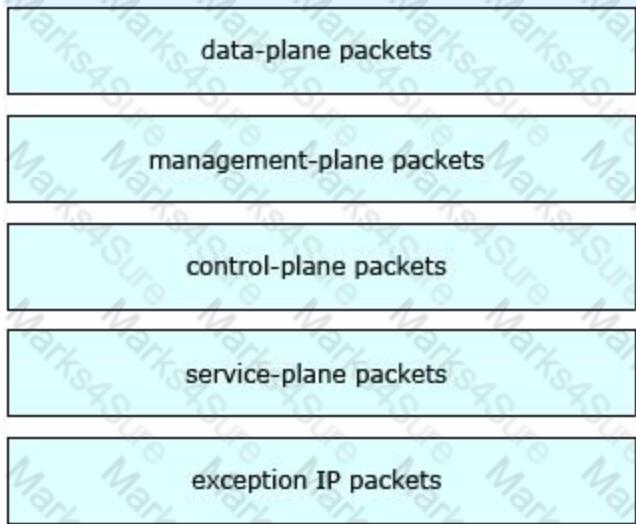
Drag and drop each IP traffic plane-packet type from the left onto its description on the right.

control-plane packets	packets that are generated by end users and forwarded to other end-station devices using destination IP address based forwarding
data-plane packets	packets that are generated by ... by the router CPU
exception IP packets	packets that are used to create and operate the network
management-plane packets	packets that have either a transit destination IP address or a receive destination IP address
service-plane packets	packets that may contain TTL expires or IP header options

Answer:

control-plane packets	data-plane packets
data-plane packets	management-plane packets
exception IP packets	control-plane packets
management-plane packets	service-plane packets
service-plane packets	exception IP packets

Explanation

**Question #:252 - [\(Exam Topic 3\)](#)**

Refer to the exhibit.

```
ARP packet debugging is on
*Mar 1 00:07:52.851: IP ARP: sent req src 192.168.12.1 c001.2314.0000,
                      dst 10.3.3.3 0000.0000.0000 FastEthernet0/0.
*Mar 1 00:07:54.851: IP ARP: sent req src 192.168.12.1 c001.2314.0000,
                      dst 10.3.3.3 0000.0000.0000 FastEthernet0/0.
*Mar 1 00:07:56.851: IP ARP: sent req src 192.168.12.1 c001.2314.0000,
                      dst 10.3.3.3 0000.0000.0000 FastEthernet0/0.
```

R1 is unable to ping the device at 10.3.3.3. Which two options are possible reasons for the problem? (Choose two.)

- A. The static route is configured as a host route.
- B. The static route points to a broadcast interface without a next-hop.
- C. IP CEF is disabled on the local router.
- D. Proxy ARP is disabled on the next-hop router.
- E. The dynamic routing protocol configuration is missing.
- F. IP CEF is disabled on the remote router.

Answer: C D

Question #:253 - [\(Exam Topic 3\)](#)

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

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

Answer: A E

Question #:254 - (Exam Topic 3)

Refer to the exhibit.

```
Switch(config)# mls qos srr-queue input priority-queue 2 bandwidth 2
Switch(config)# mls qos srr-queue input bandwidth 4 2
```

Which two effects of this configuration are true? (Choose two.)

- A. The priority queue is disabled.
- B. Queue 1 is allocated 4 percent of the available bandwidth and queue 2 is allocated 2 percent of the available bandwidth
- C. Queue 1 is a priority queue that is allocated 1/3 of the available bandwidth
- D. Queue 1 is served twice as fast as queue 2.
- E. Queue 1 is a priority queue that is allocated 2/3 of the available bandwidth
- F. Queue 2 is served twice as fast as queue 1.

Answer: A D

Question #:255 - (Exam Topic 3)

Which command can you enter to configure a built-in policer with minimum guaranteed bandwidth without starving other classes during periods of congestion?

- A. bandwidth remaining percent
- B. bandwidth
- C. priority percent

- D. fair-queue

Answer: C**Question #:256 - (Exam Topic 3)**

Refer to the exhibit.

```
Routing Process "ospf 1" with ID 1.1.1.1
Start time: 1w5d, Time elapsed: 4d11h
Supports only single TOS(TOS0) routes
Supports opaque LSA
Supports Link-local Signaling (LLS)
Supports area transit capability
Router is not originating router-LSAs with maximum metric
Initial SPF schedule delay 5000 msecs
Minimum hold time between two consecutive SPFs 10000 msecs
Maximum wait time between two consecutive SPFs 10000 msecs
Incremental-SPF disabled
Minimum LSA interval 5 secs
Minimum LSA arrival 1000 msecs
LSA group pacing timer 240 secs
Interface flood pacing timer 33 msecs
Retransmission pacing timer 66 msecs
Number of external LSA 0. Checksum Sum 0x0000000
Number of opaque AS LSA 0. Checksum Sum 0x0000000
Number of DCbitless external and opaque AS LSA 0
Number of DoNotAge external and opaque AS LSA 0
Number of areas in this router is 1. 1 normal 0 stub 0 nssa
Number of areas transit capable is 0
External flood list length 0
IETF NSF helper support enabled
Cisco NSF helper support enabled
Reference bandwidth unit is 100 mbps
Area BACKBONE(0)
    Number of interfaces in this area is 2 (1 loopback)
    Area has no authentication
    SPF algorithm last executed 00:00:11.176 ago
    SPF algorithm executed 7 times
    Area ranges are
        Number of LSA 3. Checksum Sum 0x0140E9
        Number of opaque link LSA 0. Checksum Sum 0x0000000
        Number of DCbitless LSA 0
        Number of indication LSA 0
        Number of DoNotAge LSA 0
    Flood list length 0
```

Which two statements are true? (Choose two.)

- A. This is the output of the show ip OSPF command.
- B. This is the output of the show ip protocols command.
- C. This router is an ABR

- D. This router is an ASBR
- E. Authentication is not configured for the area.

Answer: A E**Question #:257 - [\(Exam Topic 3\)](#)**

A floating static route appears in the routing table of an interface even when the interface is unusable. Which action can you take to correct the problem?

- A. Remove the permanent option from the static route
- B. Correct the administrative distance.
- C. Configure the floating static route to point to another in the routing table.
- D. Correct the DHCP-provided route on the DHCP server.

Answer: A**Question #:258 - [\(Exam Topic 3\)](#)**

Which two route types are allowed to exit an EIGRP stub? (Choose two)

- A. default
- B. host
- C. summary
- D. static
- E. connected

Answer: C E**Question #:259 - [\(Exam Topic 3\)](#)**

Drag and drop each extended ping IP header option from the left onto "the corresponding description on the right

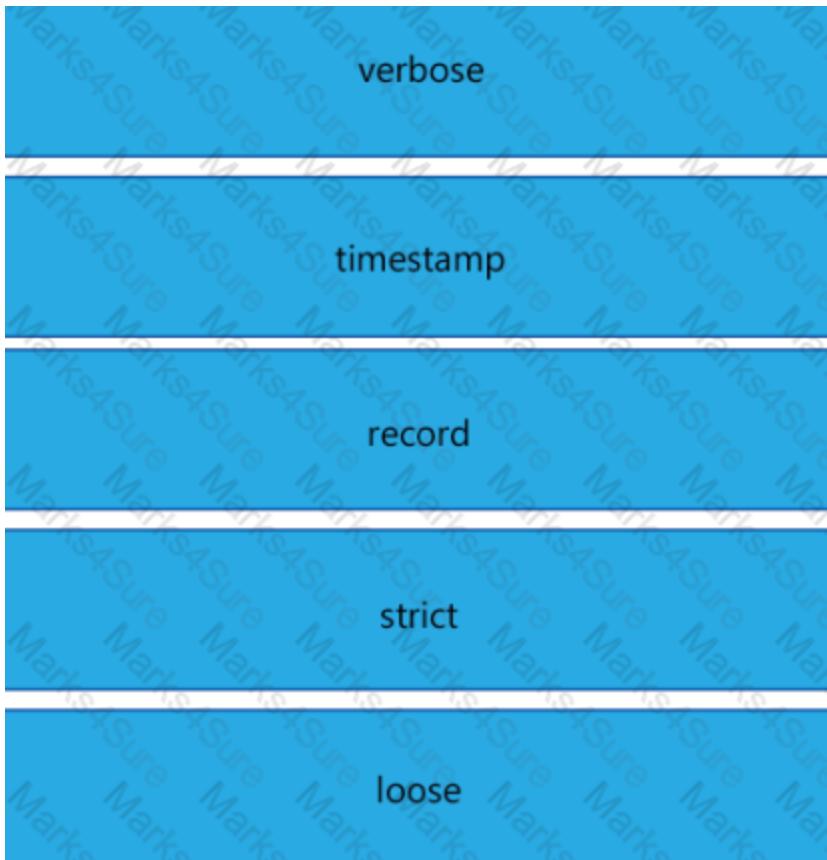
Select and Place:

loose	displays output details
record	displays the elapsed time over the round trip of the packet
strict	displays the routers that the packet crossed along the path to the destination
timestamp	sets the specific path the packet will travel to the destination
verbose	specifies one or more routers through which the packet may travel to the destination

Answer:

loose	verbose
record	timestamp
strict	record
timestamp	strict
verbose	loose

Explanation

**Question #:260 - [\(Exam Topic 3\)](#)**

Which IP SLA operation type is enhanced by the use of the IP SLAs Responder?

- A. DNS
- B. HTTP
- C. ICMP Echo
- D. UDP Echo

Answer: D**Question #:261 - [\(Exam Topic 3\)](#)**

Which action can you take to avoid sub optimal routing on all EIGRP network?

- A. Use tags to filter routes outbound.
- B. Use the distribute-list command to filter routes inbound.
- C. Summarize outbound prefixes.

- D. Redistribute connected and static routes.

Answer: D

Question #:262 - [\(Exam Topic 3\)](#)

Refer to the exhibit.

```
ICMP statistics:
  Recv: 0 burst errors, 0 checksum errors, 0 fragments, 0 unreachables
        0 echo, 0s echo reply, 0 next hop, 0 link replies, 0 parameter
        0 timestamp, 0 info request, 0 other
        0 info replies, 0 info confirmations
  Send: 0 redirects, 0 unreachable, 0 echo reply
        0 next requests, 0 next replies, 0 quench, 0 timestamp
        0 info reply, 0 time exceeded, 0 parameter problems
        0 info notifications, 0 info advertisements
```

While troubleshooting a connectivity issue, you executed a trace route that returned the given output. Which conclusion can you draw about the problem?

- A. An ACL is blocking traffic
- B. Packets are being fragmented
- C. The PDUs transmitted errors
- D. The destination is too busy

Answer: D

Question #:263 - [\(Exam Topic 3\)](#)

Which options is the default LACP load-balancing algorithm for IP traffic on Layer 3?

- A. the source and destination IP port
- B. the destination IP port
- C. the source and destination IP address
- D. the destination port
- E. the source IP port

Answer: C

Question #:264 - [\(Exam Topic 3\)](#)

Which IP SLA operation type uses IP to measure the round-trip time between a router and a device?

- A. HTTP
- B. ICMP Echo
- C. ICMP Path Jitter
- D. UDP Jitter for VoIP

Answer: B**Question #:265 - [\(Exam Topic 3\)](#)**

Which EIGRP feature allows the use of leak maps?

- A. offset-list
- B. neighbor
- C. address-family
- D. stub

Answer: D**Question #:266 - [\(Exam Topic 3\)](#)**

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 reply reporting that the prefix has gone stuck-in-active
- C. to respond to a query reporting that the prefix has gone stuck-in-active
- D. to respond to an SIA query with the alternative path requested

Answer: A**Question #:267 - [\(Exam Topic 3\)](#)**

Which TCP feature allows a client to request a specific packet that was lost?

- A. flow control
- B. sliding window
- C. fast recovery
- D. selective acknowledgment

Answer: D

Question #:268 - [\(Exam Topic 3\)](#)

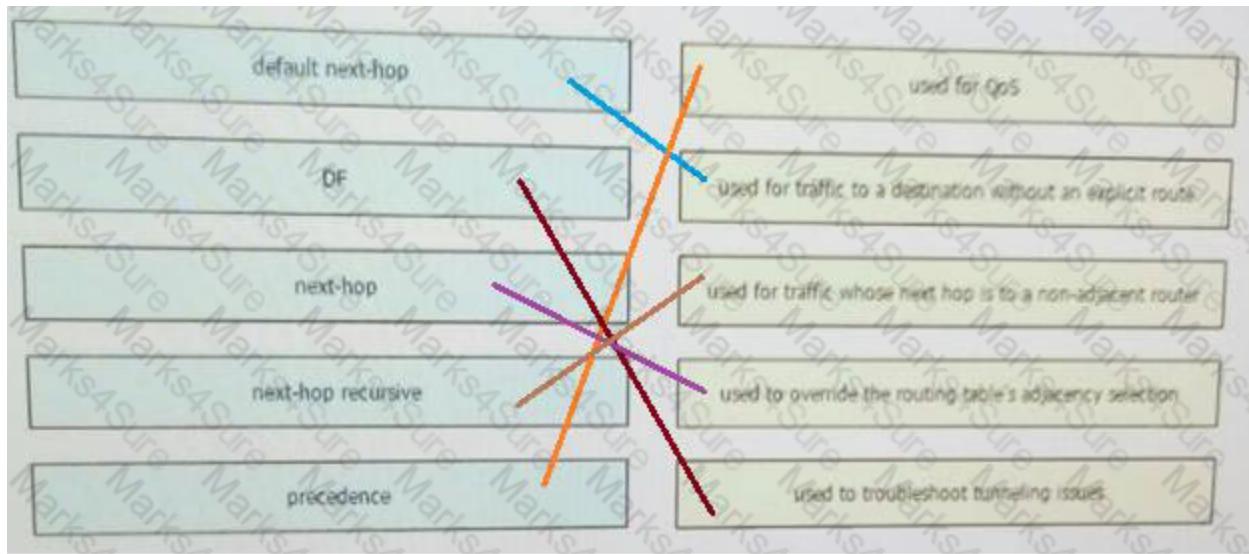
Drag each set action for policy-based routing on the left to the matching statement on the right.

default next-hop	used for QoS
DF	used for traffic to a destination without an explicit route
next-hop	used for traffic whose next hop is to a non-adjacent router
next-hop recursive	used to override the routing table's adjacency selection
precedence	used to troubleshoot tunneling issues

Answer:

default next-hop	precedence
DF	default next-hop
next-hop	next-hop recursive
next-hop recursive	next-hop
precedence	DF

Explanation

**Question #:269 - [\(Exam Topic 3\)](#)**

Which two options are purposes of MSDP SA filtering? (Choose two.)

- A. to allow the filtering of PIM messages between peers
- B. to allow all SA message to be processed by MSDP peers
- C. to improve the scalability of an MSDP multicast environment
- D. to reduce the number of multicast address that are shared to MSDP peers
- E. to allow the filtering of IGMP messages between peers
- F. to reduce the number of multicast address that are distributed to other devices in the same multicast domain

Answer: C D**Question #:270 - [\(Exam Topic 3\)](#)**

Which three statements are true about PPP CHAP authentication? (Choose three.)

- A. PPP encapsulation must be enabled globally.
- B. The LCP phase must be complete and in closed state.
- C. The hostname used by a router for CHAP authentication cannot be changed.
- D. PPP encapsulation must be enabled on the interface.
- E. The LCP phase must be complete and in open state.

- F. By default, the router uses its hostname to identify itself to the peer.

Answer: D E F

Question #:271 - [\(Exam Topic 3\)](#)

What technology allows a PE router to exchange VPNv4 routes with other PE routers?

- A. MPLS L3VPN
- B. MPLS L2VPN
- C. VPLS
- D. Frame Relay to ATM AAL5 Interworking

Answer: A

Question #:272 - [\(Exam Topic 3\)](#)

Which two statements about EIGRP load balancing are true? (Choose two.)

- A. EIGRP supports 6 unequal-cost paths.
- B. A path can be used for load balancing only if it is a feasible successor.
- C. EIGRP supports unequal-cost paths by default.
- D. Any path in the EIGRP topology table can be used for unequal-cost load balancing.
- E. Cisco Express Forwarding is required to load-balance across interfaces

Answer: A B

Question #:273 - [\(Exam Topic 3\)](#)

Drag each statement about QoS features on the left to the matching QoS feature on the right.

Select and Place:

Drag each statement about QoS features on the left to the matching QoS feature

applied in both the inbound and outbound directions

buffers and queues excess packets when traffic load exceeds the CIR

configured in bits per second

drops excess packets when traffic load exceeds the CIR

may cause excessive TCP retransmission

minimizes TCP retransmission

Traffic Policing

Traffic Shaping

Answer:

Drag each statement about QoS features on the left to the matching QoS feature

The diagram shows two columns of statements. The left column is for 'Traffic Policing' and the right column is for 'Traffic Shaping'. Each statement has a dashed border indicating it can be moved.

Traffic Policing	Traffic Shaping
applied in both the inbound and outbound directions	applied in both the inbound and outbound directions
buffers and queues excess packets when traffic load exceeds the CIR	drops excess packets when traffic load exceeds the CIR
configured in bits per second	may cause excessive TCP retransmission
drops excess packets when traffic load exceeds the CIR	buffers and queues excess packets when traffic load exceeds the CIR
may cause excessive TCP retransmission	configured in bits per second
minimizes TCP retransmission	minimizes TCP retransmission

Question #:274 - [\(Exam Topic 3\)](#)

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

- A. It requires two-way authentication.
- B. It can protect against playback attacks.
- C. It is supported only on synchronous interfaces.
- D. It is vulnerable to trial-and error attacks.
- E. Login attempts are controlled by the remote node.

Answer: D E

Question #:275 - [\(Exam Topic 3\)](#)

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

- A. The FIB is used to populate the Cisco Express Forwarding table.

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

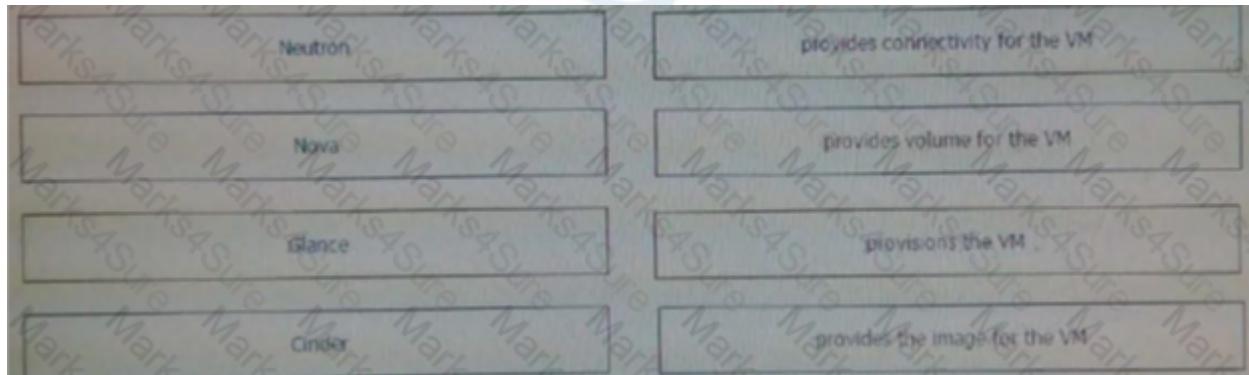
Answer: D**Question #:276 - ([Exam Topic 3](#))**

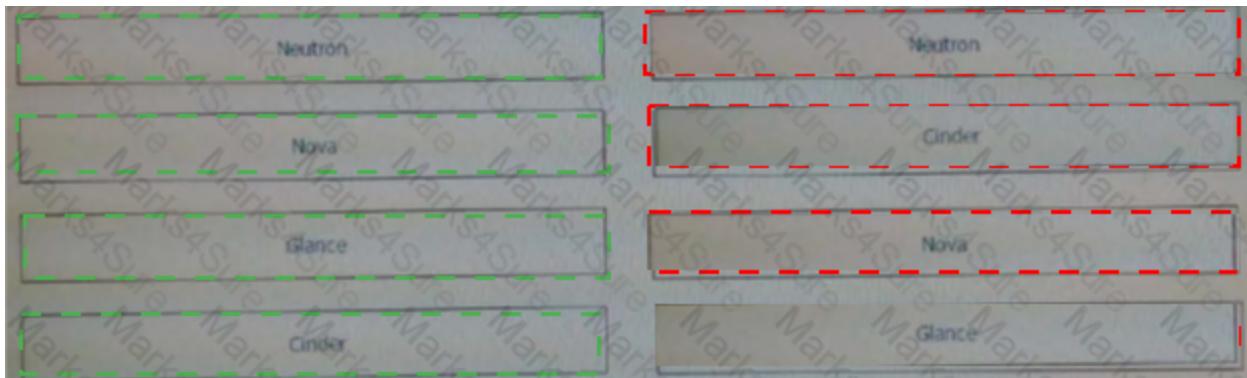
Which statement about STP port states is true?

- A. A port in the blocking state remains in that state for 30 seconds before transitioning to the listening state.
- B. Listening and learning are transitory port states that use the forward delay timer.
- C. When a port transitions to the learning state, it can send and receive data frames
- D. A port in the blocking state learns address and receives BPDUs

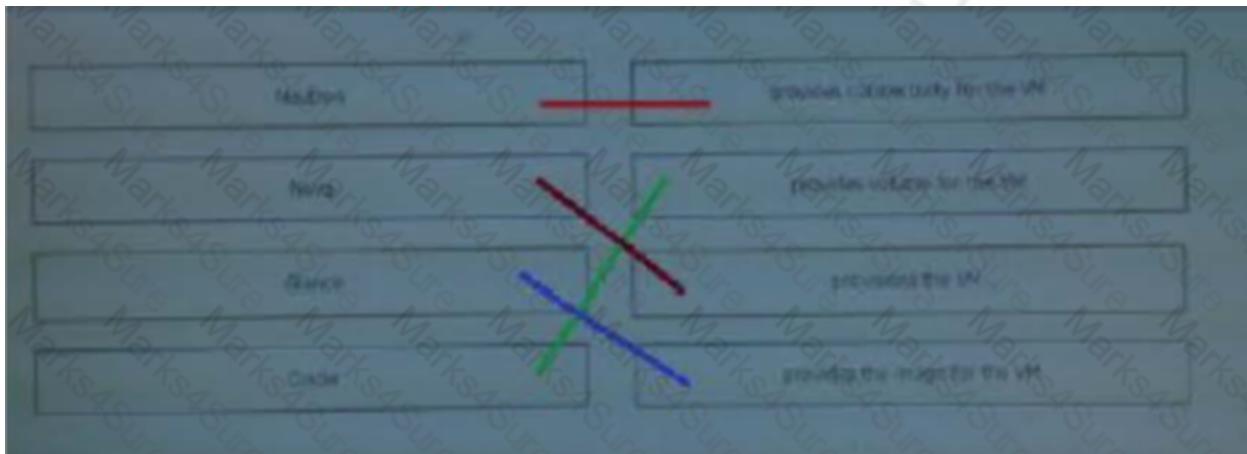
Answer: B**Question #:277 - ([Exam Topic 3](#))**

Drag and Drop the OpenStack projects from the left onto their function on the right?

**Answer:**



Explanation



Question #:278 - [\(Exam Topic 3\)](#)

Refer to the exhibit.

Router#show line	Try	Type	Tx/Rx	A	Modem	Roty	Acc0	Acc1	Users	Noise	Overruns	Int
	0	CTT	-	-	-	-	-	-	0	0/0	-	-
*	1	AUX	9600/9600	-	-	-	-	-	0	0/0	-	-
	2	VTY	-	-	-	-	-	-	0	0/0	-	-
	3	VTY	-	-	-	-	-	-	0	0/0	-	-
	4	VTY	-	-	-	-	-	-	0	0/0	-	-
	5	VTY	-	-	-	-	-	-	0	0/0	-	-
	6	VTY	-	-	-	-	-	-	0	0/0	-	-

According to the given show line output, which type of line is connected to the router?

- A. Telnet
- B. terminal
- C. console

- D. SSH
- E. auxiliary

Answer: C**Question #:279 - (Exam Topic 3)**

Drag each NTP command on the left to its effect on the right.

ntp master	Configures an external time source.
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.

Answer:

ntp master	ntp refclock
ntp orphan	ntp master
ntp peer	ntp orphan
ntp refclock	ntp server
ntp server	ntp peer

Explanation

**Question #:280 - [\(Exam Topic 3\)](#)**

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

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

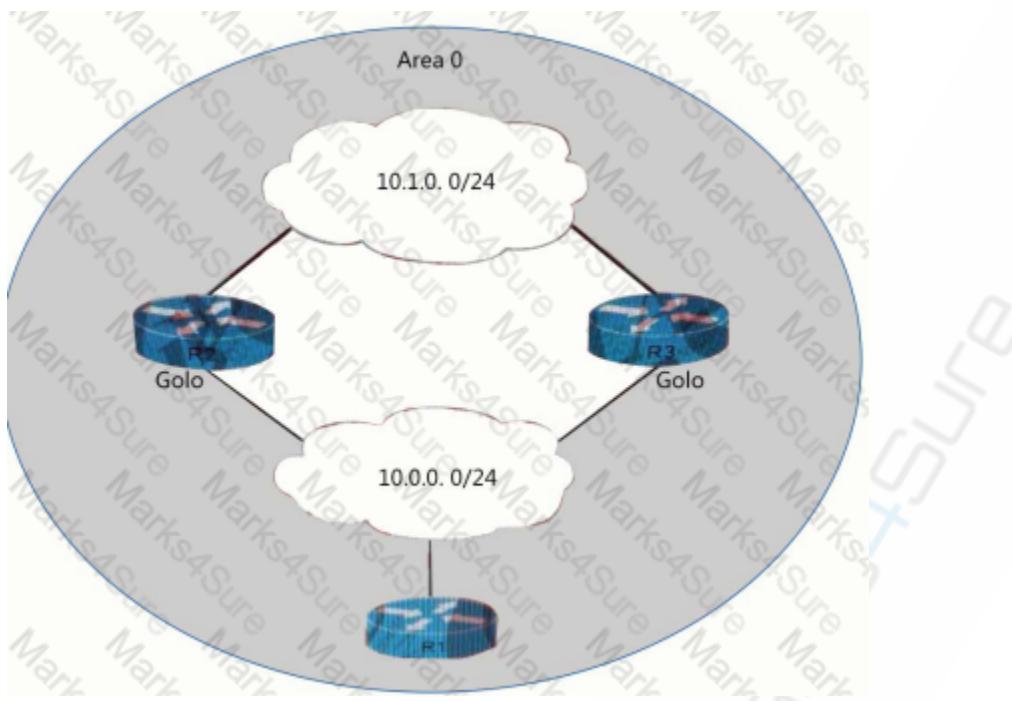
Answer: C E**Question #:281 - [\(Exam Topic 3\)](#)**

How does an IPv6 host automatically generate a global address?

- A. It prepends its interface identifier to the network prefixes contained in Router Advertisement messages.
- B. It appends its interface identifier to the network prefixes contained in Router Advertisement messages.
- C. It appends its interface identifier to the network prefixes contained in Router Solicitation messages.
- D. It prepends its interface identifier to the network prefixes contained in Router Solicitation messages

Answer: B**Question #:282 - [\(Exam Topic 3\)](#)**

Refer to the exhibit.



R1 has an OSPF path to R2 and R3 for 10.1.0.0/24, but R1 has a routing entry for 10.1.0.0/24 from only one router at a time. Which option is the most likely cause?

- A. The R1 maximum-path is set to 1
- B. R3 has a higher administrative distance.
- C. R3 is using a filter list
- D. R2 is using an offset-list

Answer: A

Question #:283 - [\(Exam Topic 3\)](#)

When you deploy DMVPN, what is the purpose of the command `crypto isakmp key ciscotest address 0.0.0.0 0.0.0.0?`

- A. It is configured on the spokes to indicate the hub router.
- B. It is configured on hub to set the pre-shared key for the spoke routers.
- C. It is configured on hub and spoke router to establish peering
- D. It is configured on the internet PE routers to allow traffic to traverse the ISP core

Answer: B

Question #:284 - [\(Exam Topic 3\)](#)

Drag and drop the BGP attribute on the left to the correct category on the right.

Originator ID	BGP Well-Known Mandatory Attribute
Community	Target
Local-Pref	Target
AS_path	BGP Well-Known Discretionary Attribute
Aggregator	Target
Next-Hop	BGP Optional Nontransitive Attribute
	Target

Answer:

Originator ID	BGP Well-Known Mandatory Attribute
Community	Target
Local-Pref	Target
AS_path	BGP Well-Known Discretionary Attribute
Aggregator	Target
Next-Hop	BGP Optional Nontransitive Attribute
	Target

Explanation

BGP Well-Known Mandatory Attribute
AS_path
Next-Hop
BGP Well-Known Discretionary Attribute
Local-Pref
BGP Optional Nontransitive Attribute
Originator ID

Question #:285 - [\(Exam Topic 3\)](#)

Refer to the exhibit.

```
R1
interface FastEthernet0/0
 ip address 192.168.12.4 255.255.255.0
interface FastEthernet0/1
 ip address 192.168.21.1 255.255.255.0
router eigrp 100
 network 192.168.12.0
 network 192.168.21.0
 metric weights 0 1 10 0

R2
interface FastEthernet0/0
 ip address 192.168.12.2 255.255.255.0
interface FastEthernet0/1
 ip address 192.168.21.2 255.255.255.0
router eigrp 100
 network 192.168.12.0
 network 192.168.21.0
 metric weights 0 10 1 0 0
```

What is the effect on the network when you apply these configuration to R1 and R2?

- A. Asymmetric routing occurs because the bandwidth and delay K value settings are mismatched.
- B. The interface bandwidth and delay settings adjust automatically to match the new metric settings.
- C. The neighbor adjacency between R1 and R2 temporarily resets and then reestablishes itself.
- D. R1 and R2 fail to form a neighbor adjacency.

Answer: D

Question #:286 - [\(Exam Topic 3\)](#)

Your NetFlow collector is not working due to a large amount of traffic entering your network which is destined to a single IP address. Which NetFlow feature allows you to collect the top source hosts for this traffic on the local router?

- A. A NetFlow can export flows only to a external flow collector
- B. Show ip cache flow
- C. Ip accounting
- D. Ip flow-top-talkers

Answer: D

Question #:287 - [\(Exam Topic 3\)](#)

Refer to the exhibit.

```
R2#show ipv6 interface e0/0
Ethernet0/0 is up, line protocol is up
  IPv6 is enabled, link-local address is FE80::A8BB:CCFF:FE00:200
    No virtual link-local address(es):
    No global unicast address is configured
  Joined group address(es):
    FF02::1
    FF02::2
    FF02::A
    FF02::1:FF00:200
```

Which part of the joined group addresses list indicates that the interface has joined the EIGRP multicast group address?

- A. FF02::1
- B. FF02::1:FF00:200
- C. FF02::A
- D. FF02::2

Answer: C**Question #:**288 - [\(Exam Topic 3\)](#)

Which information is contained in all OSPF Type 1 Router LSA?

- A. The Autonomous System Border Routers (ASBR) for the OSPF network and the cost of the path to reach each ASBR
- B. The router's interfaces (links) on which OSPF is enabled, the state and outgoing cost of each link, and the OSPF neighbors on each link
- C. The network links to all known OSPF routers and the cost of each path
- D. The Area Border Routers (ABR) for the area and the cost of the path to each ABR
- E. The OSPF neighboring routers and the cost of the outgoing link to reach each neighbor

Answer: B

Question #:289 - [\(Exam Topic 3\)](#)

Drag and drop each IS-IS router type from the left onto the best matching OSPF router type on the right.

Select and Place:

DIS
Level 1
Level 1-2
Level 2

ABR
designated router
Internal backbone
Totally Stubby internal nonbackbone

Answer:

DIS
Level 1
Level 1-2
Level 2

Level 1-2
DIS
Level 2
Level 1

Explanation

Level 1-2

DIS

Level 2

Level 1

Question #:290 - [\(Exam Topic 3\)](#)

Drag and drop the NHRP flag on the left to the corresponding meaning on the right.

authoritative

The NHRP mapping entry was created from an NHRP registration request

implicit

NHRP information was obtained from the next hop server
that maintains the NBMA-to-IP mapping

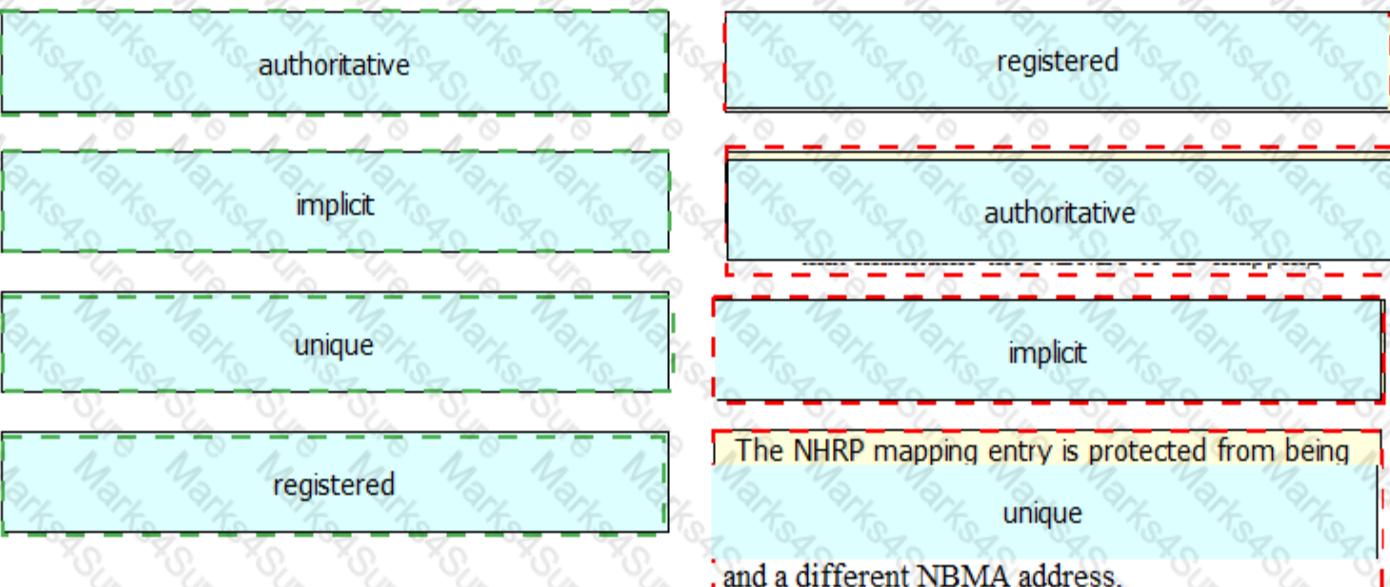
unique

NHRP information was learned from a forwarded NHRP packet

registered

The NHRP mapping entry is protected from being overwritten
by a mapping address that has the same IP address
and a different NBMA address.

Answer:



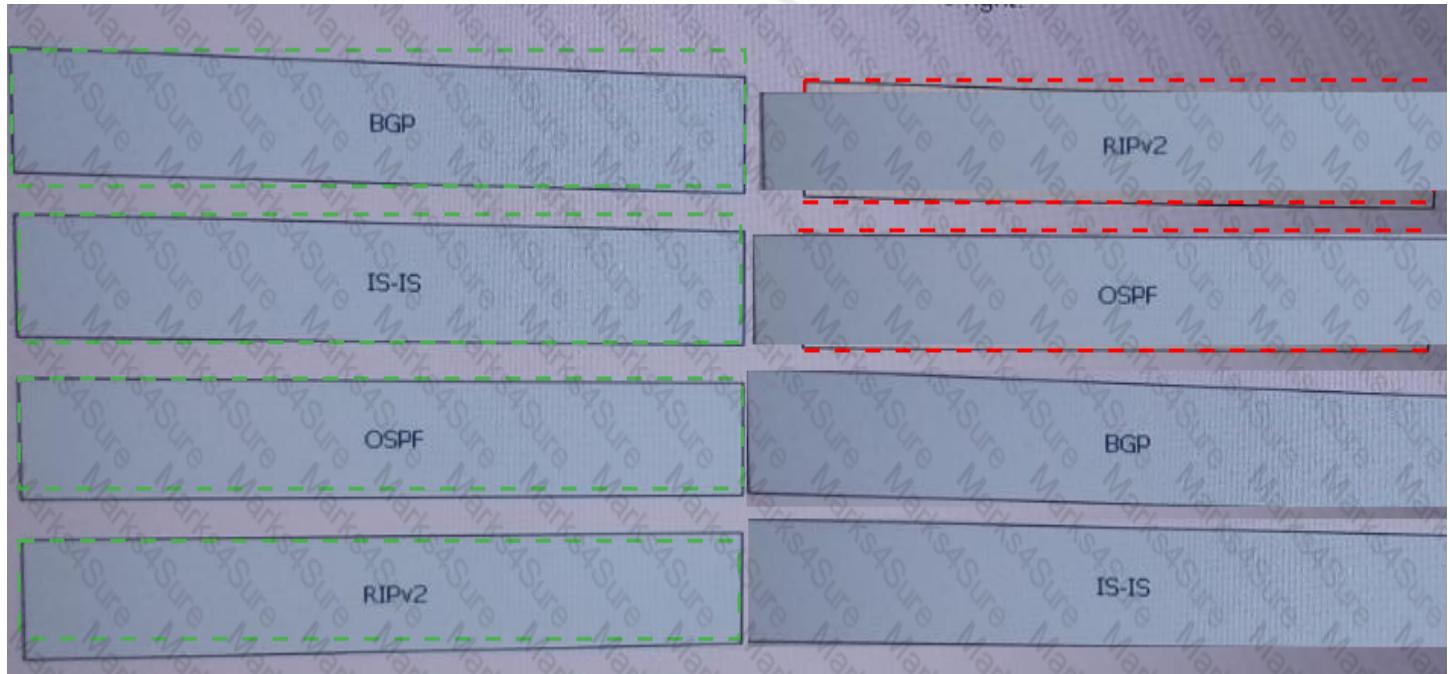
Explanation

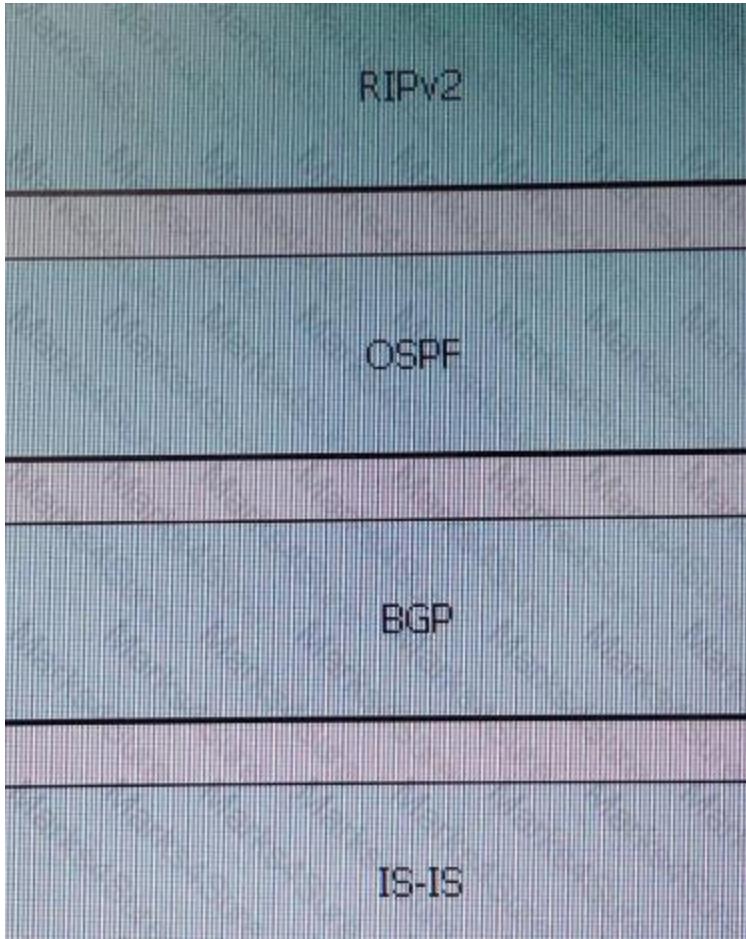


Question #:291 - [\(Exam Topic 3\)](#)

Drag and drop the routing protocol on the left to the correct statement on the right.

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 TLV to incorporate features.

Answer:**Explanation**

**Question #:**292 - [\(Exam Topic 3\)](#)

Which two conditions must be met before IS-IS Level 1 routers will become adjacent? (Choose two.)

- A. The routers must share a common Autonomous System Number.
- B. The router must share a common process ID.
- C. The router must be in different areas.
- D. The routers must share a common network segment.
- E. The routers must be configured with the neighbor command.
- F. The routers must be in the same area.

Answer: D F**Question #:**293 - [\(Exam Topic 3\)](#)

Which two statements about route redistribution default metrics are true? (Choose two)

- A. When IGP is redistributed into OSPF, it has a default metric of 110
- B. When BGP is redistributed into OSPF, it has a default metric of 1
- C. Which EIGRP is redistributed into OSPF as E2, it has a default metric of 20
- D. When IGP is redistributed into RIP, it has a default metric of 1
- E. When IGP is redistributed into IS-IS, it has a default metric of 115

Answer: B C

Question #:294 - [\(Exam Topic 3\)](#)

Which type of port would have root guard enabled on it?

- A. a root port
- B. an alternate port
- C. a blocked port
- D. a designated port

Answer: D

Question #:295 - [\(Exam Topic 3\)](#)

Which two statements about HDLC operations in asynchronous balanced mode are true? (Choose two.)

- A. The initiating device sends a DTE frame.
- B. Either device can send frames at any time.
- C. Each device must negotiate with its neighbors before sending frames.
- D. Each device must negotiate with its neighbors to recover from framing errors.
- E. Either device can initiate transmission of frames.

Answer: B E

Question #:296 - [\(Exam Topic 3\)](#)

Refer to the exhibit.

```

RT1#sh bfd neighbours detail
IPv4 Sessions
Neighbour          LD/RD      RH/Rs      State      Int
10.129.95.197      1/2148270086   Up        Up        G10/3
Session state is UP and not using echo function.
Session Host: Software
OurAddr: 10.129.95.198
Handle: 1
Local Diag: 0, Demand mode: 0, Poll bit: 0
MinTxInt: 999000, MinRxInt: 999000, Multipler: 3
Received MinRxInt: 999000, Received Multipler: 3
Holddown (hits): 2691 {0}, Hello (hits): 999 (2143414)
Rx Count: 2049145, Rx Interval (ms) min/max/avg:816/1016/917 last: 306 ms ago
Tx Count: 2143416, Tx Interval (ms) min/max/avg:4/1266/878 last:476 ms ago
Elapsed time watermarks: 0 0 (last:0)
Registered protocols:BGP
Uptime:3w0d
Last packet: Version: 1 - Diagnostic:0
State bit: Up           - Demand bit:0
Poll bit:0             - Final bit:0
C bit:1               - Length:24
Multipler:3            - Your Discr.: 1
My Discr.: 2148270086  - Min rx interval:999000
Min tx interval:999000
Min Echo interval: 0

```

Which two statements about the output are true?(Choose two)

- A. BFD last failed 476ms ago on interface GigabitEthernet0/3.
- B. BGP on RT1 has negotiated the BFD capability with its peer.
- C. BFD is active on interface GigabitEtherntv0/3 and is using ICMP.
- D. BFD is active on interface GigabitEthern0/3 and is using UDP.
- E. BFD is active for BGP on RT1.

Answer: B E

Question #:297 - [\(Exam Topic 3\)](#)

When is it most important to implement multiple synonymous area addresses on an IS-IS network?

- A. when integrating an IS-IS Layer 2 router with another routing protocol
- B. When an IS-IS router is merging routing information
- C. When splitting areas in the IS-IS domain
- D. When merging or splitting areas in the IS-IS domain

Answer: D

Question #:298 - [\(Exam Topic 3\)](#)

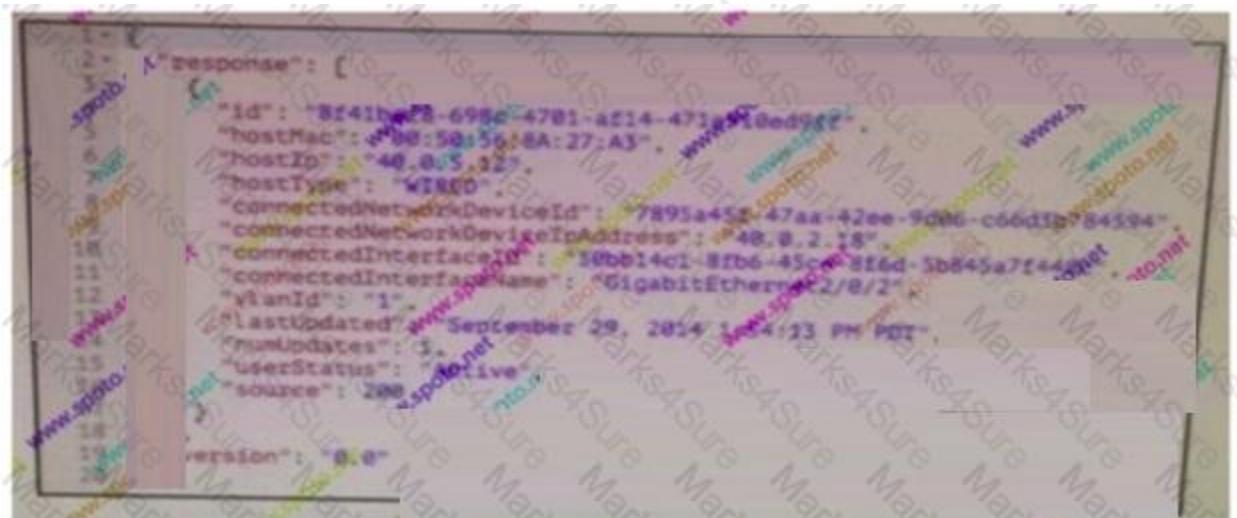
External EIGRP route exchange on routers R1 and R2 was failing because the routers had duplicate router IDs.

You changed the eigrp router-id command on R1, but the problem persists. Which additional action must you take to enable the routers to exchange routes?

- A. Change the corresponding loopback address.
- B. Change the router ED on R2.
- C. Reset the EIGRP neighbor relationship.
- D. Clear the EIGRP process.

Answer: D**Question #:299 - [\(Exam Topic 3\)](#)**

Refer to the exhibit.



Which data format is used in this REST API call?

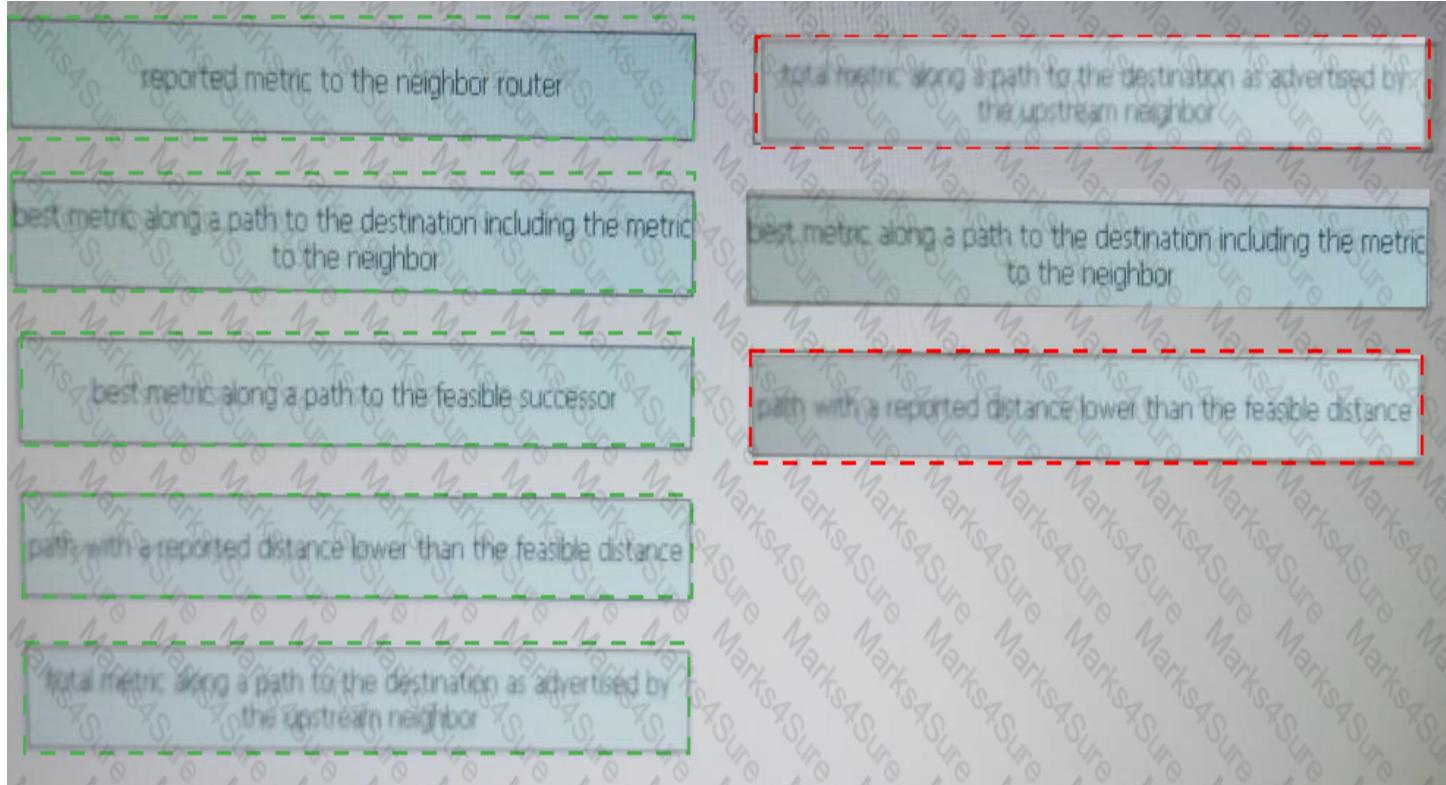
- A. XML
- B. BASH
- C. JSON
- D. HTML
- E. HTMLv5

Answer: C**Question #:300 - (Exam Topic 3)**

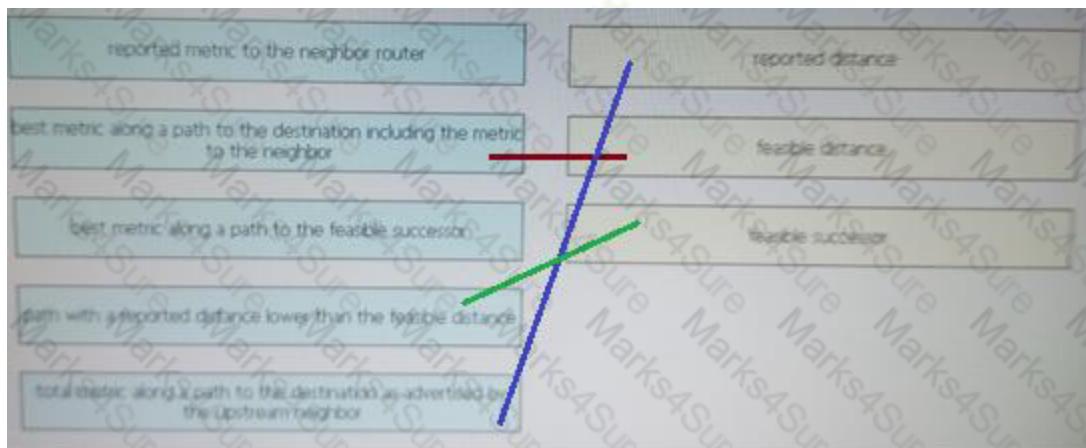
Drag and drop the description on the left to the correct Eigrp term on the right. Not all options are used.

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 a path to the destination as advertised by the upstream neighbor	

Answer:



Explanation



Question #:301 - [Exam Topic 3](#)

Which option describes a difference between Ansible and Puppet?

- A. Ansible is client-server based, and Puppet is not
- B. Ansible requires an agent, and Puppet does not.
- C. Ansible is Python based, and Puppet is Ruby based.
- D. Ansible automates repetitive tasks, and Puppet allows you to run plain ssh command.

Answer: C**Question #:302 - [\(Exam Topic 3\)](#)**

Which statements about PMTUD is true?

- A. It is supported by TCP and UDP.
- B. It increases the connection's send MSS value to prevent fragmentation
- C. GRE tunnels use PMTUD to fragment data packets by default.
- D. It is used to prevent fragmentation of packets at the endpoint of a TCP connection.
- E. It is used to prevent fragmentation of packets traveling across a smaller MTU link between

Answer: E**Question #:303 - [\(Exam Topic 3\)](#)**

Drag and drop each NAT64 description from the left onto the corresponding NAT64 type on the right. Select and Place:

**Answer:**

- Conservers IPv4 address
- Creates a unique binding for every translation
- Performs 1:1 translation
- Performs 1:N translation
- Provides end-to-end address transparency
- Requires IPv6 address assignments that can be translated to IPv4
- Supports all modes of IPv6 address assignment
- Wastes IPv4 address

- | Stateless NAT64 |
|--|
| Performs 1:1 translation |
| Provides end-to-end address transparency |
| Requires IPv6 address assignments that can be translated to IPv4 |
| Wastes IPv4 address |
-
- | StatefulNAT64 |
|--|
| Conservers IPv4 address |
| Performs 1:N translation |
| Creates a unique binding for every translation |
| Supports all modes of IPv6 address assignment |

Explanation

Stateless NAT64
Performs 1:1 translation
Provides end-to-end address tra
Requires IPv6 address assignments translated to IPv4
Wastes IPv4 address
StatefulNAT64
Conserves IPv4 address
Performs 1:N translation
Creates a unique binding for every
Supports all modes of IPv6 address

Question #:304 - (Exam Topic 3)

Refer to the exhibit.

```
Router(config)#no logging on
```

Which is effect of the given configuration?

- A. The router stops logging messages to the syslog server only.
- B. The router logs messages only to the console
- C. The router logs messages only to the buffer
- D. The router stops SNMP logging

Answer: B**Question #:305 - (Exam Topic 3)**

Drag and drop the MPLS term on the left to the function it performs on the right.

label	instructs the router to keep the label when forwarding
implicit-null	groups IP packets so that they are given the same forwarding treatment
explicit-null	identifies the group to which an IP packet belongs
penultimate hop popping	instructs the penultimate router to pop the label before
FEC	identifies a layer 2 MPLS connection from one device to
virtual circuit	pops an MPLS label off one hop before its final destination

Answer:

label	explicit-null
implicit-null	FEC
explicit-null	label
penultimate hop popping	implicit-null
FEC	virtual circuit
virtual circuit	penultimate hop popping

Explanation

explicit-null FEC label implicit-null virtual circuit penultimate hop popping**Question #:306 - [\(Exam Topic 3\)](#)**

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. It requires a VRF on the IPv6 interface
- D. It requires BGP to exchange labeled IPv6 unicast between PE routers
- E. Uses an IPv4-mapped IPv6 address as the IPv4 next-hop on PE router

Answer: D E**Question #:307 - [\(Exam Topic 3\)](#)**

What are two reasons for an OSPF neighbor relationship to be stuck in exstart/exchange state? (Choose two.)

- A. There is an area ID mismatch
- B. There is an MTU mismatch
- C. Both routers have the same router ID.
- D. There is an authentication mismatch

- E. Both routers have the same OSPF process ID

Answer: B C

Question #:308 - [\(Exam Topic 3\)](#)

Which two options are two problems that Bridge Assurance can protect against? (Choose two)

- A. Ports being put into a root-inconsistent state.
- B. Unidirectional link failures.
- C. BPDU flooding.
- D. The forwarding of data traffic after the spanning tree algorithm is stopped.
- E. Slow convergence time after a topology change.

Answer: A B

Question #:309 - [\(Exam Topic 3\)](#)

Refer to the exhibit.

```
Switch# show spanning-tree vlan 1 detail

VLAN0001 is executing the ieee compatible Spanning Tree protocol
Bridge Identifier has priority 32768, sysid 1, address 0007.0e8f.04c0
Configured hello time 2, max age 20, forward delay 15
Current root has priority 8192, address 0007.4f1c.e847
Root port is 65 (GigabitEthernet2/1), cost of root path is 119
Topology change flag not set, detected flag not set
Number of topology changes 1 last change occurred 00:00:35 ago
    from GigabitEthernet1/1
Times: hold 1, topology change 35, notification 2
        hello 2, max age 20, forward delay 15
Timers: hello 0, topology change 0, notification 0, aging 300
```

Which two statements about the output are true? (Choose two.)

- A. Setting the priority of this switch to 0 for VLAN 1 would cause it to become the new root.
- B. This switch is the root bridge for VLAN1
- C. Spanning-tree PortFast should not be enabled on GigabitEthernet2/1
- D. 802.1 W spanning tree is being used

- E. Spanning-tree PortFast is enabled on GigabitEthernet 1/1

Answer: A C

Question #:310 - [\(Exam Topic 3\)](#)

When you implement the EIGRP add-paths feature, which configuration can cause routing issues on a DMVPN circuit?

- A. disabling ECMP mode under the EIGRP process
- B. disabling automatic summarization
- C. enabling next-hop-self under the EIGRP process
- D. enabling synchronization under the EIGRP process
- E. disabling the default variance under the EIGRP process
- F. disabling NHRP when deploying EIGRP over DMVPN

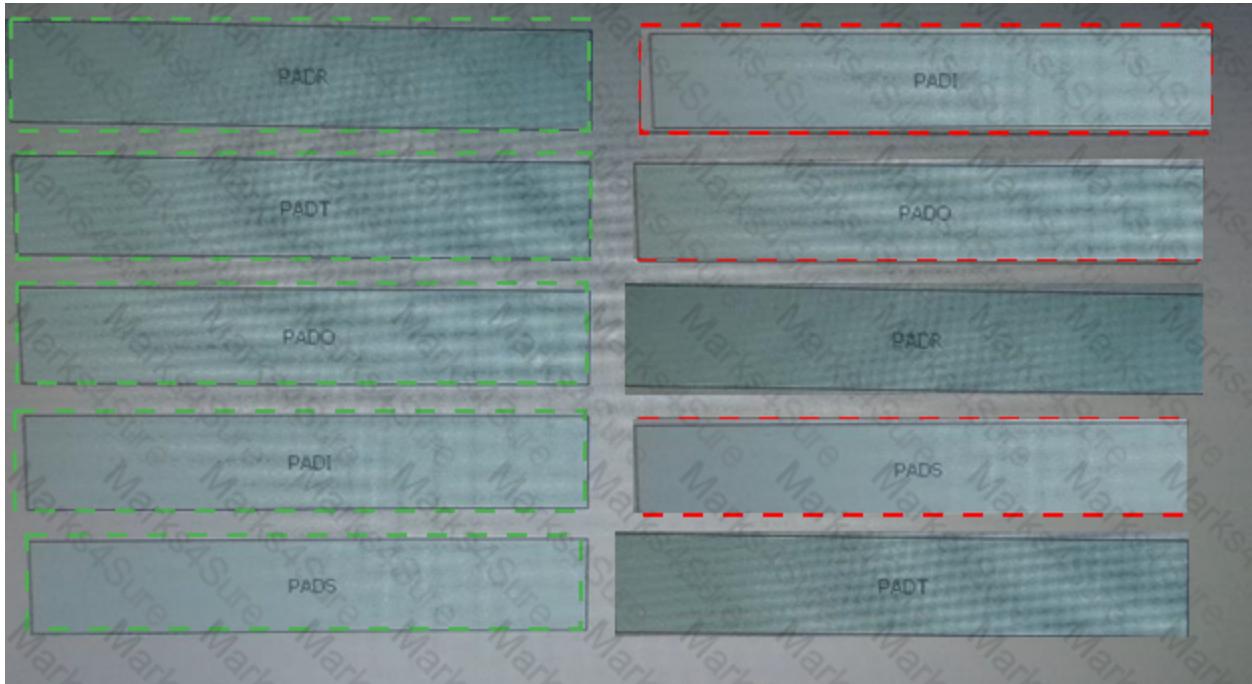
Answer: E

Question #:311 - [\(Exam Topic 3\)](#)

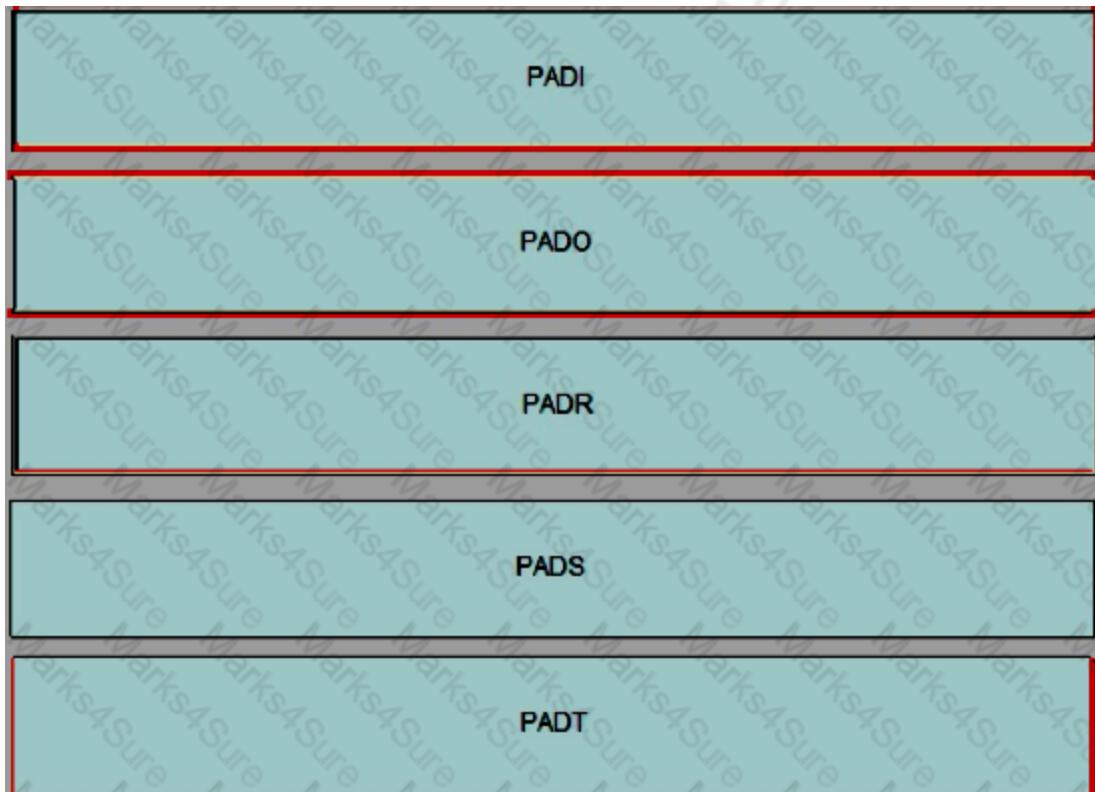
Drag and drop the PPPoE packet type on the left of the corresponding description on the right.

PADR	A packet that is sent with the destination_addr set to the broadcast address. The packet indicates the type of service requested.
PADT	A packet that is sent with the broadcast_addr set to the unicast address of the PPPoE client. The packet contains an offer for the client.
PADO	A packet that is sent from the PPPoE client with the destination_addr set to the chosen access concentrator. The packet contains a session request from the client.
PADI	A packet that is sent as confirmation to the client. The packet contains the unique PPPoE session ID.
PADS	A packet that is sent to terminate the PPPoE session

Answer:



Explanation



Question #:312 - [\(Exam Topic 3\)](#)

Drag and drop each STP port role on the left to the matching statement on the right.

alternate port	the port whose path cost deems it closest to the root bridge
backup port	the port that sends the best BPDUs on its segment
designated port	a blocked port that receives more useful BPDUs from a different bridge
root port	a blocked port that receives more useful BPDUs from its own bridge

Answer:

alternate port	root port
backup port	designated port
designated port	alternate port
root port	backup port

Explanation

root port
designated port
alternate port
backup port

Question #:313 - [\(Exam Topic 3\)](#)

Refer to the exhibit.

```
R1#show monitor capture status
Load for five secs: 0%/0%; one minute: 0%; five minutes: 0%
capture state      : ON
  [running for 00:03:26.860]
capture mode       : Circular [wrap count = 0 ]
Number of packets :
  captured : 201
  dropped  : 0
  received  : 591
Capture will stop after 00:01:33
```

Which two statements about this capture are true? (Choose two.)

- A. It is set to run for five minutes.
- B. It continues to capture data after the buffer is full.
- C. It is set to nm for a period of 00:03:26.
- D. It captures data only until the buffer is full.
- E. It is set to use the default buffer type

Answer: A B

Question #:314 - [\(Exam Topic 3\)](#)

If EIGRP and OSPF are configured within an administrative domain for the same network, which value can you change so that the OSPF becomes the installed routing protocol for all routes?

- A. Local preference
- B. Metric
- C. MED
- D. Administrative distance
- E. Prefix length

Answer: D

Question #:315 - [\(Exam Topic 3\)](#)

Which two statements about Cisco Express Forwarding are true? (Choose two.)

- A. Changing MAC Header rewrite strings requires cache validation.
- B. Cisco Express Forwarding tables contain reachability information and adjacency tables contain forwarding information.
- C. Adjacency tables and Cisco Express Forwarding tables require packet process- switching
- D. Cisco Forwarding tables contain forwarding; information and adjacency tables contain reachability information
- E. adjacency tables and Cisco Express Forwarding tables can be built separately

Answer: B E

Question #:316 - [\(Exam Topic 3\)](#)

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

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

Answer: B

Question #:317 - [\(Exam Topic 3\)](#)

Which three criteria are used for stackwise election of a master switch?

- A. lowest MAC address
- B. VLAN revision number
- C. longest uptime
- D. user-selected priority
- E. highest MAC address
- F. IOS version number

Answer: A C D

Question #:318 - [\(Exam Topic 3\)](#)

Which two statements about the Add Path Support in EIGRP feature are true?(Choose two)

- A. It is supported in both classic EIGRP and EIGRP named mode configurations.
- B. It allows a DMVPN hub to advertise as many as five best paths.
- C. The next-hop-self command should be disabled to prevent interference with the add-paths command.
- D. It uses the variance command to alter the metrics of routes.
- E. It is supported with both DMVPN and GETVPN.

Answer: B C

Question #:319 - [\(Exam Topic 3\)](#)

What feature can a device use to identify other members of the same IPv6 multicast group on a network segment?

- A. MLD
- B. MSDP
- C. source-specific multicast
- D. rendezvous points

Answer: A

Question #:320 - [\(Exam Topic 3\)](#)

Refer to the exhibit.

SPANTREE-2-LOO PGUAR DBLOCK: No BPDUs were received on port FastEthernet 0/1+ in VLAN 10. Moved to loop-inconsistent state+

While troubleshooting an issue with a blocked switch port, you find this error in the switch log. Which action should you take first to locate the problem?

- A. Check the attached switch for a BPDU filter.
- B. Test the link for unidirectional failures.
- C. Execute the show interface command to check FastEthernt 0/0
- D. Check the attached switch for an interface configuration issue

Answer: A**Question #:321 - [\(Exam Topic 3\)](#)**

Which two options are valid IPV6 extension header types? (Choose two)

- A. Flow Label
- B. Encapsulating security Payload
- C. Version
- D. Traffic Class
- E. Mobility

Answer: B E**Question #:322 - [\(Exam Topic 3\)](#)**

Which statement about Type-4 LSA in OSPFv2 is true?

- A. It is generated by each ABR and forwarded in non-stub areas.
- B. It is generated by the ASBR and forwarded throughout the whole OSPF domain
- C. It is present only in the backbone area
- D. It is forwarded in NSSA areas

Answer: A**Question #:323 - [\(Exam Topic 3\)](#)**

configuration line in DMVPN deployment?

- A. It allows the spoke routers to change the next hop value when sending EIGRP updates to the hub router.
- B. It enables EIGRP to dynamically assign the next hop value based on the EIGRP database.
- C. It preserves the original next hop value as learned by the spoke routers.
- D. It preserves the original next hop value as learned by the hub routers.
- E. It allows the spoke routers to change the next hop value when sending EIGRP updates to the spoke router.

Answer: C**Question #:324 - (Exam Topic 3)**

Refer to the exhibit.

```
R1#show ip bgp summary
BGP router identifier 10.1.1.1, local AS number 65530
BGP table version is 1, main routing table version 1

Neighbor      V   AS MsgRcvd MsgSent TblVer  InQ OutQ Up/Down  State
10.1.12.2     4   65530    11     11      0      0      0  00:08:00  Active

R1#show ip route | in 10.1.12.0
C      10.1.12.0/24 is directly connected, FastEthernet0/0

R1#show run | section router bgp
router bgp 65530
  no synchronization
  bgp router-id 10.1.1.1
  bgp log-neighbor-changes
  neighbor 10.1.12.2 remote-as 65530
  neighbor 10.1.12.2 update-source Loopback0
  no auto-summary

R2#show ip bgp summary
BGP router identifier 10.2.2.2, local AS number 65530
BGP table version is 1, main routing table version 1

Neighbor      V   AS MsgRcvd MsgSent TblVer  InQ OutQ Up/Down  State/P
10.1.12.1     4   65530    11     89      0      0      0  00:41:39  Active
```

R1 and R2 have been configured as BGP neighbor, but their session is stuck in active.

Which action can you take that will enable a session to be established?

- A. Enable synchronization on R1 and R2.
- B. Issue the neighbor 10.1.12.2 activate command on R1.
- C. Configure 10.1.12.1 as the BGP router ID on R1
- D. Configure a neighbor relationship with Loopback0 address of R1 on R2.

Answer: D**Question #:325 - (Exam Topic 3)**

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

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

- F. They are used to forward untagged traffic only.

Answer: C F

Question #:326 - [\(Exam Topic 3\)](#)

Which IPv6 first-hop security feature blocks traffic sourced from IPv6 addresses that are outside the prefix gleaned from router advertisements?

- A. IPv6 RA guard
- B. IPv6 DHCP guard
- C. IPv6 source guard
- D. IPv6 prefix guard

Answer: D

Question #:327 - [\(Exam Topic 3\)](#)

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

- A. It can work over any transport that can forward IP packets.
- B. It provides integrated mechanisms to maintain First Hop Resiliency Protocols such as HSRP, VRRP, or GLBP.
- C. It includes automatic detection of multihoming.
- D. It relies on flooding to propagate MAC address reachability information.
- E. It can carry a single VLAN per VPLS instance.

Answer: D E

Question #:328 - [\(Exam Topic 3\)](#)

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

- A. IS-IS and EIGRP are link-state protocols
- B. OSPF and IS-IS are classless protocols.
- C. RIPv2 and IS-IS calculate the metric of a link based on the bandwidth of a link.
- D. OSPF and EIGRP have high resource usage.

- E. RIPv2 and EIGRP support VLSM.F. RIPv2 and OSPF are distance vector protocols

Answer: B E

Question #:329 - [\(Exam Topic 3\)](#)

Which three technologies can be used to implement redundancy for IPv6? (Choose three)

- A. IPv6 NA
- B. NHRP
- C. HSRP
- D. DV MAP
- E. GLBP
- F. IPv6 RA

Answer: C E F

Question #:330 - [\(Exam Topic 3\)](#)

Which IPv6 tunneling method allows Host A to communicate with Host B within the same site?

- A. GRE
- B. ISATAP
- C. Manual
- D. 6to4

Answer: B

Question #:331 - [\(Exam Topic 3\)](#)

Drag and drop the OTV component on the left to the function it performs on the right.

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

Answer:

edge device	authoritative edge device
join interface	internal interface
internal interface	site VLAN
overlay interface	join interface
site VLAN	overlay interface
authoritative edge device	edge device

Explanation

authoritative edge device

internal interface

site VLAN

join interface

overlay interface

edge device

Question #:332 - [\(Exam Topic 3\)](#)

Which two statements about the host address 172.150.100.10/18 are true? (Choose two)

- A. The network address is 172.150.0.0
- B. The network address is 172.150.64.0
- C. The network address is 172.150.100.0
- D. The broadcast address is 172.150.127.255
- E. The broadcast address is 172.150.255.255
- F. The broadcast address is 172.150.100.255

Answer: B D

Question #:333 - [\(Exam Topic 3\)](#)

Drag and drop the NAT operations on the left into the correct sequential order on the right.

Check the IP routing table.	step 1
Check the outbound access list.	step 2
Check the inbound access list.	step 3
Inspect CBAC.	step 4
Translate inside local to outside global.	step 5
Check the policy routing	step 6

Answer:

Check the IP routing table.	step 1
Check the outbound access list.	step 2
Check the inbound access list.	step 3
Inspect CBAC.	step 4
Translate inside local to outside global.	step 5
Check the policy routing	step 6

Explanation

Check the inbound access list.
Check the policy routing
Check the IP routing table.
Translate inside local to outside global.
Check the outbound access list.
Inspect CBAC.

Question #334 - (Exam Topic 3)

Which two statements about MLD snooping are true? (Choose two)

- A. MLD protocol messages can be sent in both IGMPv4 and ICM3V6 formats.
- B. It supports private VLANs.
- C. It limits the Layer 2 multicast traffic that is generated by routing protocols.
- D. The MLD snooping querier requires the VLAN interface to be configured with an IPv6 address.
- E. PFC modes support MLD version 2 only.

Answer: B D

Question #:335 - [\(Exam Topic 3\)](#)

Drag and drop each BGP attribute on the left into the priority order in which the attributes are preferred when determining the best path on the right.

highest LOCAL_PREF	First
highest WEIGHT	Second
locally originated path	Third
lowest MED	Fourth
lowest origin type	Fifth
shortest AS_PATH	Sixth

Answer:

highest LOCAL_PREF	highest WEIGHT
highest WEIGHT	highest LOCAL_PREF
locally originated path	locally originated path
lowest MED	shortest AS_PATH
lowest origin type	lowest origin type
shortest AS_PATH	lowest MED

Explanation

highest WEIGHT

highest LOCAL_PREF

locally originated path

shortest AS_PATH

lowest origin type

lowest MED

Question #:336 - [\(Exam Topic 3\)](#)

Company A have 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. communities
- B. peer groups
- C. allows-in
- D. AS path prepending

Answer: C

Question #:337 - [\(Exam Topic 3\)](#)

Drag and drop each IPv6 neighbor discovery message type on the left to the corresponding description on the right.

neighbor redirect	The message a node uses to share its link-layer address
router solicitation	The message a node uses to notify hosts on the link of a better first-hop for a destination
router advertisement	The message a node uses to discover the link-local addresses of other nodes on the link
neighbor advertisement	The message a node uses to share information about its status and its local prefixes
neighbor solicitation	The message a host sends when it starts up, requesting local routers to transmit information

Answer:

neighbor redirect	The message a node uses to share its link-layer address
router solicitation	The message a node uses to notify hosts on the link of a better first-hop for a destination
router advertisement	The message a node uses to discover the link-local addresses of other nodes on the link
neighbor advertisement	The message a node uses to share information about its status and its local prefixes
neighbor solicitation	The message a host sends when it starts up, requesting local routers to transmit information

Explanation

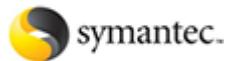
neighbor advertisement
neighbor redirect
neighbor solicitation
router advertisement
router solicitation

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