400-101 cisco

Number: 400-101
Passing Score: 925
Time Limit: 120 min

Exam A

QUESTION 1
Which two options are reasons for TCP starvation? (Choose two.)

A. The use of tail drop
B. The use of WRED
C. Mixing TCP and UDP traffic in the same traffic class
D. The use of TCP congestion control

Correct Answer: CD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 2
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

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 3
Refer to the exhibit. Which action will solve the error state of this interface when connecting a host behind a Cisco IP phone?

```
DOT1X-SP-5-SECURITY_VIOLATION: Security violation on interface GigabitEthernet4/8,
New MAC address 0080.ad00.c2e4 is seen on the interface in Single host mode
%PM-SP-4-ERR_DISABLE: security-violation error detected on Gi4/8, putting Gi4/8 in
err-disable state
```

A. Configure dot1x-port control auto on this interface
B. Enable errdisable recovery for security violation errors
C. Enable port security on this interface
D. Configure multidomain authentication on this interface

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 4
Refer to the exhibit. While troubleshooting high CPU utilization of a Cisco Catalyst 4500 Series Switch, you notice the error message that is shown in the exhibit in the log file. What can be the cause of this issue, and how can it be prevented?

```
%C4K_L3HWFORWARDING-2-FWDCAMFULL: L3 routing table is full. Switching to software forwarding
```

A. The hardware routing table is full. Redistribute from BGP into IGP.
B. The software routing table is full. Redistribute from BGP into IGP.
C. The hardware routing table is full. Reduce the number of routes in the routing table.
D. The software routing table is full. Reduce the number of routes in the routing table.
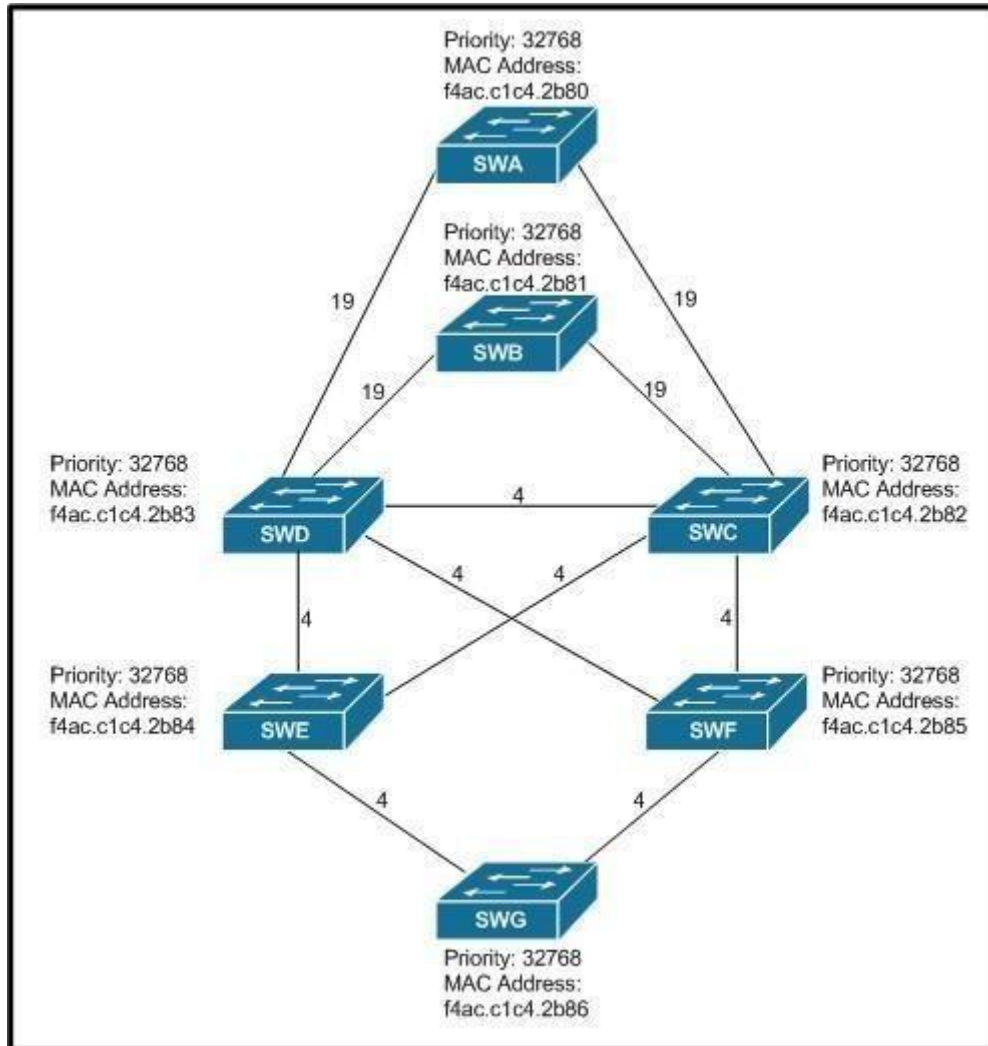
Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 5
Refer to the exhibit. All switches have default bridge priorities, and originate BPDUs with MAC addresses as indicated. The numbers shown are STP link metrics. Which two ports are forwarding traffic after STP converges? (Choose two.)

A. The port connecting switch SWD with switch SWE
B. The port connecting switch SWG with switch SWF

C. The port connecting switch SWC with switch SWE

D. The port connecting switch SWB with switch SWC

Correct Answer: CD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 6
Refer to the exhibit. While troubleshooting high CPU utilization on one of your Cisco Catalyst switches, you find that the issue is due to excessive flooding that is caused by STP. What can you do to prevent this issue from happening again?

```
switch#show spanning-tree detail

 MST0 is executing the mstp compatible Spanning Tree protocol
  Bridge Identifier has priority 32768, sysid 0, address f4ac.clc4.2b80
  Configured hello time 2, max age 20, forward delay 15, transmit hold-count 6
  Current root has priority 24576, address 0019.07aa.9ac0
  Root port is 56 (Port-channel1), cost of root path is 0
  Topology change flag not set, detected flag not set
  Number of topology changes 296 last change occurred 00:01:17 ago
          from GigabitEthernet0/15
```

A. Disable STP completely on the switch.

B. Change the STP version to RSTP.

C. Configure PortFast on port-channel 1.

D. Configure UplinkFast on the switch.

E. Configure PortFast on interface Gi0/15.

Correct Answer: E
Section: (none)
Explanation

Explanation/Reference:

QUESTION 7
Refer to the exhibit. Which three statements about the output are true? (Choose three.)

```
Switch# show ip igmp snooping mrouter
Vlan     ports
----     -----
 10      Gi2/0/1(dynamic), Router
 20      Gi2/0/1(dynamic), Router
```

A. An mrouter port can be learned by receiving a PIM hello packet from a multicast router.
B. This switch is configured as a multicast router.
C. Gi2/0/1 is a trunk link that connects to a multicast router.
D. An mrouter port is learned when a multicast data stream is received on that port from a multicast router.
E. This switch is not configured as a multicast router. It is configured only for IGMP snooping.
F. IGMP reports are received only on Gi2/0/1 and are never transmitted out Gi2/0/1 for VLANs 10 and 20.

Correct Answer: ABC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 8
Refer to the exhibit. If a port is configured as shown and receives an untagged frame, of which VLAN will the untagged frame be a member?

```
Switch#show int fastEthernet0/1 switchport
Name: Fa0/1
Switchport: Enabled
Administrative Mode: dynamic auto
Operational Mode: static access
Administrative Trunking Encapsulation: dot1q
Operational Trunking Encapsulation: native
Negotiation of Trunking: On
Access Mode VLAN: 2 (VLAN0002)
Trunking Native Mode VLAN: 3 (VLAN0003)
Administrative Native VLAN tagging: enabled
Voice VLAN: none
Administrative private-vlan host-association: none
Administrative private-vlan mapping: none
Administrative private-vlan trunk native VLAN: none
Administrative private-vlan trunk Native VLAN tagging: enabled
Administrative private-vlan trunk encapsulation: dot1q
Administrative private-vlan trunk normal VLANs: none
Administrative private-vlan trunk private VLANs: none
Operational private-vlan: none
Trunking VLANs Enabled: ALL
Pruning VLANs Enabled: 2-1001
Capture Mode Disabled
Capture VLANs Allowed: ALL

Protected: false
Unknown unicast blocked: disabled
Unknown multicast blocked: disabled
Appliance trust: none
```

A. VLAN 1
B. VLAN 2
C. VLAN 3
D. VLAN 4

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 9
Refer to the exhibit. Which statement describes the effect on the network if FastEthernet0/1 goes down temporarily?

```
Switch#show interfaces switchport backup detail

Switch Backup Interface Pairs:

Active Interface         Backup Interface         State
-----------------------------------------------------------------------
FastEthernet0/1          FastEthernet0/2          Active Up/Backup Standby

Interface Pair    : Fa0/1, Fa0/2
Preemption Mode   : off
Bandwidth : 100000 Kbit (Fa0/1), 10000 Kbit (Fa0/2)
Mac Address Move Update Vlan : auto
```

A. FastEthernet0/2 forwards traffic only until FastEthernet0/1 comes back up.
B. FastEthernet0/2 stops forwarding traffic until FastEthernet0/1 comes back up.
C. FastEthernet0/2 forwards traffic indefinitely.
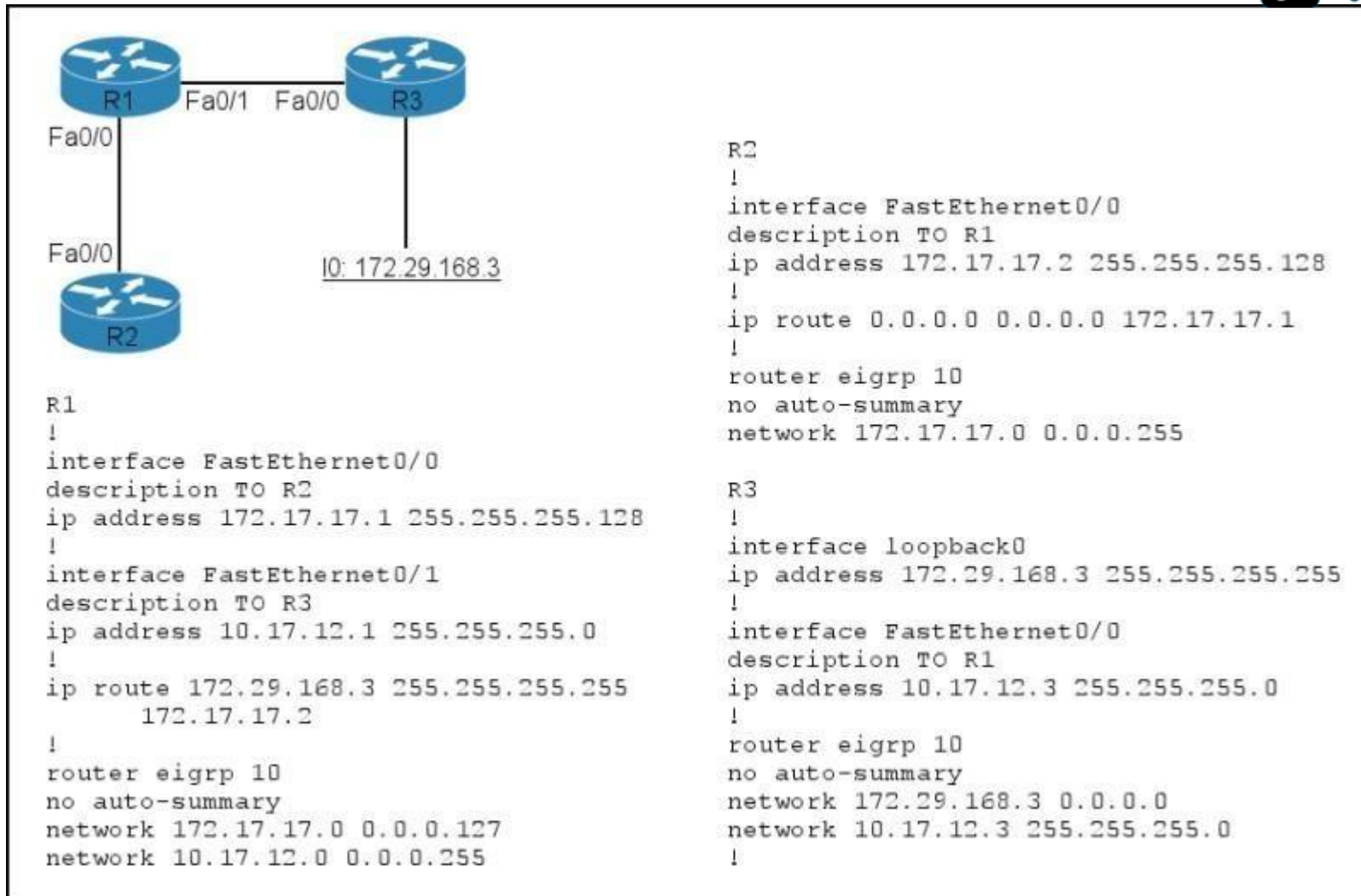D. FastEthernet0/1 goes into standby.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 10
Refer to the exhibit. Routers R1, R2, and R3 are configured as shown, and traffic from R2 fails to reach 172.29.168.3.
Which action can you take to correct the problem?

```
R1       Fa0/1   Fa0/0     R3
Fa0/0

Fa0/0
               I0: 172.29.168.3
   R2
```

```
R2
!
interface FastEthernet0/0
description TO R1
ip address 172.17.17.2 255.255.255.128
!
ip route 0.0.0.0 0.0.0.0 172.17.17.1
!
router eigrp 10
no auto-summary
network 172.17.17.0 0.0.0.255

R3
!
interface loopback0
ip address 172.29.168.3 255.255.255.255
!
interface FastEthernet0/0
description TO R1
ip address 10.17.12.3 255.255.255.0
!
router eigrp 10
no auto-summary
network 172.29.168.3 0.0.0.0
network 10.17.12.3 255.255.255.0
!
```

```
R1
!
interface FastEthernet0/0
description TO R2
ip address 172.17.17.1 255.255.255.128
!
interface FastEthernet0/1
description TO R3
ip address 10.17.12.1 255.255.255.0
!
ip route 172.29.168.3 255.255.255.255
      172.17.17.2
!
router eigrp 10
no auto-summary
network 172.17.17.0 0.0.0.127
network 10.17.12.0 0.0.0.255
```

A. Correct the static route on R1.
B. Correct the default route on R2.
C. Edit the EIGRP configuration of R3 to enable auto-summary.
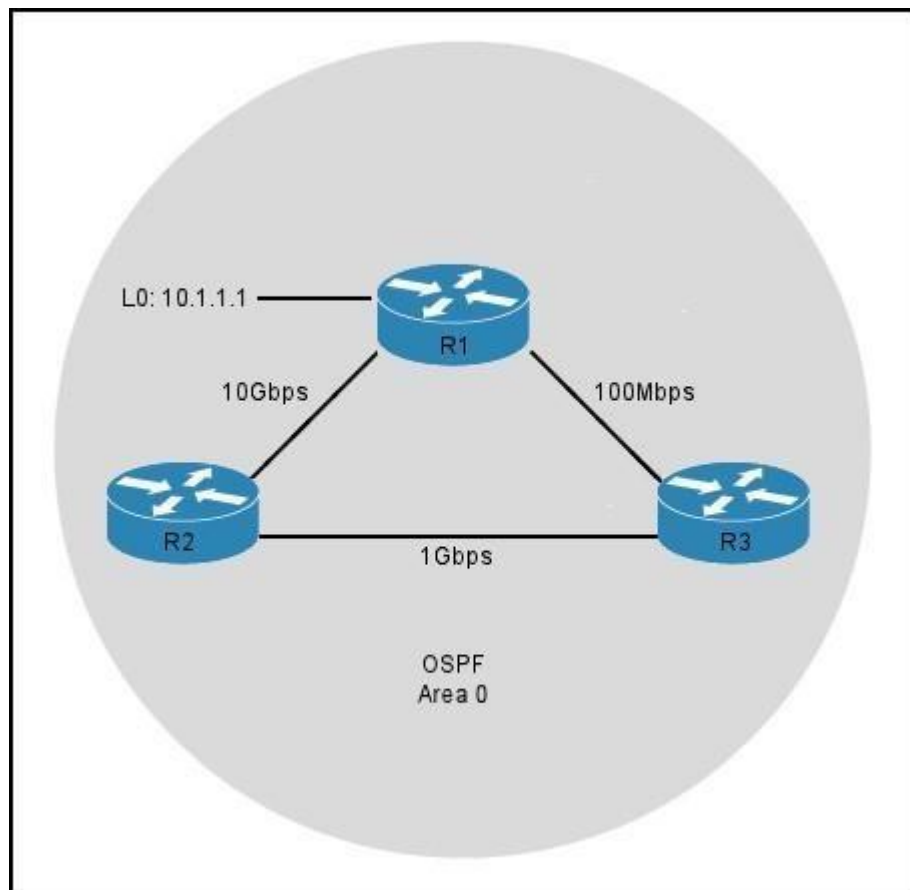D. Correct the network statement for 172.29.168.3 on R3.

Correct Answer: A

Section: (none)
Explanation

Explanation/Reference:

QUESTION 11
Refer to the exhibit. R3 prefers the path through R1 to reach host 10.1.1.1.
Which option describes the reason for this behavior?

A. The OSPF reference bandwidth is too small to account for the higher speed links through R2.
B. The default OSPF cost through R1 is less than the cost through R2.

C. The default OSPF cost through R1 is more than the cost through R2.

D. The link between R2 and R1 is congested.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 12
Refer to the exhibit. For which reason could a BGP-speaking device in autonomous system 65534 be prevented from installing the given route in its BGP table?

```
*>172.21.95.0/22  172.17.192.1   0  120 0 65534 65535 65100 65235 ?
```

A. The AS number of the BGP is specified in the given AS_PATH.

B. The origin of the given route is unknown.

C. BGP is designed only for publicly routed addresses.

D. The AS_PATH for the specified prefix exceeds the maximum number of ASs allowed.

E. BGP does not allow the AS number 65535.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 13
Which statement about the feasibility condition in EIGRP is true?

A. The prefix is reachable via an EIGRP peer that is in the routing domain of the router.

B. The EIGRP peer that advertises the prefix to the router has multiple paths to the destination.

C. The EIGRP peer that advertises the prefix to the router is closer to the destination than the router.

D. The EIGRP peer that advertises the prefix cannot be used as a next hop to reach the destination.

Correct Answer: C

Section: (none)
Explanation

Explanation/Reference:

QUESTION 14
Which two statements about the function of the stub feature in EIGRP are true? (Choose two.)

A. It stops the stub router from sending queries to peers.
B. It stops the hub router from sending queries to the stub router.
C. It stops the stub router from propagating dynamically learned EIGRP prefixes to the hub routers .
D. It stops the hub router from propagating dynamically learned EIGRP prefixes to the stub routers .

Correct Answer: BC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 15
In which type of EIGRP configuration is EIGRP IPv6 VRF-Lite available?

A. stub
B. named mode
C. classic mode
D. passive

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 16
Two routers are trying to establish an OSPFv3 adjacency over an Ethernet link, but the adjacency is not forming. Which two options are possible reasons that prevent OSPFv3 to form between these two routers? (Choose two.)

A. mismatch of subnet masks

B. mismatch of network types
C. mismatch of authentication types
D. mismatch of instance IDs
E. mismatch of area types

Correct Answer: DE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 17
Like OSPFv2, OSPFv3 supports virtual links.Which two statements are true about the IPv6 address of a virtual neighbor? (Choose two.)

A. It is the link-local address, and it is discovered by examining the hello packets received from the virtual neighbor.
B. It is the link-local address, and it is discovered by examining link LSA received by the virtual neighbor.
C. It is the global scope address, and it is discovered by examining the router LSAs received by the virtual neighbor.
D. Only prefixes with the LA-bit not set can be used as a virtual neighbor address.
E. It is the global scope address, and it is discovered by examining the intra-area-prefix-LSAs received by the virtual neighbor.
F. Only prefixes with the LA-bit set can be used as a virtual neighbor address.

Correct Answer: EF
Section: (none)
Explanation

Explanation/Reference:

QUESTION 18
Which field is specific to the OPSFv3 packet header, as opposed to the OSPFv2 packet header?

A. checksum
B. router ID
C. AuType
D. instance ID

Correct Answer: D
Section: (none)

Explanation

Explanation/Reference:

QUESTION 19
Which two functions are performed by the DR in OSPF? (Choose two.)

A. The DR originates the network LSA on behalf of the network.
B. The DR is responsible for the flooding throughout one OSPF area.
C. The DR forms adjacencies with all other OSPF routers on the network, in order to synchronize the LSDB across the adjacencies.
D. The DR is responsible for originating the type 4 LSAs into one area.

Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 20
Refer to the exhibit. AS #1 and AS #2 have multiple EBGP connections with each other. AS #1 wants all return traffic that is destined to the prefix 10.10.10.1/32 to enter through the router R1 from AS #2. In order to achieve this routing policy, the AS 1 advertises a lower MED from R1, compared to a higher MED from R3, to their respective BGP neighbor for the prefix 10.10.10.0/24. Will this measure guarantee that the routing policy is always in effect?
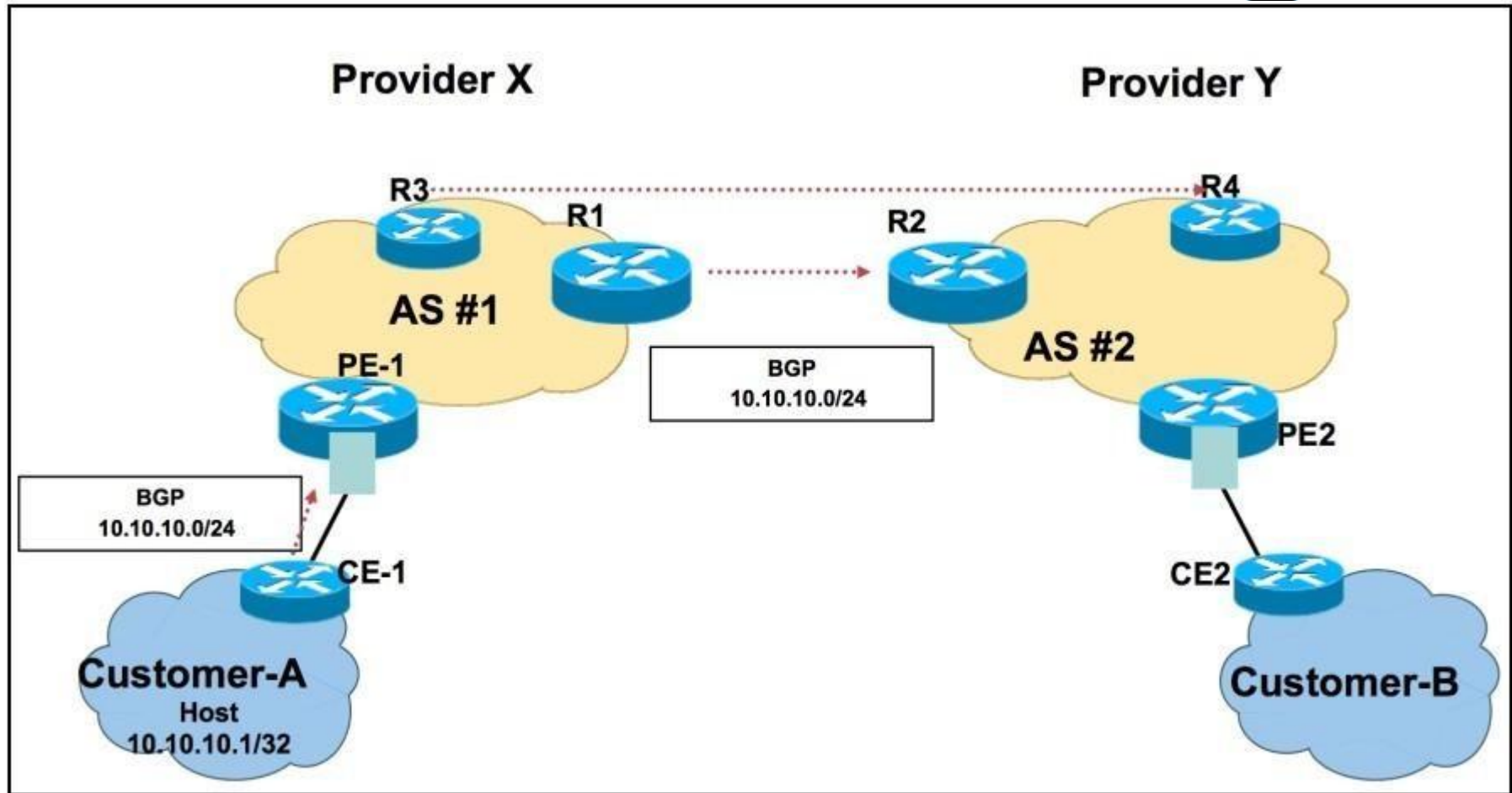
A. Yes, because MED plays a deterministic role in return traffic engineering in BGP.
B. Yes, because a lower MED forces BGP best-path route selection in AS #2 to choose R1 as the best path for 10.10.10.0/24.
C. Yes, because a lower MED in AS #2 is the highest BGP attribute in BGP best-path route selection.
D. No, AS #2 can choose to alter the weight attribute in R2 for BGP neighbor R1, and this weight value is cascaded across AS #2 for BGP best-path route selection.
E. No, AS #2 can choose to alter the local preference attribute to overwrite the best-path route selection over the lower MED advertisement from AS #1. This local preference attribute is cascaded across AS #2 for the BGP best-path route selection.

Correct Answer: E

Section: (none)
Explanation

Explanation/Reference:

QUESTION 21
Which regular expression will only allow prefixes that originated from AS 65000 and that are learned through AS 65001?

A. ^65000_65001$
B. 65000_65001$
C. ^65000_65001
D. ^65001_65000$

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 22
Which statement describes the BGP add-path feature?

A. It allows for installing multiple IBGP and EBGP routes in the routing table.
B. It allows a network engineer to override the selected BGP path with an additional path created in the config.
C. It allows BGP to provide backup paths to the routing table for quicker convergence.
D. It allows multiple paths for the same prefix to be advertised.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 23
Refer to the exhibit. What does "(received-only)" mean?

```
R1>sh ip bgp 10.1.1.1
BGP routing table entry for 10.1.0.0/16, version 182
Paths: (2 available, best #1, table default, not advertised to EBGP peer)
  Advertised to update-groups:
     2
  Refresh Epoch 1
  50811 65112
     172.28.1.5 from 172.28.1.5 (192.168.236.222)
       Origin incomplete, localpref 800, valid, external, best
       Community: no-export
       rx pathid: 0, tx pathid: 0x0
  Refresh Epoch 1
  50811 65112, (received-only)
     172.28.1.5 from 172.28.1.5 (192.168.236.222)
       Origin incomplete, localpref 100, valid, external
       Community: 65112:21147 50811:11145
       rx pathid: 0, tx pathid: 0
R1>
```

A. The prefix 10.1.1.1 can not be advertised to any eBGP neighbor.
B. The prefix 10.1.1.1 can not be advertised to any iBGP neighbor.
C. BGP soft reconfiguration outbound is applied.
D. BGP soft reconfiguration inbound is applied.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 24
Refer to the exhibit. Which statement is true?

```
C#show ipv6 route ::/0
IPv6 Routing Table - 6 entries
Codes: C - Connected, L - Local, S - Static, R - RIP, B - BGP
       I1 - ISIS L1, I2 - ISIS L2, IA - ISIS interarea, IS - ISIS summary
I1   ::/0 [115/10]
     via FE80::A8BB:CCFF:FE00:401, Ethernet1/0
     via ::, Ethernet0/0
```

A. There is no issue with forwarding IPv6 traffic from this router.

B. IPv6 traffic can be forwarded from this router, but only on Ethernet1/0.

C. IPv6 unicast routing is not enabled on this router.

D. Some IPv6 traffic will be blackholed from this router.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 25
Refer to the exhibit. What is a reason for the RIB-failure?

```
R1#show bgp ipv4 unicast 10.100.1.1/32
BGP routing table entry for 10.100.1.1/32, version 8
Paths: (2 available, best #1, table default, RIB-failure(17))
  Advertised to update-groups:
      2
  Refresh Epoch 2
  4
    10.1.3.4 from 10.1.3.4 (10.100.1.1)
      Origin IGP, metric 0, localpref 100, valid, external, best
      rx pathid: 0, tx pathid: 0x0
  Refresh Epoch 2
  5 4
    10.1.5.5 from 10.1.5.5 (10.1.5.5)
      Origin IGP, localpref 100, valid, external
      rx pathid: 0, tx pathid: 0
```

A. CEF is not enabled on this router.
B. The route 10.100.1.1/32 is in the routing table, but not as a BGP route.
C. The routing table has yet to be updated with the BGP route.
D. The BGP route is filtered inbound and hence is not installed in the routing table.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 26
Refer to the exhibit. Which statement is true?

```
R1#show bgp ipv4 unicast summary
BGP router identifier 10.1.3.1, local AS number 1
BGP table version is 2, main routing table version 2
1 network entries using 144 bytes of memory
1 path entries using 80 bytes of memory
1/1 BGP path/bestpath attribute entries using 144 bytes of memory
1 BGP AS-PATH entries using 24 bytes of memory
0 BGP route-map cache entries using 0 bytes of memory
0 BGP filter-list cache entries using 0 bytes of memory
BGP using 392 total bytes of memory
BGP activity 1/0 prefixes, 1/0 paths, scan interval 60 secs

Neighbor     V  AS MsgRcvd MsgSent TblVer   InQ   OutQ Up/Down    State/PfxRcd
10.1.1.2     4  2    69        69  2        0     0    01:00:54             0
10.1.2.3     4  3    69        70  1        0     0    01:00:45             0
10.1.3.4     4  4    72        70  2        0     0    01:01:12             1
```

A. BGP peer 10.1.2.3 is performing inbound filtering.

B. BGP peer 10.1.2.3 is a route reflector.

C. R1 is a route reflector, but BGP peer 10.1.2.3 is not a route reflector client.

D. R1 still needs to send an update to the BGP peer 10.1.2.3.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 27
Refer to the exhibit. Router A and router B are physically connected over an Ethernet interface, and ISIS is configured as shown. Which option explains why the ISIS neighborship is not getting formed between router A and router B?

```
RouterA#
conf t
router isis
 net 49.5200.1580.3500.6002.00

RouterB#
conf t
router isis 1
 net 49.5200.1580.3500.6002.00
```

A. same area ID
B. same N selector
C. same domain ID
D. same system ID

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 28
Refer to the exhibit. Which statement is true?

```
R4#show isis database R4.00-00 detail
IS-IS Level-2 LSP R4.00-00
LSPID                   LSP Seq Num   LSP Checksum   LSP Holdtime        ATT/P/OL
R4.00-00              * 0x000022BE    0xD36A         1194                0/0/0
   Area Address: 49.0001
   NLPID:        0x81 0xCC 0x8E
   Hostname: R4
   IP Address:   10.1.100.4
   IPv6 Address: 2001:100::1:4
   Metric: 10         IS-Extended R3.00
   Metric: 10         IS-Extended R5.03
   Metric: 10         IP 10.1.1.0/24
   Metric: 10         IP 10.1.2.0/24
   Metric: 10         IP 10.1.3.0/24
   Metric: 10         IP 10.1.100.4/32
   Metric: 50         IP 10.200.200.200/32
   Metric: 10         IPv6 2001:1::1:0/112
   Metric: 10         IPv6 2001:1::2:0/112
   Metric: 10         IPv6 2001:100::1:4/128
```

A. IS-IS has been enabled on R4 for IPv6, single-topology.

B. IS-IS has been enabled on R4 for IPv6, multitopology.

C. IS-IS has been enabled on R4 for IPv6, single-topology and multitopology.

D. R4 advertises IPv6 prefixes, but it does not forward IPv6 traffic, because the protocol has not been enabled under router IS-IS.
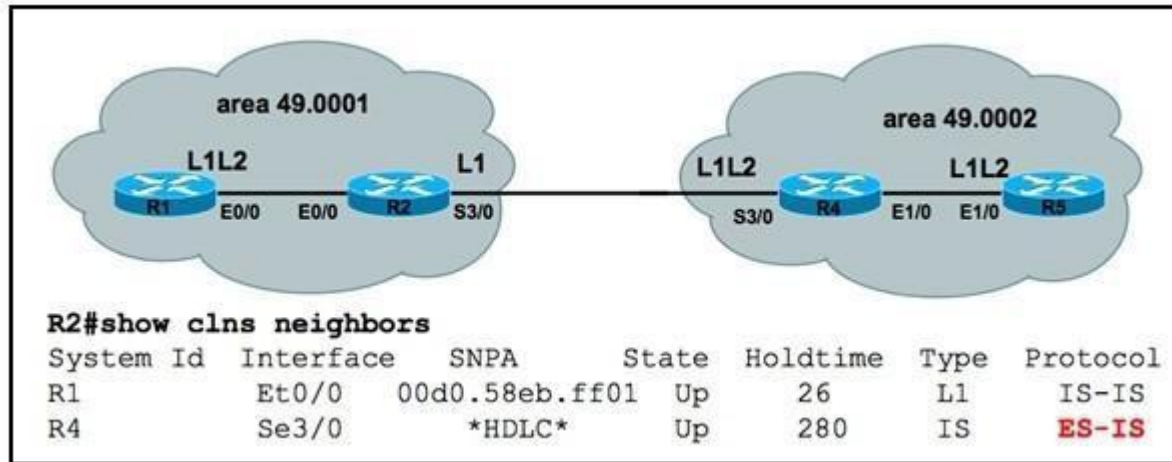
Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 29
Refer to the exhibit. Why is the neighbor relationship between R2 and R4 shown as ES-IS?

```
R2#show clns neighbors
System Id   Interface   SNPA            State   Holdtime   Type   Protocol
R1          Et0/0       00d0.58eb.ff01  Up      26         L1     IS-IS
R4          Se3/0       *HDLC*          Up      280        IS     ES-IS
```

A. because there is an MTU mismatch between R2 and R4
B. because interface S3/0 of R4 is configured as L1/L2
C. because interface S3/0 of R2 is configured as L1
D. because there is a hello interval mismatch between R2 and R4

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 30
Refer to the exhibit. The interface FastEthernet0/1 of both routers R4 and R5 is connected to the same Ethernet segment with a multicast receiver.
Which two statements are true? (Choose two)

```
R4
interface FastEthernet0/1
ip address 192.168.2.1 255.255.255.0
ip pim sparse-dense-mode
duplex auto
speed auto
standby 1 ip 192.168.2.4
standby 1 priority 150
standby 1 preempt

R5
interface FastEthernet0/1
ip address 192.168.2.2 255.255.255.0
ip pim sparse-dense-mode
duplex auto
speed auto
standby 1 ip 192.168.2.4
```

A. Multicast traffic that is destined to a receiver with IP address 192.168.2.6 will flow through router R4.

B. Both routers R4 and R5 will send PIM join messages to the RP.

C. Only router R5 will send a multicast join message to the RP.

D. Multicast traffic that is destined to a receiver with IP address 192.168.2.6 will flow through router R5.

Correct Answer: CD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 31
Refer to the exhibit. This is the configuration of the ASBR of area 110.Which option explains why the remote ABR should not translate the type 7 LSA for the prefix 192.168.0.0/16 into a type 5 LSA?

```
router ospf 100
 router-id 4.4.4.4
 area 110 nssa
 summary-address 192.168.0.0 255.255.0.0 nssa-only
 redistribute static metric-type 1 subnets tag 704
 network 110.110.0.0 0.0.255.255 area 110
```

A. The remote ABR translates all type 7 LSA into type 5 LSA, regardless of any option configured in the ASBR.
B. The ASBR sets the forwarding address to 0.0.0.0 which instructs the ABR not to translate the LSA into a type 5 LSA.
C. The ASBR originates a type 7 LSA with age equal to MAXAGE 3600.
D. The ABR clears the P bit in the header of the type 7 LSA for 192.168.0.0/16.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 32
What is the function of an EIGRP sequence TLV packet?

A. to acknowledge a set of sequence numbers during the startup update process
B. to list the peers that should listen to the next multicast packet during the reliable multicast process
C. to list the peers that should not listen to the next multicast packet during the reliable multicast process
D. to define the initial sequence number when bringing up a new peer

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 33
What are two reasons to define static peers in EIGRP? (Choose two.)

A. Security requirements do not allow dynamic learning of neighbors.

B. The link between peers requires multicast packets.
C. Back-level peers require static definition for successful connection.
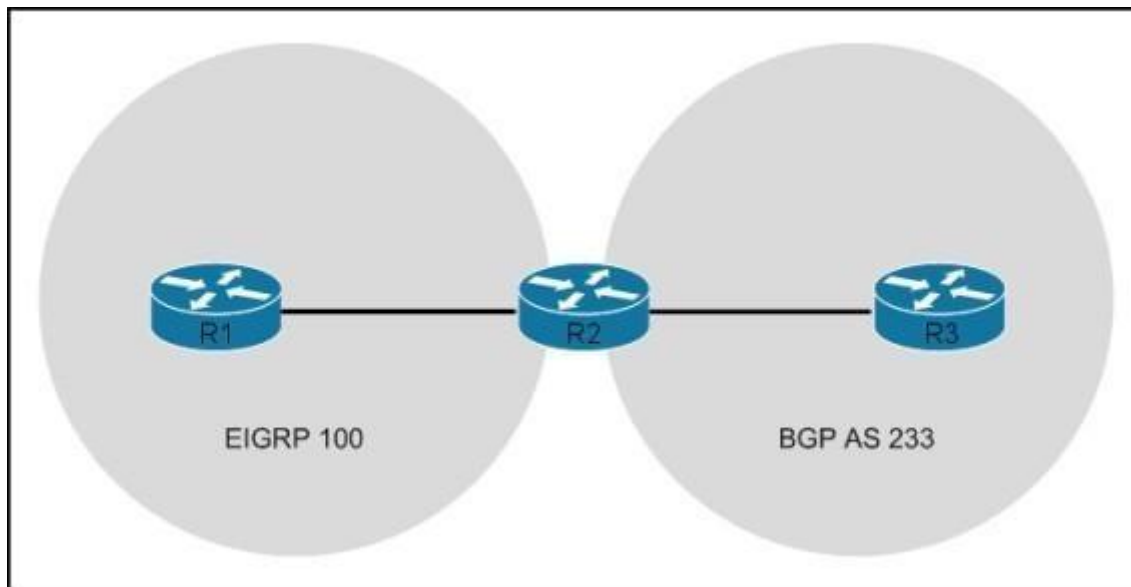D. The link between peers requires unicast packets.

Correct Answer: AD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 34
Refer to the exhibit. R2 is mutually redistributing between EIGRP and BGP. Which configuration is necessary to enable R1 to see routes from R3?

A. The R3 configuration must include ebgp-multihop to the neighbor statement for R2.
B. The R2 BGP configuration must include bgp redistribute-internal.
C. R1 must be configured with next-hop-self for the neighbor going to R2.
D. The AS numbers configured on R1 and R2 must match.

Correct Answer: B
Section: (none)

Explanation

Explanation/Reference:

QUESTION 35
What is the purpose of EIGRP summary leaking?

A. to allow a summary to be advertised conditionally on specific criteria
B. to allow a component of a summary to be advertised in addition to the summary
C. to allow overlapping summaries to exist on a single interface
D. to modify the metric of the summary based on which components of the summary are operational

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 36
Refer to the exhibit. You have just created a new VRF on PE3. You have enabled debug ip bgp vpnv4 unicast updates on PE1, and you can see the route in the debug, but not in the BGP VPNv4 table. Which two statements are true? (Choose two.)

```
*May20 12:16: BGP(4):10.1.1.2 rcvd UPDATE w/ attr:nexthop 10.1.1.2,origin ?, localpref 100,metric 0,extended community RT:999:999
*May20 12:16: BGP(4):10.1.1.2 rcvd 999:999:192.168.1.99/32,label 29--DENIED due to:extended community not supported
```

A. VPNv4 is not configured between PE1 and PE3.
B. address-family ipv4 vrf is not configured on PE3.
C. After you configure route-target import 999:999 for a VRF on PE3, the route will be accepted.
D. PE1 will reject the route due to automatic route filtering.
E. After you configure route-target import 999:999 for a VRF on PE1, the route will be accepted.

Correct Answer: DE
Section: (none)
Explanation

Explanation/Reference:

VCEPlus

QUESTION 37
In GETVPN, which key is used to secure the control plane?

A. Traffic Encryption Key (TEK)
B. content encryption key (CEK)
C. message encryption key (MEK)
D. Key Encryption Key (KEK).

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 38
Refer to the exhibit. NHRP registration is failing; what might be the problem?

```
R6#debug nhrp
NHRP protocol debugging is on
*Apr 14 02:05:29.416: NHRP: Attempting to send packet through interface Tunnel0 via DEST  dst 10.250.20.1
*Apr 14 02:05:29.416: NHRP: Encapsulation succeeded.  Sending NHRP Control Packet  NBMA Address: 192.168.1.1
*Apr 14 02:05:29.416: NHRP: Send Registration Request via Tunnel0 vrf 0, packet size: 105
*Apr 14 02:05:29.416:        src: 10.250.20.6, dst: 10.250.20.1
*Apr 14 02:05:29.416: NHRP: 133 bytes out Tunnel0
*Apr 14 02:05:29.416: NHRP: Resetting retransmit due to hold-timer for 10.250.20.1
*Apr 14 02:05:30.306: NHRP: Setting retrans delay to 2 for nhs  dst 10.250.20.1

R6#sh ip nhrp brief
   Target           Via          NBMA          Mode    Intfc    Claimed
R6#
```

A. invalid IP addressing
B. fragmentation
C. incorrect NHRP mapping
D. incorrect NHRP authentication

Correct Answer: D

Section: (none)
Explanation

Explanation/Reference:

QUESTION 39
Which statement is true comparing L2TPv3 to EoMPLS?

A. L2TPv3 requires OSPF routing, whereas EoMPLS does not.
B. EoMPLS requires BGP routing, whereas L2TPv3 does not.
C. L2TPv3 carries L2 frames inside MPLS tagged packets, whereas EoMPLS carries L2 frames inside IPv4 packets.
D. L2TPv3 carries L2 frames inside IPv4 packets, whereas EoMPLS carries L2 frames inside MPLS packets.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 40
Which statement is true about VPLS?

A. MPLS is not required for VPLS to work.
B. VPLS carries packets as Layer 3 multicast.
C. VPLS has been introduced to address some shortcomings of OTV.
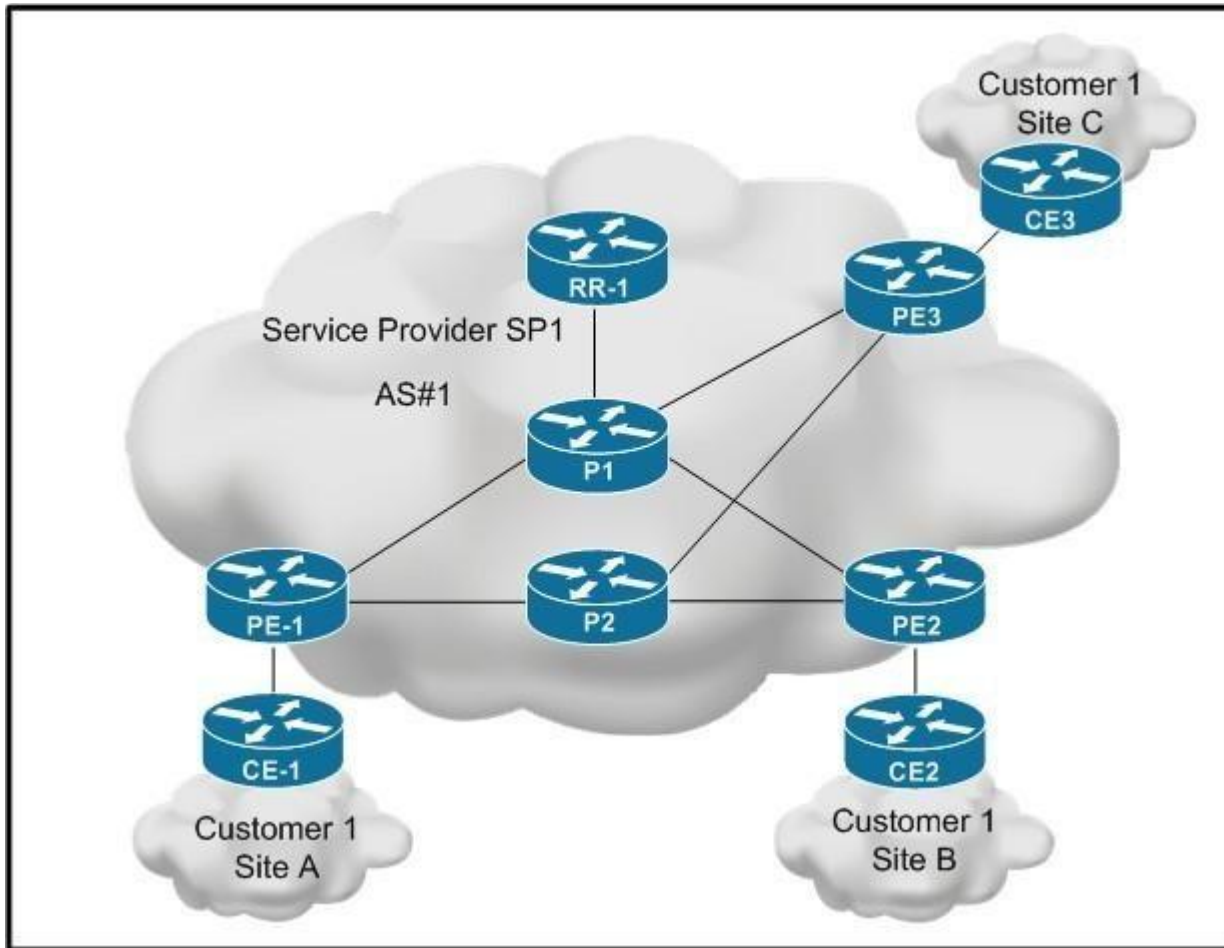D. VPLS requires an MPLS network.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 41
Refer to the exhibit. Service provider SP 1 is running the MPLS-VPN service. The MPLS core network has MP-BGP configured with RR-1 as route reflector. What will be the effect on traffic between PE1 and PE2 if router P1 goes down?

A. No effect, because all traffic between PE1 and PE2 will be rerouted through P2.
B. No effect, because P1 was not the only P router in the forwarding path of traffic.
C. No effect, because RR-1 will find an alternative path for MP-BGP sessions to PE-1 and PE-2.
D. All traffic will be lost because RR-1 will lose the MP-BGP sessions to PE-1 and PE-2.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 42
According to RFC 4577, OSPF for BGP/MPLS IP VPNs, when must the down bit be set?

A. when an OSPF route is distributed from the PE to the CE, for Type 3 LSAs
B. when an OSPF route is distributed from the PE to the CE, for Type 5 LSAs
C. when an OSPF route is distributed from the PE to the CE, for Type 3 and Type 5 LSAs
D. when an OSPF route is distributed from the PE to the CE, for all types of LSAs

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 43
Refer to the exhibit. What is a possible reason for the IPSEC tunnel not establishing?

```
IPSEC(ipsec_process_proposal): proxy identities not supported
```

A. The peer is unreachable.
B. The transform sets do not match.
C. The proxy IDs are invalid.
D. The access lists do not match.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 44
What is a key advantage of Cisco GET VPN over DMVPN?

A. Cisco GET VPN provides zero-touch deployment of IPSEC VPNs.
B. Cisco GET VPN supports certificate authentication for tunnel establishment.
C. Cisco GET VPN has a better anti-replay mechanism.
D. Cisco GET VPN does not require a secondary overlay routing infrastructure.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 45
Refer to the exhibit. What is wrong with the configuration of the tunnel interface of this DMVPN Phase II spoke router?

```
interface Tunnel0
 ip address 172.16.1.2 255.255.255.0
 ip nhrp map 172.16.1.1 192.168.1.1
 ip nhrp network-id 1
 ip nhrp nhs 172.16.1.1
 tunnel source 192.168.2.2
 ip mtu 1416
```

A. The interface MTU is too high.
B. The tunnel destination is missing.
C. The NHRP NHS IP address is wrong.
D. The tunnel mode is wrong.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 46
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.

Correct Answer: DE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 47
Refer to the exhibit. What will be the extended community value of this route?

```
!
ip vrf Cust123
 rd 200:3000
 export map Cust123mgmt
 route-target export 200:3000
!
route-map Cust123mgmt permit 10
 set extcommunity rt 200:9999
!
```

A. RT:200:3000 RT:200:9999

B. RT:200:9999 RT:200:3000

C. RT:200:3000

D. RT:200:9999

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 48
Refer to the exhibit. Which statement is true?

```
CE1#trace
Protocol [ip]: ipv6
Target IPv6 address:  2001:db8:100:1::7
Source address: 2001:db8:100:1::5
Insert source routing header? [no]:
Numeric display? [no]:
Timeout in seconds [3]:
Probe count [3]:
Minimum Time to Live [1]:
Maximum Time to Live [30]:
Priority [0]:
Port Number [0]:
Type escape sequence to abort.
Tracing the route to 2001:10:100:1::7

  1 2001:db8:1:5::1 1 msec 1 msec 1 msec
  2 ::FFFF:10.1.2.4 [MPLS: Labels 17/23 Exp 0] 2 msec 2 msec 2 msec
  3 2001:db8:1:7::2 [AS 1] [MPLS: Label 23 Exp 0] 2 msec 1 msec 1 msec
  4 2001:db8:1:7::7 [AS 1] 2 msec 1 msec 2 msec
```

A. There is an MPLS network that is running 6PE, and the ingress PE router has no mpls ip propagate-ttl.
B. There is an MPLS network that is running 6VPE, and the ingress PE router has no mpls ip propagate-ttl.
C. There is an MPLS network that is running 6PE or 6VPE, and the ingress PE router has mpls ip propagate-ttl.
D. There is an MPLS network that is running 6PE, and the ingress PE router has mpls ip propagate-ttl.
E. There is an MPLS network that is running 6VPE, and the ingress PE router has mpls ip propagate-ttl.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 49
Refer to the exhibit. Which statement is true about a VPNv4 prefix that is present in the routing table of vrf one and is advertised from this router?

```
vrf definition one
 rd 1:1
 route-target export 100:1
 route-target import 100:1
 !
 address-family ipv4
  route-target import 100:2
 exit-address-family
 !
 address-family ipv6
  route-target export 100:3
  route-target import 100:3
 exit-address-family
```

A. The prefix is advertised only with route target 100:1.
B. The prefix is advertised with route targets 100:1 and 100:2.
C. The prefix is advertised only with route target 100:3.
D. The prefix is not advertised.
E. The prefix is advertised with route targets 100:1, 100:2, and 100:3.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 50
Which is the way to enable the control word in an L2 VPN dynamic pseudowire connection on router R1?

A. R1(config)# pseudowire-class cw-enable
    R1(config-pw-class)# encapsulation mpls
    R1(config-pw-class)# set control-word
B. R1(config)# pseudowire-class cw-enable
    R1(config-pw-class)# encapsulation mpls
    R1(config-pw-class)# enable control-word
C. R1(config)# pseudowire-class cw-enable

R1(config-pw-class)# encapsulation mpls
R1(config-pw-class)# default control-word

D. R1(config)# pseudowire-class cw-enable
R1(config-pw-class)# encapsulation mpls
R1(config-pw-class)# control-word

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 51
What is the goal of Unicast Reverse Path Forwarding?

A. to verify the reachability of the destination address in forwarded packets
B. to help control network congestion
C. to verify the reachability of the destination address in multicast packets
D. to verify the reachability of the source address in forwarded packets

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 52
Which three features are considered part of the IPv6 first-hop security suite? (Choose three.)

A. DNS guard
B. destination guard
C. DHCP guard
D. ICMP guard
E. RA guard
F. DoS guard

Correct Answer: BCE
Section: (none)

Explanation

Explanation/Reference:

QUESTION 53
Refer to the exhibit. Why is the router not accessible via Telnet on the GigabitEthernet0 management interface?

```
interface GigabitEthernet0
 ip vrf forwarding Mgmt-intf
 ip address 1.1.1.1 255.255.255.0

ip access-list extended telnet-acl
 permit tcp any 1.1.1.1 0.0.0.0 eq 23 log

line vty 0 4
 access-class telnet-acl in
 transport input telnet
```

A. The wrong port is being used in the telnet-acl access list.
B. The subnet mask is incorrect in the telnet-acl access list.
C. The log keyword needs to be removed from the telnet-acl access list..
D. The access class needs to have the vrf-also keyword added.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 54
Which three modes are valid PfR monitoring modes of operation? (Choose three.)

A. route monitor mode (based on BGP route changes)
B. RMON mode (based on RMONv1 and RMONv2 data)
C. passive mode (based on NetFlow data)
D. active mode (based on Cisco IP SLA probes)

E. fast mode (based on Cisco IP SLA probes)

F. passive mode (based on Cisco IP SLA probes)

Correct Answer: CDE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 55
Refer to the exhibit. Which statement is true?

```
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                Capacity      Max BW   BW Used    Load Status          Exit Id
 Interface               (kbps)        (kbps)   (kbps)     (%)
 ---------               --------      ------   -------  ------- ------          ------
 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                Capacity      Max BW   BW Used    Load Status          Exit Id
 Interface               (kbps)        (kbps)   (kbps)     (%)
 ---------               --------      ------   -------  ------- ------          ------
 Et0/1           Tx          500          450      175       33 UP                    1
                 Rx                       500        0        0
```

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.

Correct Answer: E
Section: (none)
Explanation

Explanation/Reference:

QUESTION 56
In the DiffServ model, which class represents the highest priority with the highest drop probability?

A. AF11
B. AF13
C. AF41
D. AF43

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 57
Refer to the exhibit. Which statement about this IP SLA is true?

```
Entry number: 1
Owner:
Tag:
Type of operation to perform: echo
Target address/Source address: 172.16.129.9/0.0.0.0
Type of Service parameter: 0x0
Request size (ARR data portion): 28
Operation timeout (milliseconds): 5000
Verify data: No
Vrf Name:
Schedule:
     Operation frequency (seconds): 10
     Next Scheduled Start Time: Pending trigger
     Group Scheduled : FALSE
     Randomly Scheduled : FALSE
     Life (seconds): 3600
     Entry Ageout (seconds): never
     Recurring (Starting Everyday): FALSE
     Status of entry (SNMP RowStatus): notInService
Threshold (milliseconds): 5000
Distribution Statistics:
     Number of statistic hours kept: 2
     Number of statistic distribution buckets kept: 1
     Statistic distribution interval (milliseconds): 20
History Statistics:
     Number of history Lives kept: 0
     Number of history Buckets kept: 15
     History Filter Type: None
Enhanced History:
```

A. The SLA must also have a schedule configured before it will start.
B. The TTL of the SLA packets is 10.
C. The SLA has a timeout of 3.6 seconds.
D. The SLA has a lifetime of 5 seconds.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 58
Refer to the exhibit. Which two are causes of output queue drops on FastEthernet0/0? (Choose two.)

```
#show interface FastEthernet0/0
FastEthernet0/0 is up, line protocol is up
  Hardware is PQII_PRO_UEC, address is 0024.14ac.0d3c (bia 001f.9e3c.a5c2)
  Internet address is 1.1.1.1/24
  MTU 1500 bytes, BW 100000 Kbit/sec, DLY 10 usec,
     reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Full Duplex, 100Mbps, media type is RJ45
  output flow-control is XON, input flow-control is XON
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input 00:00:00, output 00:00:00, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/1000/0/0 (size/max/drops/flushes); Total output drops: 10000
  Queueing strategy: Class-based queueing
  Output queue: 100/1000/10000 (size/max total/drops)
  30 second input rate 361000 bits/sec, 204 packets/sec
  30 second output rate 711000000 bits/sec, 223000 packets/sec
     1221583901 packets input, 3044421428 bytes, 0 no buffer
     Received 91124750 broadcasts (0 IP multicasts)
     0 runts, 0 giants, 0 throttles
     0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
     0 watchdog, 0 multicast, 0 pause input
     1090847722 packets output, 796667418 bytes, 0 underruns
     0 output errors, 0 collisions, 0 interface resets
     0 unknown protocol drops
     0 babbles, 0 late collision, 0 deferred
     0 lost carrier, 0 no carrier, 0 pause output
     0 output buffer failures, 0 output buffers swapped out
```

A. an oversubscribed input service policy on FastEthernet0/0
B. a duplex mismatch on FastEthernet0/0
C. a bad cable connected to FastEthernet0/0
D. an oversubscribed output service policy on FastEthernet0/0

E. The router trying to send more than 100 Mb/s out of FastEthernet0/0

Correct Answer: DE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 59
Which three actions are required when configuring NAT-PT? (Choose three.)

A. Enable NAT-PT globally.
B. Specify an 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.

Correct Answer: BCD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 60
Which two DHCP messages are always sent as broadcast? (Choose two.)

A. DHCPOFFER
B. DHCPDECLINE
C. DHCPRELEASE
D. DHCPREQUEST
E. DHCPDISCOVER

Correct Answer: DE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 61
Refer to the exhibit. Which statement about the output is true?

```
Router#show ip cache flow
[...]
SrcIf           SrcIPaddress    DstIf           DstIPaddress    Pr SrcP DstP  Pkts
Vl1             144.254.10.206  Local           10.48.77.208    06 C363 01BB    2
```

A. The flow is an HTTPS connection to the router, which is initiated by 144.254.10.206.
B. The flow is an HTTP connection to the router, which is initiated by 144.254.10.206.
C. The flow is an HTTPS connection that is initiated by the router and that goes to 144.254.10.206.
D. The flow is an HTTP connection that is initiated by the router and that goes to 144.254.10.206.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 62
Refer to the exhibit. Which statement about this COS-DSCP mapping is true?

```
Cos-dscp map:
cos:    0  1  2  3  4  5  6  7
--------------------------------
dscp:   0  8 16 46 36 38 42 32
```

A. COS 3 is mapped to the expedited forwarding DSCP.
B. COS 16 is mapped to DSCP 2.
C. The default COS is mapped to DSCP 32.
D. This mapping is the default COS-DSCP mapping on Cisco switches.

Correct Answer: A
Section: (none)

Explanation

Explanation/Reference:

QUESTION 63
Which three statements about implementing a NAT application layer gateway in a network are true? (Choose three.)

A. It allows client applications to use dynamic ports to communicate with a server regardless of whether NAT is being used.
B. It maintains granular security over application-specific data.
C. It allows synchronization between multiple streams of data between two hosts.
D. Application layer gateway is used only in VoIP/SIP deployments.
E. Client applications require additional configuration to use an application layer gateway.
F. An application layer gateway inspects only the first 64 bytes of a packet before forwarding it through the network.

Correct Answer: ABC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 64
Refer to the exhibit. At which location will the benefit of this configuration be observed?

```
RouterA(config)#ip options drop
```

A. on Router A and its upstream routers
B. on Router A and its downstream routers
C. on Router A only
D. on Router A and all of its ARP neighbors

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 65
Where is multicast traffic sent, when it is originated from a spoke site in a DMVPN phase 2 cloud?

A. spoke-spoke
B. nowhere, because multicast does not work over DMVPN
C. spoke-spoke and spoke-hub
D. spoke-hub

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 66
Refer to the exhibit. A spoke site that is connected to Router-A cannot reach a spoke site that is connected to Router- B, but both spoke sites can reach the hub. What is the likely cause of this issue?

```
Router-A# show ip nhrp
10.0.2.1/32 via 10.0.2.1, Tunnel0 created 00:00:21, expire 00:05:38
  Type: dynamic, Flags: authoritative unique registered used
NBMA address: 144.254.21.2
  (Claimed NBMA address: 172.16.2.1)

Router-B# show ip nhrp
10.0.1.1/32 via 10.0.1.1, Tunnel0 created 00:00:13, expire 00:05:48
  Type: dynamic, Flags: authoritative unique registered used
NBMA address: 72.34.1.2
```

A. There is a router doing PAT at site B.
B. There is a router doing PAT at site A.
C. NHRP is learning the IP address of the remote spoke site as a /32 address rather than a /24 address.
D. There is a routing issue, as NHRP registration is working.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 67
Which mechanism can be used on Layer 2 switches so that only multicast packets with downstream receivers are sent on the multicast router-connected ports?

A. IGMP snooping
B. Router Guard
C. PIM snooping
D. multicast filtering

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 68
What is the cause of ignores and overruns on an interface, when the overall traffic rate of the interface is low?

A. a hardware failure of the interface
B. a software bug
C. a bad cable
D. microbursts of traffic

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 69
With which ISs will an ISIS Level 1 IS exchange routing information?

A. Level 1 ISs
B. Level 1 ISs in the same area

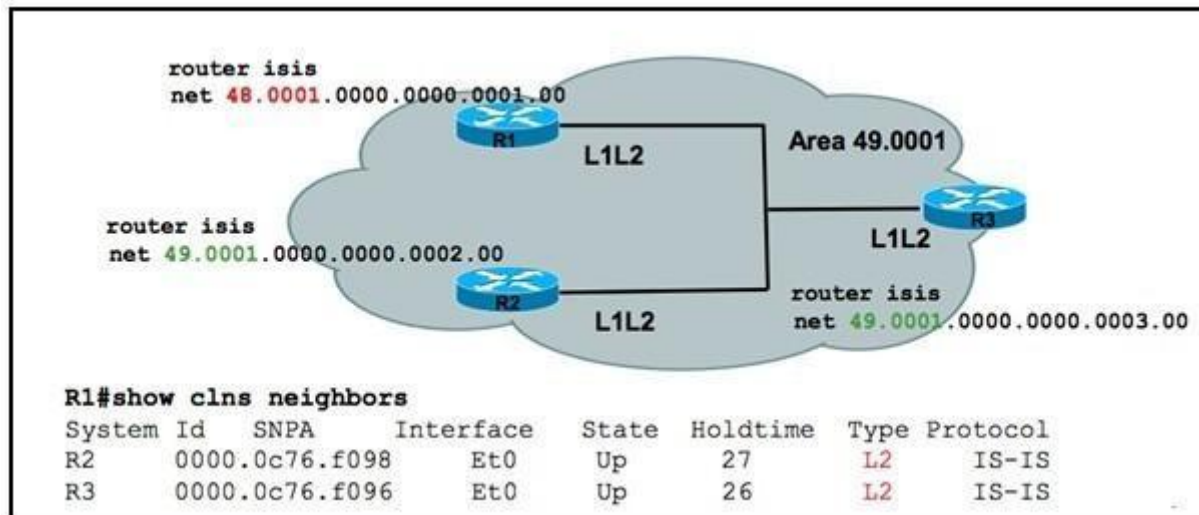C. Level 1 and Level 2 ISs
D. Level 2 ISs

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 70
Refer to the exhibit. Why is the neighbor relationship between R1 & R2 and R1 & R3 an L2-type neighborship?


```
router isis
net 48.0001.0000.0000.0001.00

R1
L1L2                    Area 49.0001

router isis
net 49.0001.0000.0000.0002.00              R3
                                        L1L2

                                    router isis
R2                                  net 49.0001.0000.0000.0003.00
L1L2
```

```
R1#show clns neighbors
System Id    SNPA            Interface   State   Holdtime   Type   Protocol
R2           0000.0c76.f098    Et0       Up        27        L2     IS-IS
R3           0000.0c76.f096    Et0       Up        26        L2     IS-IS
```

A. because the area ID on R1 is different as compared to the area ID of R2 and R3
B. because the circuit type on those three routers is L1/L2
C. because the network type between R1, R2, and R3 is point-to-point
D. because the hello interval is not the same on those three routers

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 71
Which three statements about the designated router election in IS-IS are true? (Choose three.)

A. If the IS-IS DR fails, a new DR is elected.
B. The IS-IS DR will preempt. If a new router with better priority is added, it just becomes active in the network.
C. If there is a tie in DR priority, the router with a higher IP address wins.
D. If there is a tie in DR priority, the router with a higher MAC address wins.
E. If the DR fails, the BDR is promoted as the DR.
F. The DR is optional in a point-to-point network.

Correct Answer: ABD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 72
Which three elements compose a network entity title? (Choose three.)

A. area ID
B. domain ID
C. system ID
D. NSAP selector
E. MAC address
F. IP address

Correct Answer: ACD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 73
Which statement about shaped round robin queuing is true?

A. Queues with higher configured weights are serviced first.

B. The device waits a period of time, set by the configured weight, before servicing the next queue.

C. The device services a single queue completely before moving on to the next queue.

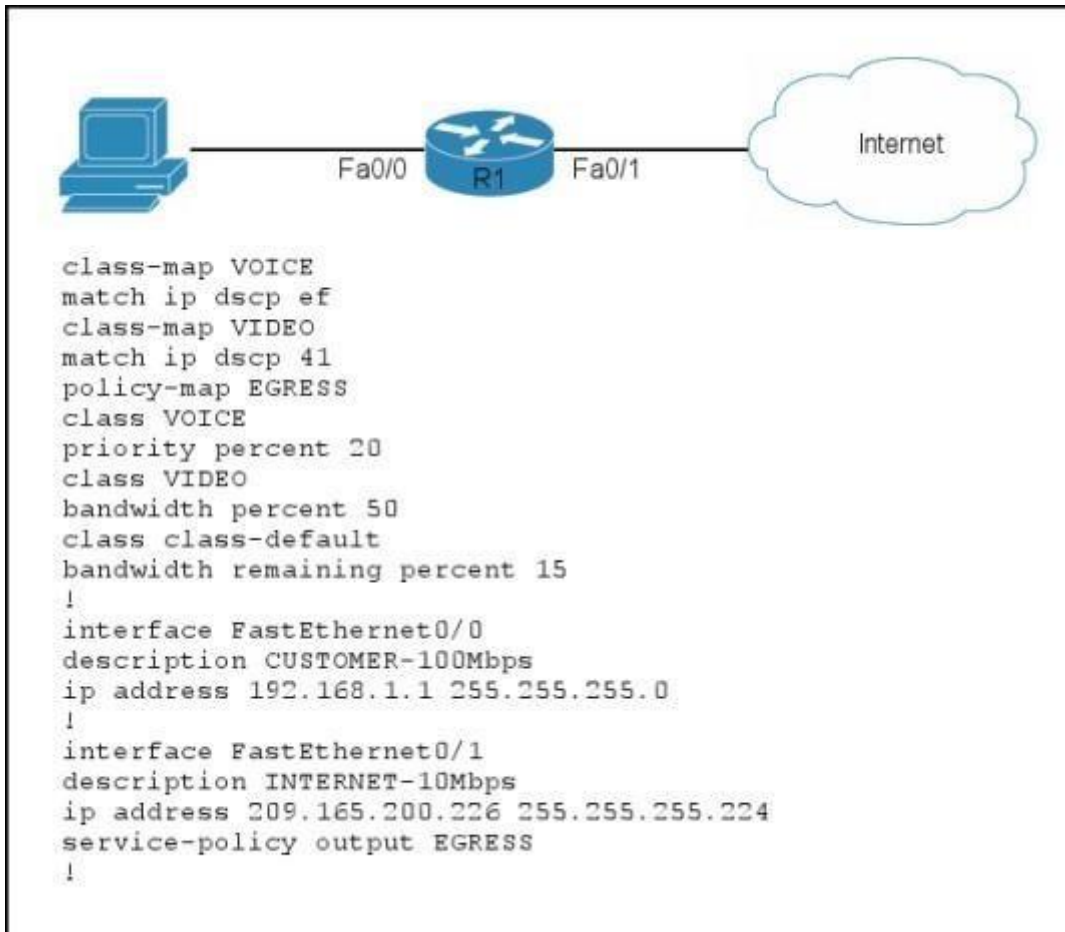D. Shaped mode is available on both the ingress and egress queues.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 74
Refer to the exhibit. You discover that only 1.5 Mb/s of web traffic can pass during times of congestion on the given network.

```
class-map VOICE
match ip dscp ef
class-map VIDEO
match ip dscp 41
policy-map EGRESS
class VOICE
priority percent 20
class VIDEO
bandwidth percent 50
class class-default
bandwidth remaining percent 15
!
interface FastEthernet0/0
description CUSTOMER-100Mbps
ip address 192.168.1.1 255.255.255.0
!
interface FastEthernet0/1
description INTERNET-10Mbps
ip address 209.165.200.226 255.255.255.224
service-policy output EGRESS
!
```

Which two options are possible reasons for this limitation? (Choose two.)

A. The web traffic class has too little bandwidth reservation.
B. Video traffic is using too much bandwidth.
C. The service-policy is on the wrong interface.
D. The service-policy is going in the wrong direction.
E. The NAT policy is adding too much overhead.

Correct Answer: AB
Section: (none)

Explanation

Explanation/Reference:

QUESTION 75
Refer to the exhibit. Which statement about the debug behavior of the device is true?

```
San_Jose#show debug
Load for five secs: 0%/0%; one minute: 0%; five minutes: 0%
Time source is NTP, 09:10:59.124 PST Thu Aug 22 2013
Condition 1: ip 172.16.129.4 (0 flags triggered)
```

A. The device debugs all IP events for 172.16.194.4.
B. The device sends all debugging information for 172.16.194.4.
C. The device sends only NTP debugging information to 172.16.194.4.
D. The device sends debugging information every five seconds.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 76
Refer to the exhibit. Which statement about this device configuration is true?

```
snmp-server community public RO 2
snmp-server trap-source Loopback0
snmp-server chassis-id HONGKONG
snmp-server enable traps snmp linkdown linkup coldstart
snmp-server enable traps ospf state-change
snmp-server enable traps bgp state-changes
snmp-server enable traps pim neighbor-change
snmp-server enable traps cpu threshold
snmp-server enable traps mpls ldp
snmp-server host 192.168.252.254 version 2c public
```

A. The NMS needs a specific route configured to enable it to reach the Loopback0 interface of the device.
B. The ifindex of the device could be different when the device is reloaded.
C. The device will allow anyone to poll it via the public community.
D. The device configuration requires the AuthNoPriv security level.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 77
Which three steps are necessary to enable SSH? (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

Correct Answer: ACD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 78
Which two features does the show ipv6 snooping features command show information about? (Choose two.)

A. RA guard
B. DHCP guard
C. ND inspection
D. source guard

Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 79
Refer to the exhibit. Which two statements about how the configuration processes Telnet traffic are true? (Choose two.)

```
R1#sh policy-map control-plane

Service-policy input: CoPP-POLICY

    Class-map: CoPP-CLASS (match-all)
        8 packets, 480 bytes
        5 minute offered rate 0 bps, drop rate 0 bps
        Match: access-group name R9-T0-R2
        police:
            rate 10 pps, burst 0 packets
            conformed 0 packets; actions:
            drop
            exceeded 8 packets; actions:
            drop
            conformed 0 pps, exceed 0 pps

    Class-map: class-default (match-any)
        929 packets, 86395 bytes
        5 minute offered rate 0 bps, drop rate 0 bps
        Match: any

R1#sh access-lists
Extended IP access list R9-T0-R2
    10 permit tcp host 10.1.1.9 host 10.10.10.1 eq telnet (4 matches)
    20 deny tcp any any eq telnet (9 matches)
```

A. Telnet traffic from 10.1.1.9 to 10.10.10.1 is dropped.
B. All Telnet traffic is dropped.
C. Telnet traffic from 10.10.10.1 to 10.1.1.9 is permitted.
D. Telnet traffic from 10.1.1.9 to 10.10.10.1 is permitted.
E. Telnet traffic is permitted to all IP addresses.

Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 80
Which three statements are functions that are performed by IKE phase 1? (Choose three.)

A. It builds a secure tunnel to negotiate IKE phase 1 parameters.
B. It establishes IPsec security associations.
C. It authenticates the identities of the IPsec peers.
D. It protects the IKE exchange by negotiating a matching IKE SA policy.
E. It protects the identities of IPsec peers.
F. It negotiates IPsec SA parameters.

Correct Answer: CDE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 81
The session status for an IPsec tunnel with IPv6-in-IPv4 is down with the error message IKE message from 10.10.1.1 failed its sanity check or is malformed.
Which statement describes a possible cause of this error?

A. There is a verification failure on the IPsec packet.
B. The SA has expired or has been cleared.
C. The pre-shared keys on the peers are mismatched.
D. There is a failure due to a transform set mismatch.
E. An incorrect packet was sent by an IPsec peer.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 82
Which three statements describe the characteristics of a VPLS architecture? (Choose three.)

A. It forwards Ethernet frames.
B. It maps MAC address destinations to IP next hops.

C. It supports MAC address aging.

D. It replicates broadcast and multicast frames to multiple ports.

E. It conveys MAC address reachability information in a separate control protocol.

F. It can suppress the flooding of traffic.

Correct Answer: ACD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 83
A GRE tunnel is down with the error message %TUN-5-RECURDOWN:

```
Tunnel0 temporarily disabled due to recursive routing error.
```

Which two options describe possible causes of the error? (Choose two.)

A. Incorrect destination IP addresses are configured on the tunnel.

B. There is link flapping on the tunnel.

C. There is instability in the network due to route flapping.

D. The tunnel mode and tunnel IP address are misconfigured.

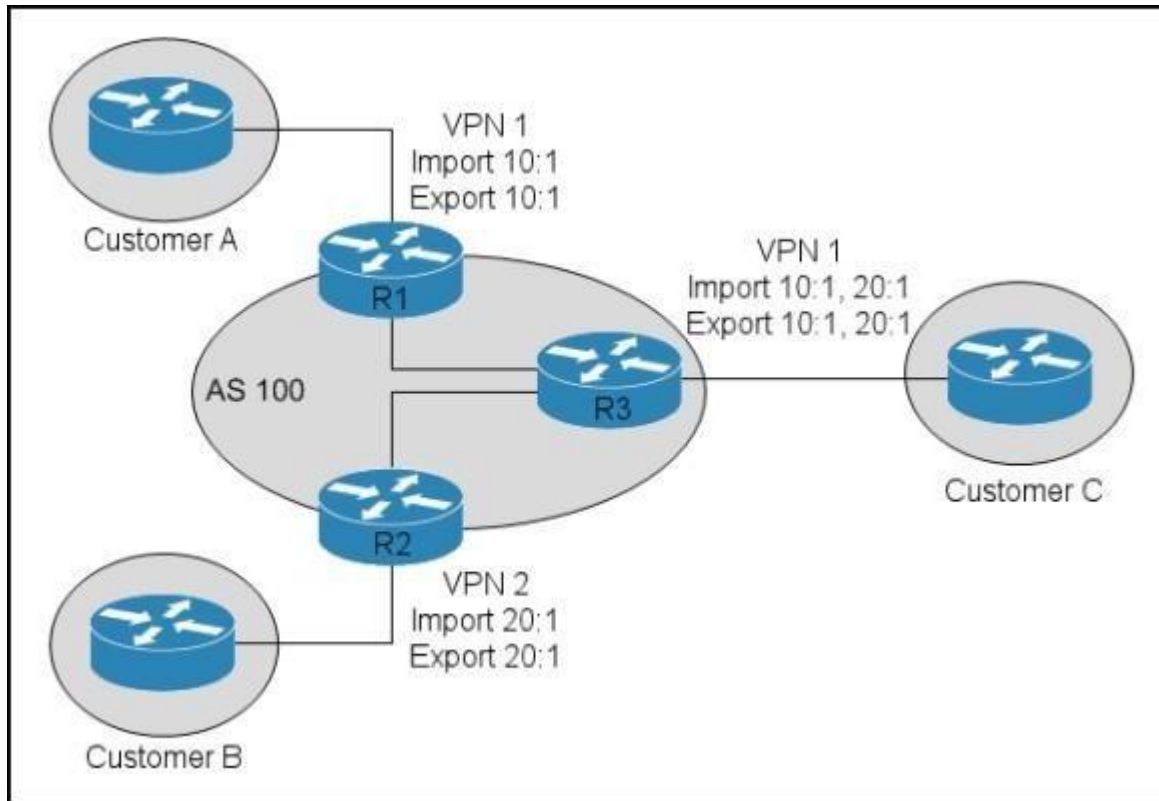E. The tunnel destination is being routed out of the tunnel interface.

Correct Answer: CE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 84
Refer to the exhibit. Which two statements about the VPN solution are true? (Choose two.)

A. Customer A and customer B will exchange routes with each other.
B. R3 will advertise routes received from R1 to R2.
C. Customer C will communicate with customer A and B.
D. Communication between sites in VPN1 and VPN2 will be blocked.
E. R1 and R2 will receive VPN routes advertised by R3.

Correct Answer: CE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 85

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.

Correct Answer: BCE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 86
Which mechanism does Cisco recommend for CE router interfaces that face the service provider for an EVPL circuit with multiple EVCs and multiple traffic classes?

A. HCBWFQ
B. LLQ
C. tail drop
D. WRED

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 87
Which Carrier Ethernet service supports the multiplexing of multiple point-to-point EVCs across as a single UNI?

A. EPL
B. EVPL
C. EMS
D. ERMS

Correct Answer: B

Section: (none)
Explanation

Explanation/Reference:

QUESTION 88
Refer to the exhibit. Which two statements about the EEM applet configuration are true? (Choose two.)

```
event manager applet LARGECONFIG
    event cli pattern "show running-config" sync yes
    action 1.0 puts "Warning! This device has a VERY LARGE configuration
        and may take some time to process"
    action 1.1 puts nonewline "Do you wish to continue [Y/N]"
    action 1.2 gets response
    action 1.3 string toupper "$response"
    action 1.4 string match "$_string_result" "Y"
    action 2.0 if $_string_result eq 1
    action 2.1 cli command "enable"
    action 2.2 cli command "show running-config"
    action 2.3 puts $_cli_result
    action 2.4 cli command "exit"
    action 2.9 end
```

A. The EEM applet runs before the CLI command is executed.
B. The EEM applet runs after the CLI command is executed.
C. The EEM applet requires a case-insensitive response.
D. The running configuration is displayed only if the letter Y is entered at the CLI.

Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 89
Which technology can be used to prevent flooding of IPv6 multicast traffic on a switch?

A. IGMP snooping

B. IGMP filtering
C. MLD snooping
D. MLD filtering

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 90
Which variable in an EEM applet is set when you use the sync yes option?

A. $_cli_result
B. $_result
C. $_string_result
D. $_exit_status

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 91
Which two options are advantages of NetFlow version 9 over NetFlow version 5? (Choose two.)

A. NetFlow version 9 adds support for IPv6 headers.
B. NetFlow version 9 adds support for MPLS labels.
C. NetFlow version 9 adds support for the Type of Service field.
D. NetFlow version 9 adds support for ICMP types and codes.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 92
Refer to the exhibit. Which two statements about the output are true? (Choose two.)

```
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
```

A. It indicates that prefix aggregation cache export is enabled on the device.
B. It was obtained with the show ip cache flow command.
C. It indicates that the device is using NetFlow version 5.
D. It indicates that the flows are being sent to a destination using an RFC1918 address.

Correct Answer: CD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 93
Which statement describes the function of the tracking object created by the track 10 ip route 192.168.99.0/24 reachability command?

A. It tracks the reachability of route 192.168.99.0/24.
B. It tracks the line protocol status of the interface on which route 192.168.99.0/24 is received.
C. It tracks exactly 10 occurrences of route 192.168.99.0/24.
D. It tracks the summary route 192.168.99.0/24 and all routes contained within.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 94
Refer to the exhibit. Which VLANs are permitted to send frames out port FastEthernet0/1?

```
Switch#show interfaces fastEthernet0/1 switchport
Name: Fa0/1
Switchport: Enabled
Administrative Mode: trunk
Operational Mode: trunk
Administrative Trunking Encapsulation: dotlq
Operational Trunking Encapsulation: dotlq
Negotiation of Trunking: On
Access Mode VLAN: 1 (default)
Trunking Native Mode VLAN: 3 (VLAN0003)
Administrative Native VLAN tagging: enabled
Voice VLAN: none
Administrative private-vlan host-association: none
Administrative private-vlan mapping: none
Administrative private-vlan trunk native VLAN: none
Administrative private-vlan trunk Native VLAN tagging: enabled
Administrative private-vlan trunk encapsulation: dotlq
Administrative private-vlan trunk normal VLANs: none
Administrative private-vlan trunk private VLANs: none
Operational private-vlan: none
Trunking VLANs Enabled: 4-100
Pruning VLANs Enabled: 100-200
Capture Mode Disabled
Capture VLANs Allowed: ALL

Protected: false
Unknown unicast blocked: disabled
Unknown multicast blocked: disabled
Appliance trust: none
```

A. 100 - 200
B. 4 - 100
C. 1 and 4 - 100
D. 3 and 4 - 100

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 95
Which option is the default maximum age of the MAC address table?

A. 300 seconds
B. 500 seconds
C. 1200 seconds
D. 3600 seconds

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 96
Which statement about MSS is true?

A. It is negotiated between sender and receiver.
B. It is sent in all TCP packets.
C. It is 20 bytes lower than MTU by default.
D. It is sent in SYN packets.
E. It is 28 bytes lower than MTU by default.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 97
Which two methods change the IP MTU value for an interface? (Choose two.)

A. Configure the default MTU.
B. Configure the IP system MTU.
C. Configure the interface MTU.
D. Configure the interface IP MTU.

Correct Answer: CD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 98
Which implementation can cause packet loss when the network includes asymmetric routing paths?

A. the use of ECMP routing
B. the use of penultimate hop popping
C. the use of Unicast RPF
D. disabling Cisco Express Forwarding

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 99
Which two mechanisms can be used to eliminate Cisco Express Forwarding polarization? (Choose two.)

A. alternating cost links
B. the unique-ID/universal-ID algorithm
C. Cisco Express Forwarding antipolarization
D. different hashing inputs at each layer of the network

Correct Answer: BD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 100
Refer to the exhibit. What kind of load balancing is done on this router?

```
R101#show ip cache flow
[...]
SrcIf          SrcIPaddress      DstIf          DstIPaddress      Pr SrcP DstP  Pkts
Et0/0          10.0.0.1          Et1/0*         14.0.0.2          01 0000 0800    34
Et0/0          10.0.0.1          Et1/0          14.0.0.2          01 0000 0800   100
Et0/0          10.0.0.1          Se3/0*         14.0.0.2          01 0000 0800    33
Et0/0          10.0.0.1          Se2/0*         14.0.0.2          01 0000 0800    33
Et0/0          10.0.0.1          Null           224.0.0.5         59 0000 0000    26
```

A. per-packet load balancing
B. per-flow load balancing
C. per-label load balancing
D. star round-robin load balancing

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 101
How does EIGRP derive the metric for manual summary routes?

A. It uses the best composite metric of any component route in the topology table.
B. It uses the worst composite metric of any component route in the topology table.
C. It uses the best metric vectors of all component routes in the topology table.
D. It uses the worst metric vectors of all component routes in the topology table.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 102
Refer to the exhibit. Which part of the joined group addresses list indicates that the interface has joined the EIGRP multicast group address?

```
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
```

A. FF02::1
B. FF02::1:FF00:200
C. FF02::A
D. FF02::2

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 103
Refer to the exhibit. Which two corrective actions could you take if EIGRP routes from R2 fail to reach R1? (Choose two.)

```
R1
!
ip vrf R2
rd 1:1
!
interface FastEthernet0/0
ip address 192.168.0.1 255.255.255.252
!
router eigrp 100
no auto-summary
address-family ipv4 vrf R2
network 192.168.0.0 0.0.0.255
  !

R2
!
interface FastEthernet0/0
ip address 192.168.0.2 255.255.255.252
!
router eigrp 100
no auto-summary
network 192.168.0.2 0.0.0.1
  !
```

A. Configure R2 to use a VRF to send routes to R1.
B. Configure the autonomous system in the EIGRP configuration of R1.
C. Correct the network statement on R2.
D. Add the interface on R1 that is connected to R2 into a VRF.

Correct Answer: BD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 104
EIGRP allows configuration of multiple MD5 keys for packet authentication to support easy rollover from an old key to a new key. Which two statements are true regarding the usage of multiple authentication keys? (Choose two.)

A. Received packets are authenticated by the key with the smallest key ID.

B. Sent packets are authenticated by all valid keys, which means that each packet is replicated as many times as the number of existing valid keys.

C. Received packets are authenticated by any valid key that is chosen.

D. Sent packets are authenticated by the key with the smallest key ID.

Correct Answer: CD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 105
Refer to the exhibit. Which additional configuration is necessary for R1 and R2 to become OSPF neighbors?

```
R1
!
interface Fastethernet0/0
ip address 10.1.1.5 255.255.255.0
!
router ospf 1
network 10.1.1.5 0.0.0.0 area 0
passive-interface default
!

R2
!
interface FastEthernet0/1
ip address 10.1.1.6 255.255.255.0
!
router ospf 10
network 10.1.1.6 0.0.0.0 area 0
!
```

A. R1
    !
    router ospf 1
    no passive-interface Fastethernet0/0
    !

B. R2
```
!
router ospf 10
no network 10.1.1.6 0.0.0.0 area 0
network 10.1.1.6 0.0.0.0 area 1
!
```
C. R1
```
!
interface FastEthernet0/0
ip ospf mtu-ignore
!
```
R2
```
!
interface FastEthernet0/1
ip ospf mtu-ignore
!
```
D. R1
```
!
no router ospf 1
router ospf 10
network 10.1.1.5 0.0.0.0 area 0
```

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 106
Consider an OSPFv3 network with four parallel links between each pair of routers. Which measure can you use to reduce the CPU load and at the same time keep all links available for ECMP?

A. Configure some interfaces as passive interface.
B. Configure ipv6 ospf priority 0 on some interfaces.
C. Configure some routers with a distribute list in ingress of the OSPFv3 process.
D. Configure ipv6 ospf database-filter all out on some interfaces.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 107
Refer to the exhibit. Which two statements about the device that generated the output are true? (Choose two.)

```
Load for five secs: 12%/0%; one minute: 4%; five minutes: 5%
Time source is NTP, 11:19:50.533 US/Ariz Tue Oct 1 2013

(10.10.76.191, 239.93.200.8), 7w0d/00:02:55, flags: sTI
    Incoming interface: TenGigabitEthernet8/2, RPF nbr 70.169.73.188, RPF-MFD
    Outgoing interface list:
        GigabitEthernet1/5, Forward/Sparse, 2w5d/00:02:25, H
        GigabitEthernet1/2, Forward/Sparse, 5w3d/00:02:25, H
        GigabitEthernet1/1, Forward/Sparse, 25w6d/00:02:49, H

(10.10.76.191, 239.93.200.9), 7w0d/00:02:55, flags: sTI
    Incoming interface: TenGigabitEthernet8/2, RPF nbr 70.169.73.188, RPF-MFD
    Outgoing interface list:
        GigabitEthernet1/5, Forward/Sparse, 2w5d/00:02:25, H
```

A. The SPT-bit is set.
B. The sparse-mode flag is set.
C. The RP-bit is set.
D. The source-specific host report was received.

Correct Answer: AD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 108
A service provider is deploying L2VPN LAN services in its MPLS cloud. Which statement is true regarding LDP signaling and autodiscovery?

A. LDP signaling requires that each PE is identified, and that an LDP session is active with its P neighbor for autodiscovery to take place.
B. LDP signaling requires that each P is identified, and that a targeted LDP session is active for auto discovery to take place.
C. LDP signaling requires that each PE is identified, and that a targeted LDP session with a BGP route reflector is active for autodiscovery to take place.

D. LDP signaling requires that each PE is identified, and that a targeted LDP session is active for auto discovery to take place.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 109
Refer to the exhibit. Which three statements about the output are true? (Choose three.)

```
Switch#show ip mroute
IP Multicast Routing Table
Flags: D - Dense, S - Sparse, B - Bidir Group, s - SSM Group, C - Connected,
       L - Local, P - Pruned, R - RP-bit set, F - Register flag,
       T - SPT-bit set, J - Join SPT, M - MSDP created entry, E - Extranet,
       X - Proxy Join Timer Running, A - Candidate for MSDP Advertisement,
       U - URD, I - Received Source Specific Host Report,
       Z - Multicast Tunnel, z - MDT-data group sender,
       Y - Joined MDT-data group, y - Sending to MDT-data group,
       V - RD & Vector, v - Vector
Outgoing interface flags: H - Hardware switched, A - Assert winner
 Timers: Uptime/Expires
 Interface state: Interface, Next-Hop or VCD, State/Mode

(*, 239.192.1.1), 00:01:43/stopped, RP 10.210.150.1, flags: SJC
  Incoming interface: Null, RPF nbr 0.0.0.0
  Outgoing interface list:
    Vlan150, Forward/Sparse-Dense, 00:01:43/00:02:55

(10.210.168.132, 239.192.1.1), 00:00:25/00:02:38, flags: T
  Incoming interface: Port-channel1, RPF nbr 10.85.20.20
  Outgoing interface list:
    Vlan150, Forward/Sparse-Dense, 00:00:25/00:02:34

(*, 224.0.1.40), 00:01:57/00:02:53, RP 10.210.150.1, flags: SJCL
  Incoming interface: Null, RPF nbr 0.0.0.0
  Outgoing interface list:
    Port-channel1, Forward/Sparse-Dense, 00:01:09/00:03:18
    Vlan150, Forward/Sparse-Dense, 00:01:39/00:02:55
```

A. This switch is currently receiving a multicast data stream that is being forwarded out VLAN 150.
B. A multicast receiver has requested to join one or more of the multicast groups.
C. Group 224.0.1.40 is a reserved address, and it should not be used for multicast user data transfer.
D. One or more multicast groups are operating in PIM dense mode.
E. One or more of the multicast data streams will be forwarded out to neighbor 10.85.20.20.

F. Group 239.192.1.1 is a reserved address, and it should not be used for multicast user data transfer.

Correct Answer: ABC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 110
Which statement about the RPF interface in a BIDIR-PIM network is true?

A. In a BIDIR-PIM network, the RPF interface is always the interface that is used to reach the PIM rendezvous point.
B. In a BIDIR-PIM network, the RPF interface can be the interface that is used to reach the PIM rendezvous point or the interface that is used to reach the source.
C. In a BIDIR-PIM network, the RPF interface is always the interface that is used to reach the source.
D. There is no RPF interface concept in BIDIR-PIM networks.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 111
Which technology is an application of MSDP, and provides load balancing and redundancy between the RPs?

A. static RP
B. PIM BSR
C. auto RP
D. anycast RP

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 112

Which two statements are true about IPv6 multicast? (Choose two.)

A. Receivers interested in IPv6 multicast traffic use IGMPv6 to signal their interest in the IPv6 multicast group.
B. The PIM router with the lowest IPv6 address becomes the DR for the LAN.
C. An IPv6 multicast address is an IPv6 address that has a prefix of FF00::/8.
D. The IPv6 all-routers multicast group is FF02:0:0:0:0:0:0:2.

Correct Answer: CD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 113
Refer to the exhibit. While configuring AAA with a local database, users can log in via Telnet, but receive the message "error in authentication" when they try to go into enable mode. Which action can solve this problem?

```
aaa new-model
aaa authentication login default local
username cisco privilege 15 password cisco

User Access Verification

Username: cisco
Password:

Router>en
% Error in authentication.

Router>
```

A. Configure authorization to allow the enable command.
B. Use aaa authentication login default enable to allow authentication when using the enable command.
C. Verify whether an enable password has been configured.
D. Use aaa authentication enable default enable to allow authentication when using the enable command.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 114
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

Correct Answer: E
Section: (none)
Explanation

Explanation/Reference:

QUESTION 115
Which three factors does Cisco PfR use to calculate the best exit path? (Choose three.)

A. quality of service
B. packet size
C. delay
D. loss
E. reachability
F. administrative distance

Correct Answer: CDE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 116
What is a reason to use DHCPv6 on a network that uses SLAAC?

A. to get a record of the IPs that are used by the clients
B. to push DNS and other information to the clients
C. no reason, because there is no need for DHCPv6 when using SLAAC
D. because DHCPv6 can be used only in stateful mode with SLAAC to record the IPs of the clients
E. because DHCPv6 can be used only in stateless mode with SLAAC to record the IPs of the clients
F. because DHCPv6 is required to use first-hop security features on the switches

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 117
Which statement is true about Fast Link Pulses in Ethernet?

A. They are used during collision detection.
B. They are used only if the media type is optical.
C. They are part of UniDirectional Link Detection.
D. They are used during autonegotiation.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 118
Which statement is true regarding UDLD and STP timers?

A. The UDLD message timer should be two times the STP forward delay to prevent loops.
B. UDLD and STP are unrelated features, and there is no relation between the timers.
C. The timers need to be synced by using the spanning-tree udld-sync command.
D. The timers should be set in such a way that UDLD is detected before the STP forward delay expires.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 119
Which switching technology can be used to solve reliability problems in a switched network?

A. fragment-free mode
B. cut-through mode
C. check mode
D. store-and-forward mode

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 120
Refer to the exhibit. A PE router is configured with a policy map that contains the policer shown. The policy map is configured in the inbound direction of an interface facing a CE router. If the PE router receives 12Mb/s of traffic with the CoS value set to 7 on a 100-Mb/s interface from the CE router, what value of MPLS EXP is set when this traffic goes through the policer shown?

```
police cir percent 10 conform-action proceed exceed-action set-mpls-experimental-topmost 6
```

A. 0
B. 6
C. 7
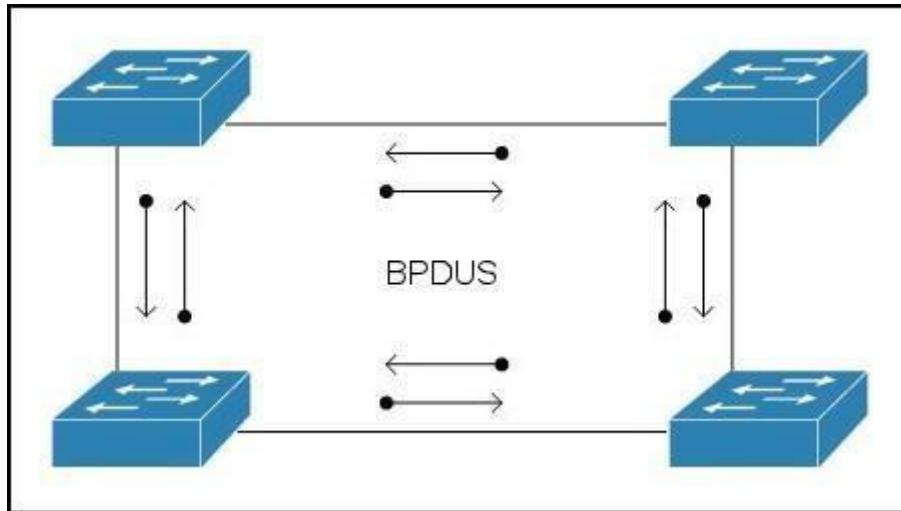D. 8

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 121
Refer to the exhibit. Which technology does the use of bi-directional BPDUs on all ports in the topology support?

A. RSTP
B. MST
C. Bridge Assurance
D. Loop Guard
E. Root Guard
F. UDLD

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 122
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.

Correct Answer: DEF
Section: (none)
Explanation

Explanation/Reference:

QUESTION 123
Which two statements are true about an EPL? (Choose two.)

A. It is a point-to-point Ethernet connection between a pair of NNIs.

B. It allows for service multiplexing.

C. It has a high degree of transparency.

D. The EPL service is also referred to as E-line.

Correct Answer: CD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 124
Which two statements describe characteristics of HDLC on Cisco routers? (Choose two.)

A. It supports multiple Layer 3 protocols.

B. It supports multiplexing.

C. It supports only synchronous interfaces.

D. It supports authentication.

Correct Answer: AC
Section: (none)

Explanation

Explanation/Reference:

QUESTION 125
Refer to the exhibit. What is the meaning of the asterisk (*) in the output?

```
R1#show ip mroute 232.1.1.1
IP Multicast Routing Table
Flags: D - Dense, S - Sparse, B - Bidir Group, s - SSM Group, C - Connected,
       L - Local, P - Pruned, R - RP-bit set, F - Register flag,
       T - SPT-bit set, J - Join SPT, M - MSDP created entry,
       X - Proxy Join Timer Running, A - Candidate for MSDP Advertisement,
       U - URD, I - Received Source Specific Host Report,
       Z - Multicast Tunnel, z - MDT-data group sender,
       Y - Joined MDT-data group, y - Sending to MDT-data group
Outgoing interface flags: H - Hardware switched, A - Assert winner
 Timers: Uptime/Expires
 Interface state: Interface, Next-Hop or VCD, State/Mode

(10.1.4.7, 232.1.1.1), 00:17:24/00:02:53, flags: sTI
  Incoming interface: Ethernet1/0, RPF nbr 10.1.5.6*
  Outgoing interface list:
    Loopback0, Forward/Sparse, 00:14:42/00:01:21
```

A. PIM neighbor 10.1.5.6 is the RPF neighbor for the group 232.1.1.1 for the shared tree.
B. PIM neighbor 10.1.5.6 is the one that is seen as the RPF neighbor when performing the command show ip rpf 10.1.4.7.
C. PIM neighbor 10.1.5.6 is the winner of an assert mechanism.
D. The RPF neighbor 10.1.5.6 is invalid.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 126
Refer to the exhibit. What is the role of this multicast router?

```
Router#show ip pim tunnel
Tunnel0
  Type  : PIM Encap
  RP    : 10.1.100.2*
  Source: 10.1.100.2
Tunnel1*
  Type  : PIM Decap
  RP    : 10.1.100.2*
  Source: -
```

A. a first-hop PIM router
B. a last-hop PIM router
C. a PIM rendezvous point
D. a PIM inter-AS router

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 127
Refer to the exhibit. Which statement is true?

```
R1#show ipv6 route

C    2001:DB8::/64 [0/0]
      via Ethernet0/0, directly connected
L    2001:DB8::1/128 [0/0]
      via Ethernet0/0, receive
```

A. 2001:DB8::1/128 is a local host route, and it can be redistributed into a dynamic routing protocol.

B. 2001:DB8::1/128 is a local host route, and it cannot be redistributed into a dynamic routing protocol.

C. 2001:DB8::1/128 is a local host route that was created because ipv6 unicast-routing is not enabled on this router.

D. 2001:DB8::1/128 is a route that was put in the IPv6 routing table because one of this router's loopback interfaces has the IPv6 address 2001:DB8::1/128.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 128
Refer to the exhibit. Which option explains why the forwarding address is set to 0.0.0.0 instead of 110.100.1.1?

```
interface Ethernet0/1
 ip address 110.100.1.4 255.255.255.0
!
router ospf 100
 router-id 4.4.4.4
 redistribute static metric-type 1 subnets tag 704
 network 110.110.0.0 0.0.255.255 area 110
!
ip route 192.168.10.0 255.255.255.0 Ethernet0/1 110.100.1.1
!


External LSA:

            OSPF Router with ID (4.4.4.4) (Process ID 100)

                Type-5 AS External Link States

  LS age: 101
  Options: (No TOS-capability, DC, Upward)
  LS Type: AS External Link
  Link State ID: 192.168.10.0 (External Network Number )
  Advertising Router: 4.4.4.4
  LS Seq Number: 80000084
  Checksum: 0x74E2
  Length: 36
  Network Mask: /24
        Metric Type: 1 (Comparable directly to link state metric)
        MTID: 0
        Metric: 20
        Forward Address: 0.0.0.0
        External Route Tag: 704
```

A. The interface Ethernet0/1 is in down state.
B. The next-hop ip address 110.100.1.1 is not directly attached to the redistributing router.
C. The next-hop interface (Ethernet0/1) is specified as part of the static route command; therefore, the forwarding address is always set to 0.0.0.0.
D. OSPF is not enabled on the interface Ethernet0/1.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 129
Refer to the exhibit. You have configured two routing protocols across this point-to-point link. How many BFD sessions will be established across this link?

```
Hub2#sh ip eigrp neighbors
EIGRP-IPv4 Neighbors for AS(123)
H   Address                   Interface        Hold Uptime   SRTT    RTO   Q   Seq
                                               (sec)         (ms)          Cnt Num
0   192.168.0.2               Et0/3            11 01:49:56   1    3000    0   1
Hub2#sh ip ospf neighbor

Neighbor ID      Pri   State        Dead Time   Address        Interface
192.168.0.2        1   FULL/DR      00:00:31    192.168.0.2    Ethernet0/3
```

A. three per interface
B. one per multicast address
C. one per routing protocol
D. one per interface

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 130
What is the most efficient way to confirm whether microbursts of traffic are occurring?

A. Monitor the output traffic rate using the show interface command.
B. Monitor the output traffic rate using the show controllers command.

C. Check the CPU utilization of the router.
D. Sniff the traffic and plot the packet rate over time.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 131
What is a cause for unicast flooding?

A. Unicast flooding occurs when multicast traffic arrives on a Layer 2 switch that has directly connected multicast receivers.
B. When PIM snooping is not enabled, unicast flooding occurs on the switch that interconnects the PIM-enabled routers.
C. A man-in-the-middle attack can cause the ARP cache of an end host to have the wrong MAC address.
    Instead of having the MAC address of the default gateway, it has a MAC address of the man-in-the-middle.
    This causes all traffic to be unicast flooded through the man-in-the-middle, which can then sniff all packets.
D. Forwarding table overflow prevents new MAC addresses from being learned, and packets destined to those MAC addresses are flooded until space becomes available in the forwarding table.
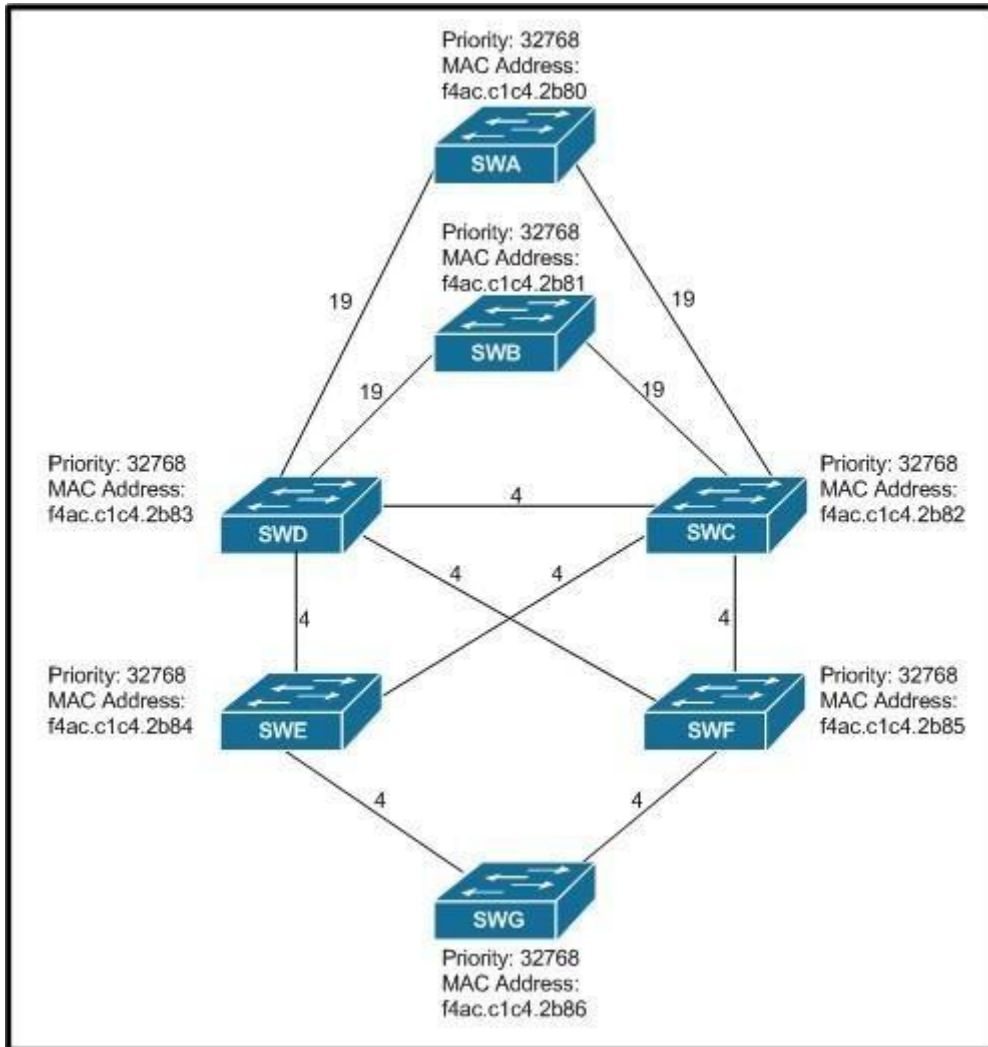
Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 132
Refer to the exhibit. All switches have default bridge priorities, and originate BPDUs with MAC addresses as indicated. The numbers shown are STP link metrics. Which two ports are in blocking state after STP converges? (Choose two.)

Priority: 32768
MAC Address:
f4ac.c1c4.2b80
SWA

Priority: 32768
MAC Address:
f4ac.c1c4.2b81
SWB

19   19

19   19

Priority: 32768
MAC Address:
f4ac.c1c4.2b83
SWD   4   SWC
Priority: 32768
MAC Address:
f4ac.c1c4.2b82

4   4

4   4

Priority: 32768
MAC Address:
f4ac.c1c4.2b84
SWE   SWF
Priority: 32768
MAC Address:
f4ac.c1c4.2b85

4   4

SWG
Priority: 32768
MAC Address:
f4ac.c1c4.2b86

A. the port on switch SWD that connects to switch SWE
B. the port on switch SWF that connects to switch SWG
C. the port on switch SWD that connects to switch SWC
D. the port on switch SWB that connects to switch SWD

Correct Answer: CD

Section: (none)
Explanation

Explanation/Reference:

QUESTION 133
Which statement is true about IGMP?

A. Multicast sources send IGMP messages to their first-hop router, which then generates a PIM join message that is then sent to the RP.
B. Multicast receivers send IGMP messages to their first-hop router, which then forwards the IGMP messages to the RP.
C. IGMP messages are encapsulated in PIM register messages and sent to the RP.
D. Multicast receivers send IGMP messages to signal their interest to receive traffic for specific multicast groups.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 134
What is a disadvantage of using aggressive mode instead of main mode for ISAKMP/IPsec establishment?

A. It does not use Diffie-Hellman for secret exchange.
B. It does not support dead peer detection.
C. It does not support NAT traversal.
D. It does not hide the identity of the peer.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 135
What can PfR passive monitoring mode measure for TCP flows?

A. only delay

B. delay and packet loss
C. delay and reachability
D. delay, packet loss, and throughput
E. delay, packet loss, throughput, and reachability

Correct Answer: E
Section: (none)
Explanation

Explanation/Reference:

QUESTION 136
Which two statements are true about an EVPL? (Choose two.)

A. It has a high degree of transparency.
B. It does not allow for service multiplexing.
C. The EVPL service is also referred to as E-line.
D. It is a point-to-point Ethernet connection between a pair of UNIs.

Correct Answer: CD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 137
Which two statements are true about OTV? (Choose two.)

A. It relies on flooding to propagate MAC address reachability information.
B. It uses a full mesh of point-to-multipoint tunnels to prevent head-end replication of multicast traffic.
C. It can work over any transport that can forward IP packets.
D. It supports automatic detection of multihoming.

Correct Answer: CD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 138
Which two statements are true about RSTP? (Choose two.)

A. By default, RTSP uses a separate TCN BPDU when interoperating with 802.1D switches.
B. By default, RTSP does not use a separate TCN BPDU when interoperating with 802.1D switches.
C. If a designated port receives an inferior BPDU, it immediately triggers a reconfiguration.
D. By default, RTSP uses the topology change TC flag.
E. If a port receives a superior BPDU, it immediately replies with its own information, and no reconfiguration is triggered.
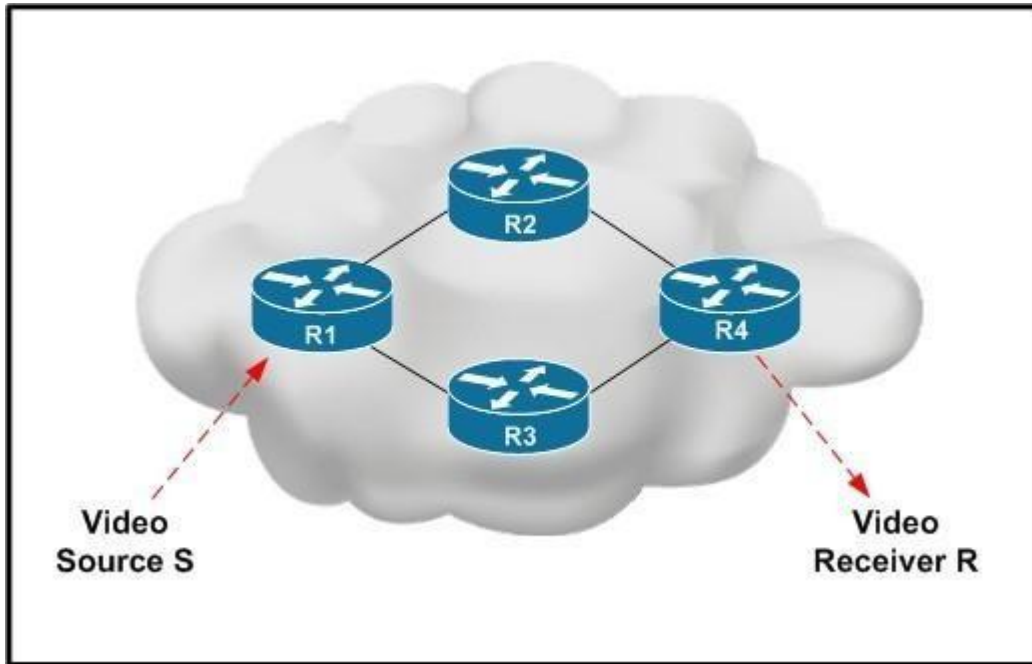
Correct Answer: BD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 139
Refer to the exhibit. Video Source S is sending interactive video traffic to Video Receiver R. Router R1 has multiple routing table entries for destination R. Which load-balancing mechanism on R1 can cause out-of- order video traffic to be received by destination R?

A. per-flow load balancing on R1 for destination R
B. per-source-destination pair load balancing on R1 for destination R
C. CEF load balancing on R1 for destination R
D. per-packet load balancing on R1 for destination R

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 140
Refer to the exhibit. Which two statements are true about the displayed STP state? (Choose two.)

```
switch#show spanning-tree detail

 MST0 is executing the mstp compatible Spanning Tree protocol
  Bridge Identifier has priority 32768, sysid 0, address f4ac.clc4.2b80
  Configured hello time 2, max age 20, forward delay 15, transmit hold-count 6
  Current root has priority 24576, address 0019.07aa.9ac0
  Root port is 56 (Port-channel1), cost of root path is 0
  Topology change flag not set, detected flag not set
  Number of topology changes 296 last change occurred 00:01:17 ago
          from GigabitEthernet0/15
```

A. The STP version configured on the switch is IEEE 802.1w.
B. Port-channel 1 is flapping and the last flap occurred 1 minute and 17 seconds ago.
C. The switch does not have PortFast configured on Gi0/15.
D. BPDUs with the TCN bit set are transmitted over port channel 1.

Correct Answer: CD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 141
Which two mechanisms provide Cisco IOS XE Software with control plane and data plane separation? (Choose two.)

A. Forwarding and Feature Manager
B. Forwarding Engine Driver
C. Forwarding Performance Management
D. Forwarding Information Base

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 142

Refer to the exhibit. Which command is configured on this router?

```
R2# show bgp ipv4 unicast summary

BGP router identifier 10.100.1.2, local AS number 2

BGP table version is 1, main routing table version 1


Neighbor        V        AS MsgRcvd MsgSent    TblVer  InQ OutQ Up/Down  State/PfxRcd

10.100.1.1      4         1       0       0         1    0    0 6d20h    Idle (PfxCt)
```

A. bgp update-delay 60
B. neighbor 10.100.1.1 maximum-prefix 200
C. neighbor 10.100.1.1 maximum-path 2
D. neighbor 10.100.1.1 ebgp-multihop 2

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 143
What is the purpose of Route Target Constraint?

A. to avoid using route reflectors in MPLS VPN networks
B. to avoid using multiple route distinguishers per VPN in MPLS VPN networks
C. to be able to implement VPLS with BGP signaling
D. to avoid sending unnecessary BGP VPNv4 or VPNv6 updates to the PE router
E. to avoid BGP having to perform route refreshes

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 144
Refer to the exhibit. Why is network 172.16.1.0/24 not installed in the routing table?

```
R3#sho ip bgp 172.16.1.0
BGP routing table entry for 172.16.1.0/24, version 5
Paths: (1 available, no best path)
Not advertised to any peer
Refresh Epoch 1
1
192.168.1.1 (inaccessible) from 192.168.2.1 (192.168.3.1)
  Origin IGP, metric 0, localpref 100, valid, internal
  rx pathid: 0x0, tx pathid: 0
```

A. There is no ARP entry for 192.168.1.1.
B. The router cannot ping 192.168.1.1.
C. The neighbor 192.168.1.1 just timed out and BGP will flush this prefix the next time that the BGP scanner runs.
D. There is no route for 192.168.1.1 in the routing table.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 145
Which two statements about port ACLs are true? (Choose two.)

A. Port ACLs are supported on physical interfaces and are configured on a Layer 2 interface on a switch.
B. Port ALCs support both outbound and inbound traffic filtering.
C. When it is applied to trunk ports, the port ACL filters only native VLAN traffic.
D. When it is applied to a port with voice VLAN, the port ACL filters both voice and data VLAN traffic.

Correct Answer: AD
Section: (none)
Explanation

Explanation/Reference:

Exam B

QUESTION 1
A TCP/IP host is able to transmit small amounts of data (typically less than 1500 bytes), but attempts to transmit larger amounts of data hang and then time out. What is the cause of this problem?

A. A link is flapping between two intermediate devices.
B. The processor of an intermediate router is averaging 90 percent utilization.
C. A port on the switch that is connected to the TCP/IP host is duplicating traffic and sending it to a port that has a sniffer attached.
D. There is a PMTUD failure in the network path.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 2
Refer to the exhibit. ICMP Echo requests from host A are not reaching the intended destination on host B. What is the problem?

```
Internet Protocol Version 4, Src: 10.149.4.110 (10.149.4.110), Dst: 192.168.3.1 (192.168.3.1)
    Version: 4
    Header length: 20 bytes
    Differentiated Services Field: 0x00 (DSCP 0x00: Default; ECN: 0x00: Not-ECT (Not ECN-Capable Transport))
    Total Length: 60
    Identification: 0x64ac (25772)
    Flags: 0x00
    Fragment offset: 0
    Time to live: 1
    Protocol: ICMP (1)
    Header checksum: 0x8269 [correct]
    Source: 10.149.4.110 (10.149.4.110)
    Destination: 192.168.3.1 (192.168.3.1)
Internet Control Message Protocol
    Type: 8 (Echo (ping) request)
    Code: 0
    Checksum: 0x4d3d [correct]
    Identifier (BE): 1 (0x0001)
    Identifier (LE): 256 (0x0100)
    Sequence number (BE): 30 (0x001e)
    Sequence number (LE): 7680 (0x1e00)
    Data (32 bytes)

0000  61 62 63 64 65 66 67 68 69 6a 6b 6c 6d 6e 6f 70   abcdefghijklmnop
0010  71 72 73 74 75 76 77 61 62 63 64 65 66 67 68 69   qrstuvwabcdefghi
        Data: 6162636465666768696a6b6c6d6e6f707172737475767761...
        [Length: 32]
```

A. The ICMP payload is malformed.
B. The ICMP Identifier (BE) is invalid.
C. The negotiation of the connection failed.
D. The packet is dropped at the next hop.
E. The link is congested.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 3
Refer to the exhibit. Which statement is true?

```
R101#show ip cache flow
[...]
SrcIf           SrcIPaddress    DstIf           DstIPaddress      Pr SrcP DstP  Pkts
Et0/0           10.0.0.1        Et0/0           15.0.0.2          01 0000 0800  2603
```

A. It is impossible for the destination interface to equal the source interface.
B. NAT on a stick is performed on interface Et0/0.
C. There is a potential routing loop.
D. This output represents a UDP flow or a TCP flow.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 4
Which three conditions can cause excessive unicast flooding? (Choose three.)

A. Asymmetric routing
B. Repeated TCNs
C. The use of HSRP
D. Frames sent to FFFF.FFFF.FFFF
E. MAC forwarding table overflow
F. The use of Unicast Reverse Path Forwarding

Correct Answer: ABE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 5
Which congestion-avoidance or congestion-management technique can cause global synchronization?

A. Tail drop
B. Random early detection
C. Weighted random early detection
D. Weighted fair queuing

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 6
Which group of neighbors can be configured as a BGP peer group?

A. a group of iBGP neighbors that have the same outbound route policies
B. a group of iBGP and eBGP neighbors that have the same inbound distribute-list
C. a group of eBGP neighbors in the same autonomous system that have different outbound route policies
D. a group of iBGP neighbors that have different outbound route policies

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 7
Refer to the exhibit. Notice that debug ip bgp updates has been enabled. What can you conclude from the debug output?

```
BGP(0): 10.1.3.4 rcvd UPDATE w/ attr: nexthop 10.1.3.4, origin i,
metric 0, merged path 4, AS_PATH
BGP(0): 10.1.3.4 rcvd 10.100.1.1/32...duplicate ignored
```

A. This is the result of the clear ip bgp 10.1.3.4 in command.
B. This is the result of the clear ip bgp 10.1.3.4 out command.

C. BGP neighbor 10.1.3.4 performed a graceful restart.

D. BGP neighbor 10.1.3.4 established a new BGP session.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 8
In the DiffServ model, which class represents the lowest priority with the lowest drop probability?

A. AF11

B. AF13

C. AF41

D. AF43

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 9
Which set of commands conditionally advertises 172.16.0.0/24 as long as 10.10.10.10/32 is in the routing table?

A.
```
neighbor x.x.x.x advertise-map ADV exist-map EXT
route-map ADV
 match IP address prefix-list ADV
!
route-map EXT
 match IP address prefix-list EXT
!
ip prefix-list EXT permit 172.16.0.0/24
!
ip prefix-list ADV permit 10.10.10.10/32
```

B.
```
neighbor x.x.x.x advertise-map ADV exist-map EXT
route-map ADV
 match IP address prefix-list ADV
!
route-map EXT
 match IP address prefix-list EXT
!
ip prefix-list ADV permit 172.16.0.0/24
!
ip prefix-list EXT permit 10.10.10.10/32
```

C.
```
neighbor x.x.x.x advertise-map ADV
noute-map ADV
 match IP address prefix-list ADV
 match IP address prefix-list EXT
!
ip prefix-list ADV permit 172.16.0.0/24
!
ip prefix-list EXT permit 10.10.10.10/32
```

D.
```
neighbor x.x.x.x advertise-map ADV
noute-map ADV
 match IP address prefix-list ADV
 match IP address prefix-list EXT
!
ip prefix-list ADV permit 172.16.0.0/24
!
ip prefix-list EXT permit 10.10.10.10/32
```
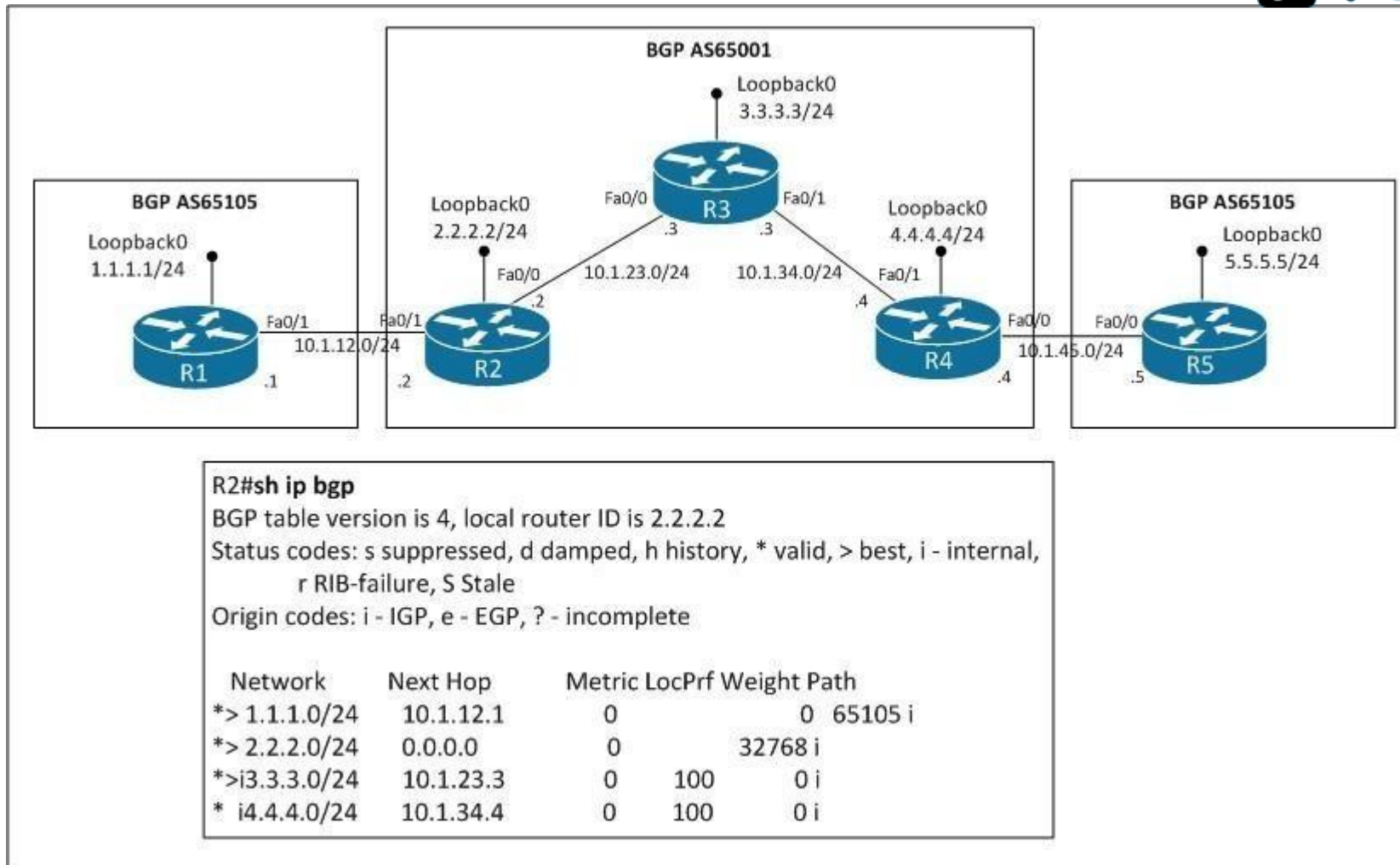
Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 10
Refer to the exhibit. Why is R2 unable to ping the loopback interface of R4?

BGP AS65001

Loopback0
3.3.3.3/24

R3

Fa0/0 .3   Fa0/1 .3

BGP AS65105

Loopback0
1.1.1.1/24

Loopback0
2.2.2.2/24

Fa0/0
.2

10.1.23.0/24   10.1.34.0/24

Loopback0
4.4.4.4/24

Fa0/1
.4

BGP AS65105

Loopback0
5.5.5.5/24

R1

Fa0/1

10.1.12.0/24

Fa0/1
.2

R2

.1

Fa0/0
.4

R4

10.1.45.0/24

Fa0/0
.5

R5

R2#**sh ip bgp**
BGP table version is 4, local router ID is 2.2.2.2
Status codes: s suppressed, d damped, h history, * valid, > best, i - internal,
        r RIB-failure, S Stale
Origin codes: i - IGP, e - EGP, ? - incomplete

```
  Network        Next Hop        Metric LocPrf Weight Path
*> 1.1.1.0/24    10.1.12.1          0                 0  65105 i
*> 2.2.2.0/24    0.0.0.0            0            32768 i
*>i3.3.3.0/24    10.1.23.3          0     100       0 i
*  i4.4.4.0/24   10.1.34.4          0     100       0 i
```

A. The local preference is too high.
B. The weight is too low.
C. The next hop is not reachable from R2.
D. The route originated from within the same AS.

Correct Answer: C
Section: (none)

Explanation

Explanation/Reference:

QUESTION 11
Refer to the exhibit. Which two statements about the output are true? (Choose two.)

A. 802.1D spanning tree is being used.
B. Setting the priority of this switch to 0 for VLAN 1 would cause it to become the new root.
C. The hello, max-age, and forward delay timers are not set to their default values.
D. Spanning-tree PortFast is enabled on GigabitEthernet1/1.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 12
Which statement about the BGP originator ID is true?

A. The route reflector always sets the originator ID to its own router ID.
B. The route reflector sets the originator ID to the router ID of the route reflector client that injects the route into the AS.
C. The route reflector client that injects the route into the AS sets the originator ID to its own router ID.
D. The originator ID is set to match the cluster ID.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 13
Refer to the exhibit. Which two statements are true? (Choose two.)

```
R5#show ip bgp
BGP table version is 24, local router ID is 10.100.1.5
Status codes: s suppressed, d damped, h history, * valid, > best, i - internal,
              r RIB-failure, S Stale
Origin codes: i - IGP, e - EGP, ? - incomplete
   Network          Next Hop          Metric LocPrf Weight Path
*> 10.100.1.1/32    10.1.1.1               0    100      0 65001 23456 2 i
r> 10.100.1.2/32    10.1.2.1               0    100      0 65001 23456 i
```

A. This router is not 4-byte autonomous system aware.
B. This router is 4-byte autonomous system aware.
C. The prefix 10.100.1.1/32 was learned through an autonomous system number with a length of 4 bytes, and this router is 4-byte autonomous system aware.
D. The prefix 10.100.1.1/32 was learned through an autonomous system number with a length of 4 bytes, and this router is not 4-byte autonomous system aware.
E. The prefix 10.100.1.1/32 was originated from a 4-byte autonomous system.
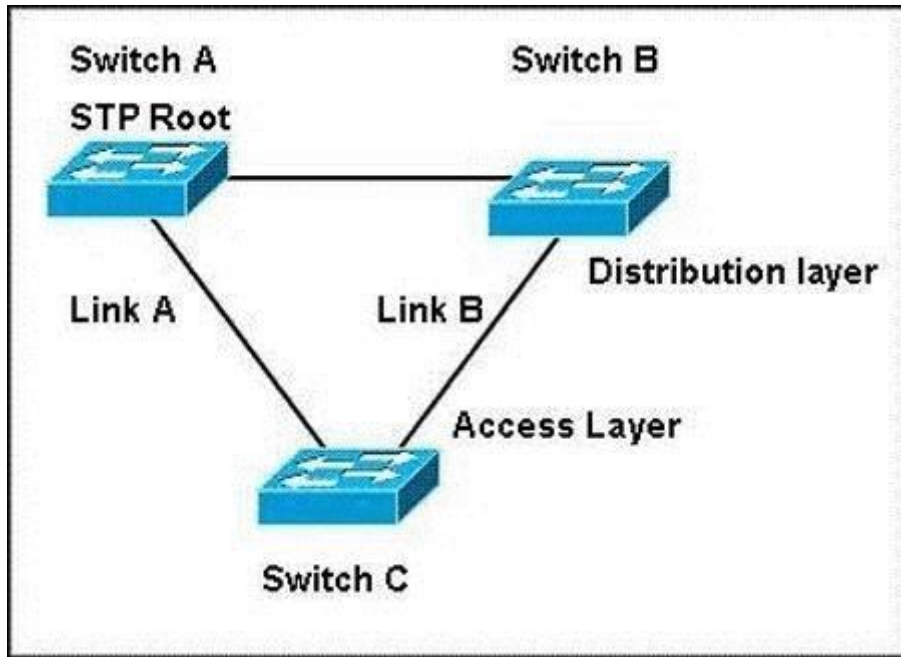
Correct Answer: AD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 14
Refer to the exhibit. Spanning tree protocol is running on all three switches. The switches are configured so that Link A is the active link, and Link B is the standby link. There is a problem occurring where Switch B starts forwarding on Link B causing a routing loop.

What is the likely cause of the problem?

A. PortFast is not enabled.
B. There is a port duplex mismatch.
C. MISTP is enabled without RSTP.
D. A single instance of STP is enabled instead of PVST.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 15
While troubleshooting a BGP neighborship, you notice that the neighborship is constantly going up and down. What is causing the neighbors to flap?

A. The traffic-shaping and rate-limiting parameters are in correct.
B. There is a BGP timer mismatch between both neighbors.

C. There is a routing issue between both neighbors.

D. A firewall is blocking TCP packets with port 179.

E. There is a mismatch on the BGP update source between both neighbors.

F. EBGP multihop has not been configured on the neighbors.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 16
Refer to the exhibit. An EBGP session is not established between Router1 and Router2.

Router 1

```
interface Loopback0
 ip address 2.2.2.2 255.255.255.255
!
interface Serial1
 ip address 10.10.10.1 255.255.255.0
!
router bgp 300
 neighbor 1.1.1.1 remote-as 400
 neighbor 1.1.1.1 ebgp-multihop 2
 neighbor 1.1.1.1 update-source Loopback0
```

Router 2

```
interface Loopback0
 ip address 1.1.1.1 255.255.255.255
!
interface Serial0
 ip address 10.10.10.2 255.255.255.0
!
router bgp 400
 neighbor 2.2.2.2 remote-as 300
 neighbor 2.2.2.2 ebgp-multihop 2
 neighbor 2.2.2.2 update-source Loopback0
```

A. The ebgp-multihop value must be increased to 3.
B. A static route needs to be added on Router1 and Router2.
C. The update-source loopback 0 command needs to be removed.
D. Use the serial interface IP addresses in the neighbor command, but leave the update source pointing to loopback 0.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 17
While troubleshooting OSPF issues on a broadcast network, the network administrator notices that some routers are stuck in two-way state.
What is the cause of this issue?

A. This is normal on OSPF broadcast network types.
B. The network type is configured incorrectly on these routers
C. There is an MTU mismatch between these routers and their neighbors.
D. This only happens to routers that have their OSPF priority set to 0.
E. Hello packets are not being received on these routers.
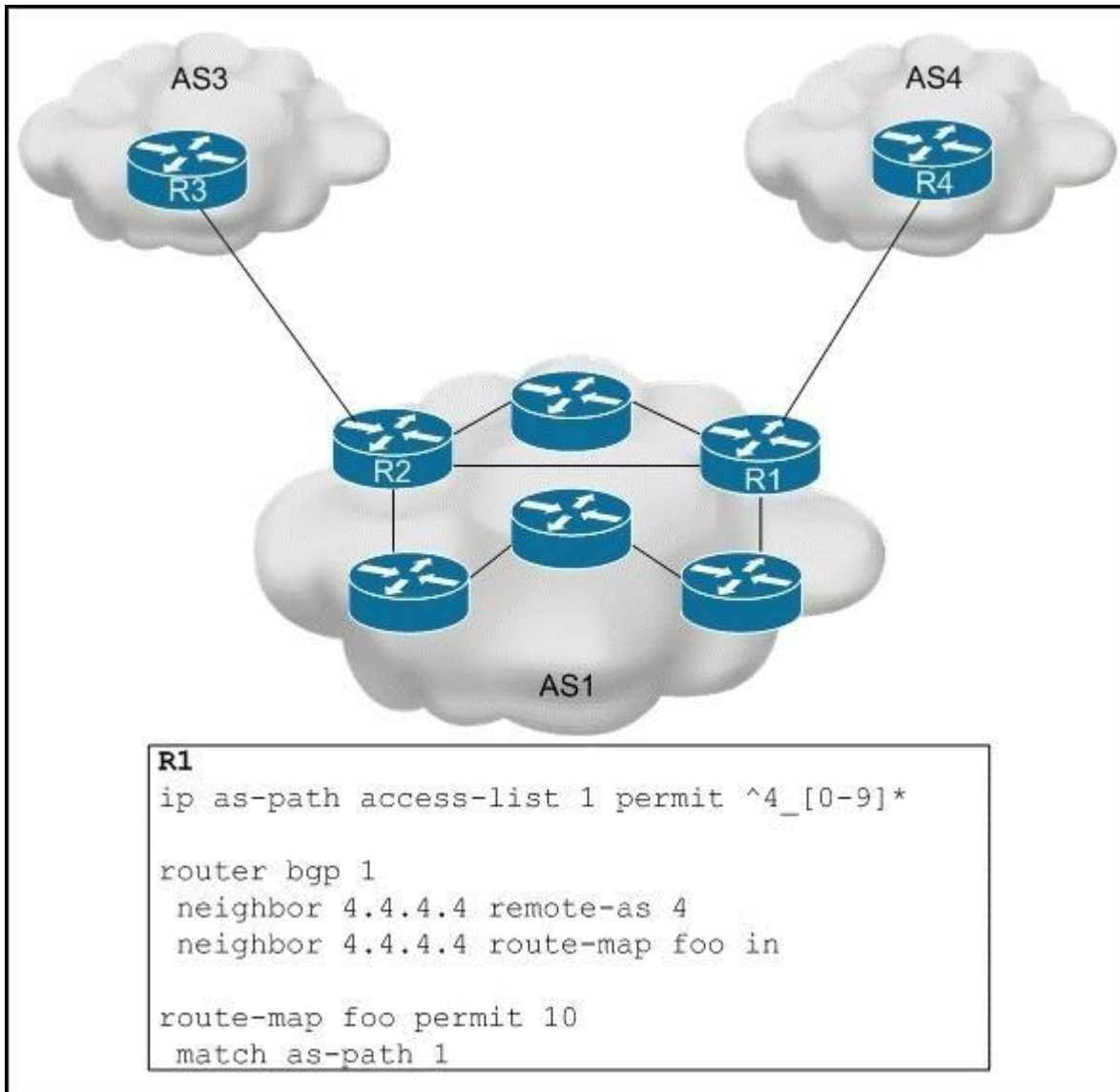
Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 18
Refer to the exhibit. You want to set up an AS path filter that allows networks that originated from AS4, and autonomous systems that are directly attached to AS4, to enter R1. When you tested the filter, you noticed that something was wrong with it.

```
R1
ip as-path access-list 1 permit ^4_[0-9]*

router bgp 1
 neighbor 4.4.4.4 remote-as 4
 neighbor 4.4.4.4 route-map foo in

route-map foo permit 10
 match as-path 1
```

How can this be solved?

A. Change the regular expressing to ^4_0-9*$.

B. Change the regular expression to ^4_0-9+$.
C. Change the regular expression to ^4_0-9.*.
D. Change the regular expression to ^4_0-9.$.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 19
Refer to the exhibit. While troubleshooting performance issues on your network, you notice that CPU utilization on your Layer 3 Internet switch is very high.
What can be done to solve this issue?

```
hostname SW1
!
ip subnet-zero
!
ip routing
!
spanning-tree extend system-id
!
interface FastEthernet0/1
 no ip address
!
!
!
interface FastEthernet0/48
 description To Internet_Router
 no switchport
 ip address 200.1.1.1 255.255.255.252
!
interface Vlan1
 no ip address
 shutdown
!
interface Vlan2
 description USER_VLAN
 ip address 10.1.2.1 255.255.255.0
!
interface Vlan3
 description SERVER_VLAN
 ip address 10.1.3.1 255.255.255.0
!
ip classless
!
ip route 0.0.0.0 0.0.0.0 FastEthernet0/48
!
line con 0
line vty 5 15
!
end
```

A. Use an SVI instead of a routed port to connect to the Internet router.
B. This is a capacity issue. Replace the switch with a high-performance Layer 3 switch.
C. Point the default static route to an IP address instead of a physical interface.
D. Configure CoPP on the Layer 3 switch.

Correct Answer: C
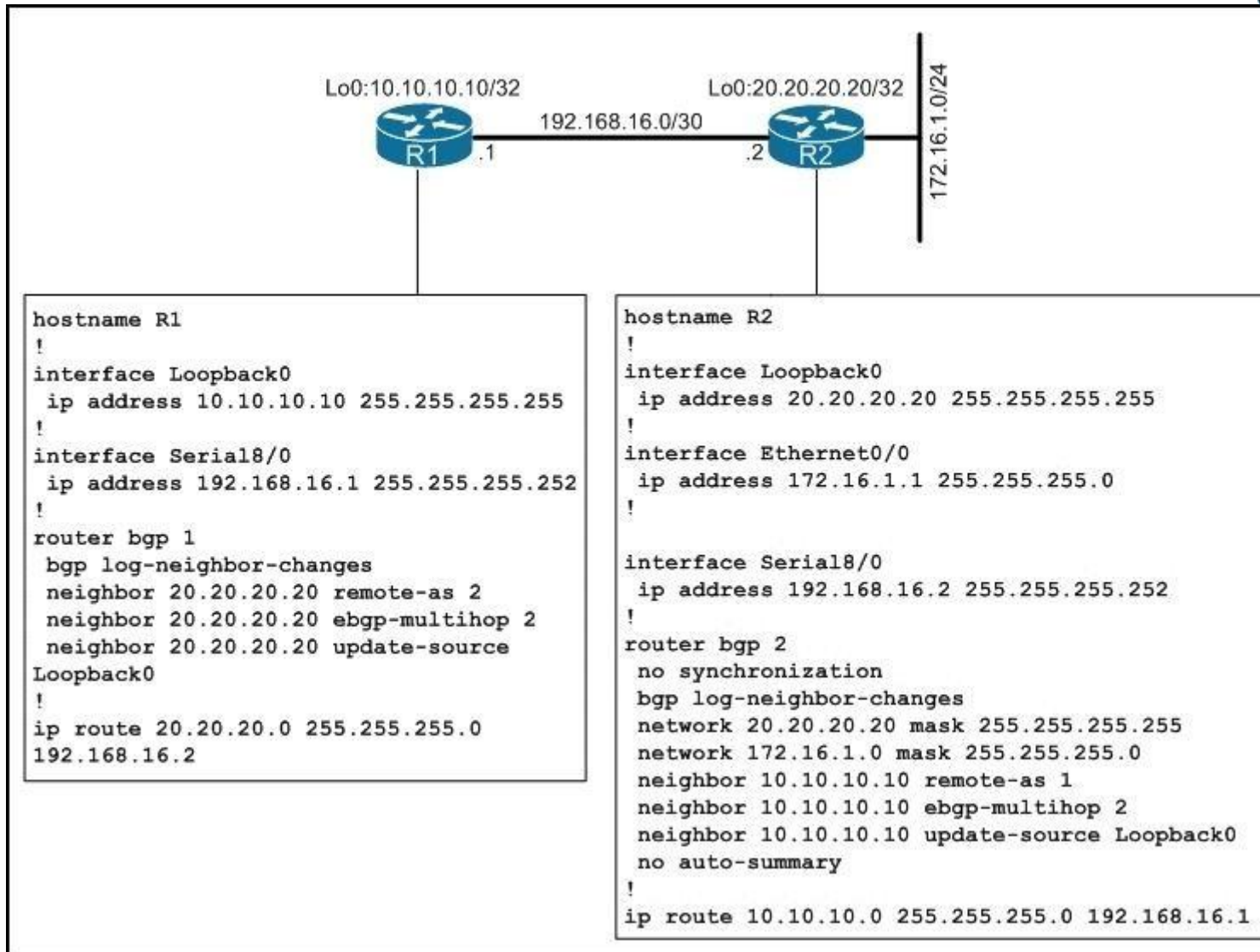**Section: (none)**
Explanation

Explanation/Reference:

QUESTION 20
Refer to the exhibit. While troubleshooting BGP in this network, you notice that routes are constantly flapping on R1.
What can be done to solve this issue?

Lo0:10.10.10.10/32 Lo0:20.20.20.20/32 172.16.1.0/24

192.168.16.0/30

R1 .1 .2 R2

```
hostname R1
!
interface Loopback0
 ip address 10.10.10.10 255.255.255.255
!
interface Serial8/0
 ip address 192.168.16.1 255.255.255.252
!
router bgp 1
 bgp log-neighbor-changes
 neighbor 20.20.20.20 remote-as 2
 neighbor 20.20.20.20 ebgp-multihop 2
 neighbor 20.20.20.20 update-source
Loopback0
!
ip route 20.20.20.0 255.255.255.0
192.168.16.2
```

```
hostname R2
!
interface Loopback0
 ip address 20.20.20.20 255.255.255.255
!
interface Ethernet0/0
 ip address 172.16.1.1 255.255.255.0
!
interface Serial8/0
 ip address 192.168.16.2 255.255.255.252
!
router bgp 2
 no synchronization
 bgp log-neighbor-changes
 network 20.20.20.20 mask 255.255.255.255
 network 172.16.1.0 mask 255.255.255.0
 neighbor 10.10.10.10 remote-as 1
 neighbor 10.10.10.10 ebgp-multihop 2
 neighbor 10.10.10.10 update-source Loopback0
 no auto-summary
!
ip route 10.10.10.0 255.255.255.0 192.168.16.1
```

A. Disable synchronization on R1 so that routes from R2 are installed in the routing table.
B. Disable autosummary on R1 so that routes from R2 are installed in routing table.
C. Increase the EBGP multihop count to 3.
D. Replace the static route on R1 with a specific route to 20.20.20.20/32.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 21
While troubleshooting an OSPFv3 neighborship between two routers on a Frame Relay network, you notice that there is a mapping issue.
Which mapping needs to be established for OSPFv3 to establish a neighborship on Frame Relay?

A. The all routers multicast address needs to be mapped to the correct DLCI.
B. The solicited node multicast address needs to be mapped to the correct DLCI.
C. The neighbor's link-local address needs to be mapped to the correct DLCI.
D. The all routers broadcast address needs to be mapped to the correct DLCI.
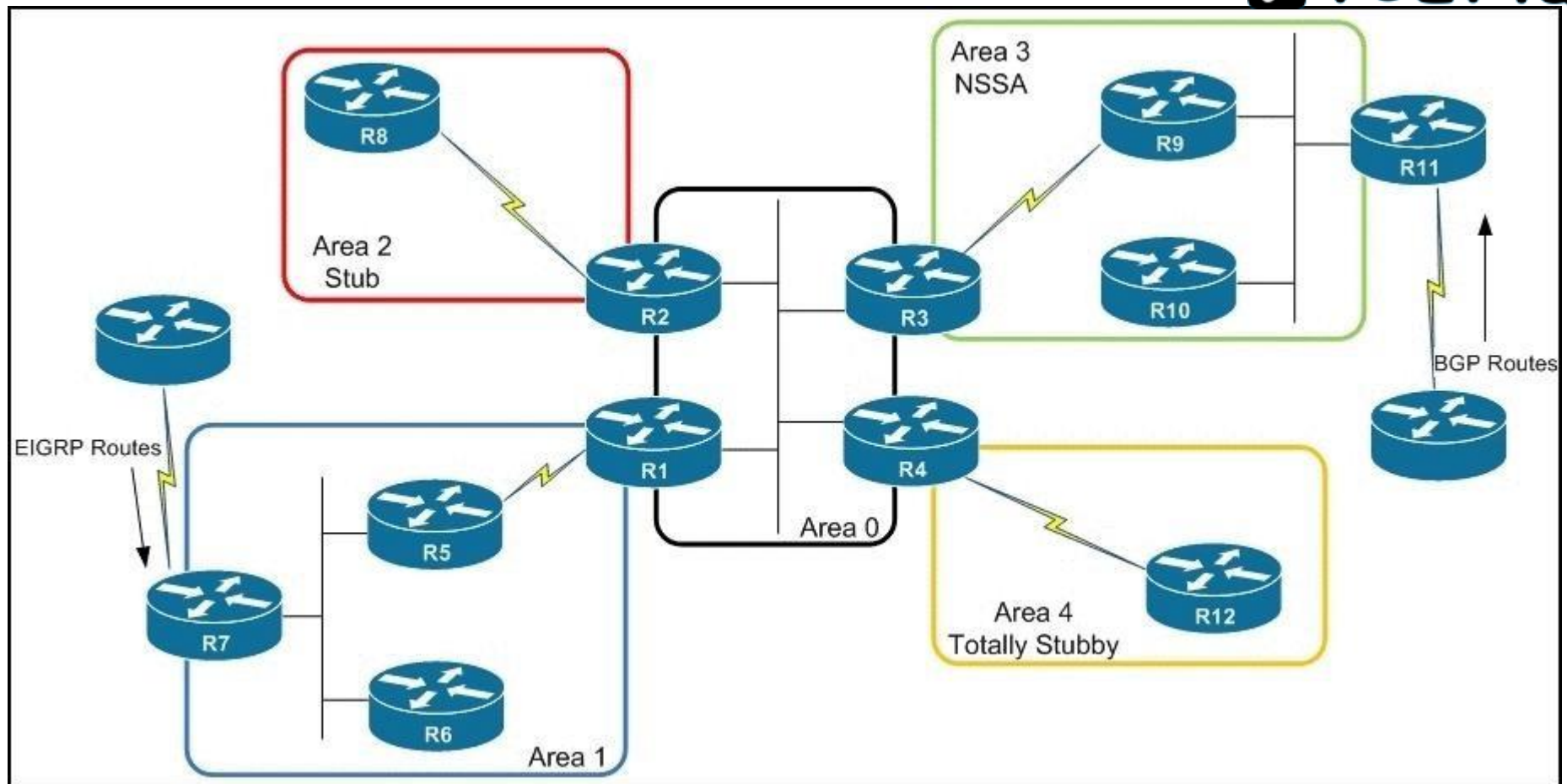
Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 22
Refer to the exhibit. R10 in area 3 is not able to reach EIGRP routes that have been redistributed into OSPF on R7.
Which two actions can be taken to resolve this issue, while maintaining connectivity to BGP routes that are redistributed on r11? (Choose two)

A. Change area 3 from NSSA to a stub area.
B. Change area 3 from NSSA to a totally stubby area.
C. Change area 3 from NSSA to a normal area.
D. Change area 3 from NSSA to an NSSA totally stub area.

Correct Answer: CD
Section: (none)
Explanation

Explanation/Reference:

```
access-list extended 111
 10 permit udp any any eq 68

access-list extended 112
 10 permit udp any any eq 67

class-map type inspect match-any self-to-out
 match access-group 111
class-map type inspect match-any out-to-self
 match access-group 112

zone security outside
zone security inside

interface Ethernet0/1
 zone-member security outside
interface Ethernet0/2
 zone-member security inside

policy-map type inspect out-to-self
 class type inspect out-to-self
  pass
 class class-default
  drop
policy-map type inspect self-to-out
 class type inspect self-to-out
  pass
 class class-default
  drop

zone-pair security out-to-self source outside destination self
zone-pair security self-to-out source self destination outside
```

A. The UDP ports in access list 111 and access list 112 are incorrect.
B. The wrong action has been configured on the policy map.

C. The zone pair configuration is incorrect.
D. The inside and outside references are incorrect.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 25
Refer to the exhibit. The multicast sender and both multicast receivers are in the same VLAN. Multicast receiver 1 can receive the multicast stream from the multicast sender, but multicast receiver 2 cannot receive this stream. While troubleshooting IGMP, it is noticed that the IGMP report from receiver 2 is received by switch 2 but not by switch 1.
Which action will solve this issue?
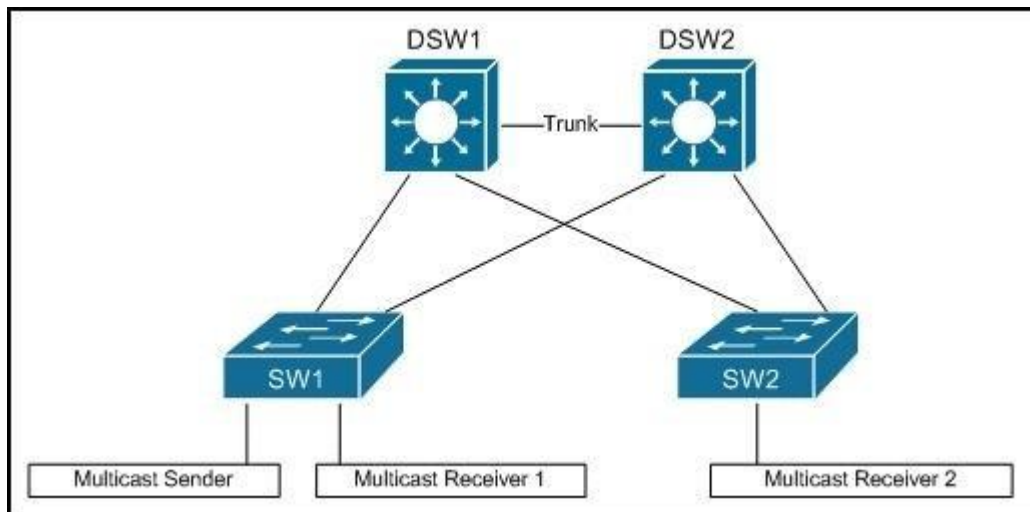
A. Enable PIM on the SVI of the VLAN on switch DSW1 or switch DSW2.
B. Add a straight connection between switch SW1 and switch SW2.
C. Enable IGMPv3 membership reports on multicast receiver 2.
D. Configure a rendezvous point on distribution switch DSW1 and distribution switch DSW2.

Correct Answer: A
Section: (none)

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Explanation

Explanation/Reference:

QUESTION 26
Refer to the exhibit. A network engineer enables a new port channel between two switches. Both switches are configured for spanning-tree MST. What is causing the dispute message to appear on one of the switches?

```
%STP-2-DISPUTE_DETECTED: Dispute detected on port port-channel100
on VLAN0085.
```

A. The switch received an IEEE 802.1D BPDU on that port.
B. The BPDU that is received from the peer is inferior, with the designated role and state as learning or forwarding.
C. The peer switch has been configured with a different VLAN instance mapping.
D. The switch has received a malformed BPDU.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 27
Which two Cisco IOS features can be used to defend against spoofing attacks? (Choose two.)

A. auth-proxy
B. lock-and-key ACL
C. IP Source Guard
D. TCP Intercept
E. CAR
F. uRPF
G. reflexive ACL

Correct Answer: CF
Section: (none)
Explanation

Explanation/Reference:

QUESTION 28
For which IP SLA test type is an IP SLA responder required on the target device?

A. Path-echo
B. Path-jitter
C. An IP SLA responder is not required for any of these probes.
D. Udp-echo
E. Tcp-connect
F. HTTP

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 29
Which action has the same effect as disabling spanning tree on a single switch port?

A. Enable the PortFast feature on the interface
B. Enable the BPDU guard feature on the interface?
C. Enable the BPDU filter feature on the interface?
D. Enable loop guard on the interface

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 30
On which port type would you configure STP PortFast BPDU guard?

A. root ports

B. designated ports
C. host ports
D. alternate ports

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 31
Refer to the exhibit. Which statement is correct?

```
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

Switch#
```

A. Setting the priority of this switch to 16384 for VLAN 1 would cause it to become the secondary root bridge.
B. IEEE 802.1s spanning tree is being used.
C. Spanning-tree PortFast should not be enabled on GigabitEthernet2/1.
D. The spanning-tree timers are not set to their default values.

Correct Answer: C
Section: (none)

Explanation

Explanation/Reference:

QUESTION 32
Refer to the exhibit. EIGRP has been configured on all routers in this network. Which EIGRP neighbor will R5 consider as the successor for network 192.168.1.0/24?
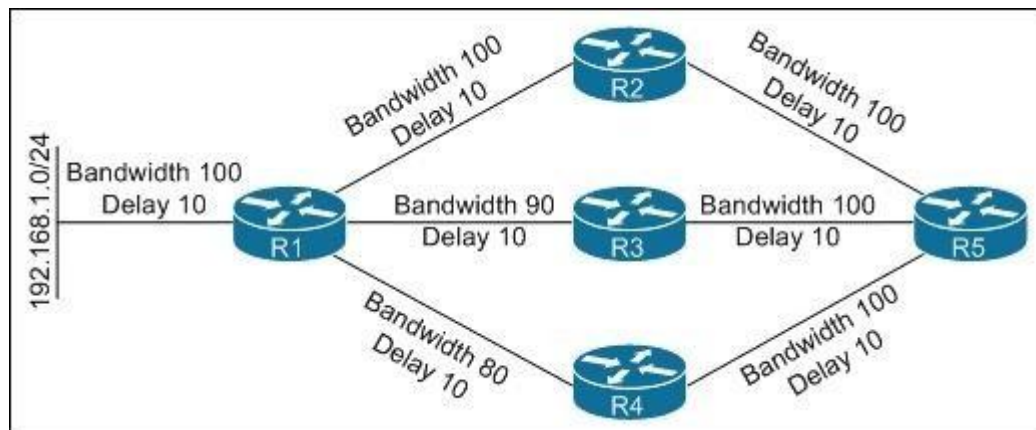
A. R3 will be the successor for 192.168.1.0/24.?
B. R4 will be the successor for 192.168.1.0/24.?
C. R2 will be the successor for 192.168.1.0/24.?
D. There is not enough information to determine which neighbor will be considered as successor.
E. R3 and R4 will both be a successor for 192.168.1.0/24.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 33
Which statement is correct about IPv6 RA guard?

A. In host mode, all RA and router redirect messages are allowed on the port.

B. The RA guard feature is supported only in the egress direction; it is not supported in the ingress direction.
C. The RA guard feature is not supported on auxiliary VLANs and private VLANs.
D. The RA guard feature compares configuration information on the Layer 2 device with the information in the received RA frame.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 34
Refer to the exhibit. What is causing the error to occur on the MST switch?


```
spanning-tree mst configuration
spanning-tree mode mst
spanning-tree mst 0 priority 61440
```

MST

Rapid PVST +

```
spanning-tree vlan 1-10 priority 4096
```
```
spanning-tree vlan 1-10 priority 8192
```

MST switch

```
%SPANTREE-2-PVSTSIM_FAIL: Blocking designated port Gi1/1: Inconsistent
superior PVST BPDU received on VLAN 2, claiming root 32770:002a.6a05.98c1
```
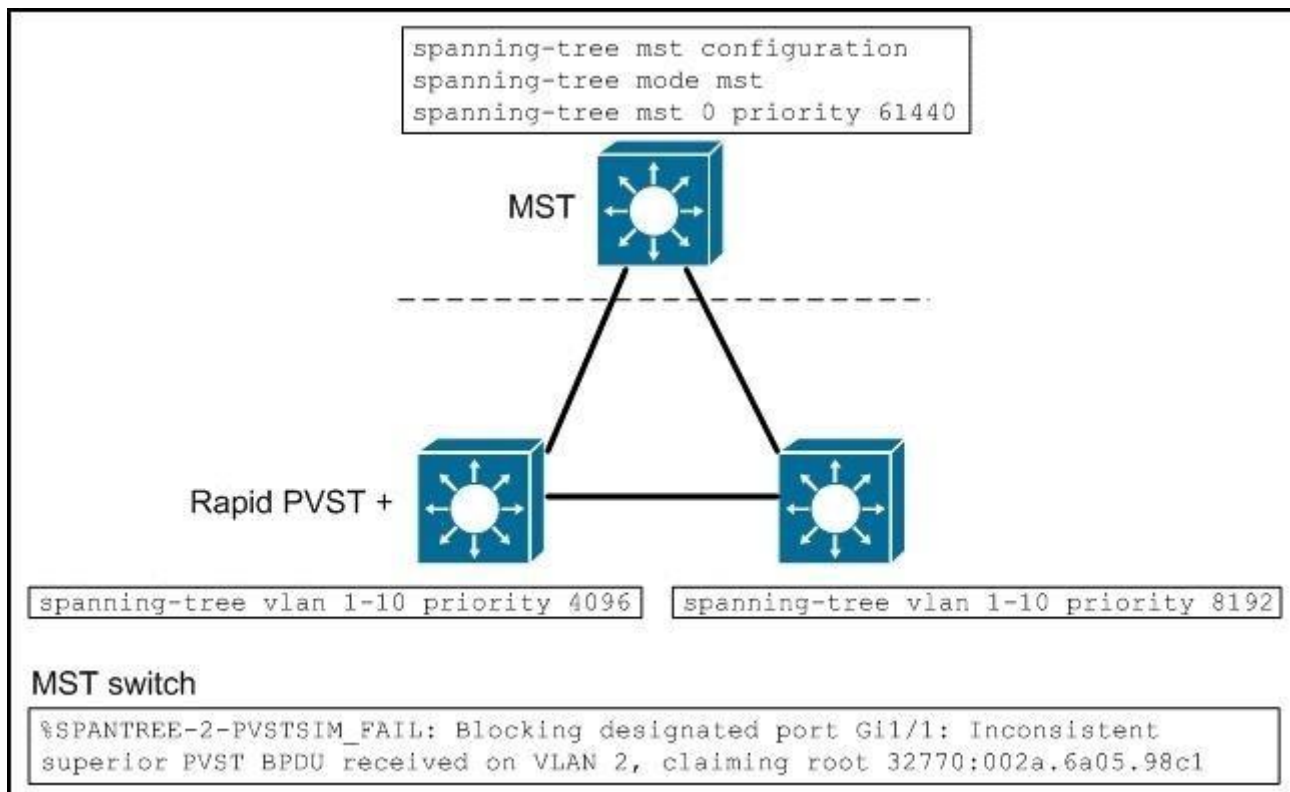
A. When a PVST+ switch is connected to an MST switch, the IST root (MST0) needs to be the root for all PVST+ spanning trees.

B. When a PVST+ switch is connected to an MST switch, interaction between MST and PVST+ is not supported

C. When a PVST+ switch is connected to an MST switch, root guard should be disabled on a per-port basis.

D. When a PVST+ switch is connected to an MST switch, the PVST+ switch must be the root for all MST instances.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 35
Which two commands are required to enable multicast on a router, when it is known that the receivers use a specific functionality of IGMPv3? (Choose two.)

A. ip pim rp-address
B. ip pim ssm
C. ip pim sparse-mode
D. ip pim passive

Correct Answer: BC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 36
What are three causes for unicast flooding? (Choose three.)

A. asymmetric routing
B. duplex mismatch
C. unidirectional link
D. spanning-tree protocol topology changes
E. forwarding table overflow
F. hardware failure on a NIC
G. routing loop

Correct Answer: ADE
Section: (none)

Explanation

Explanation/Reference:

QUESTION 37
Refer to the exhibit. Based on the configuration, what will be the final OSPFv3 neighborship state of R1 and R2?
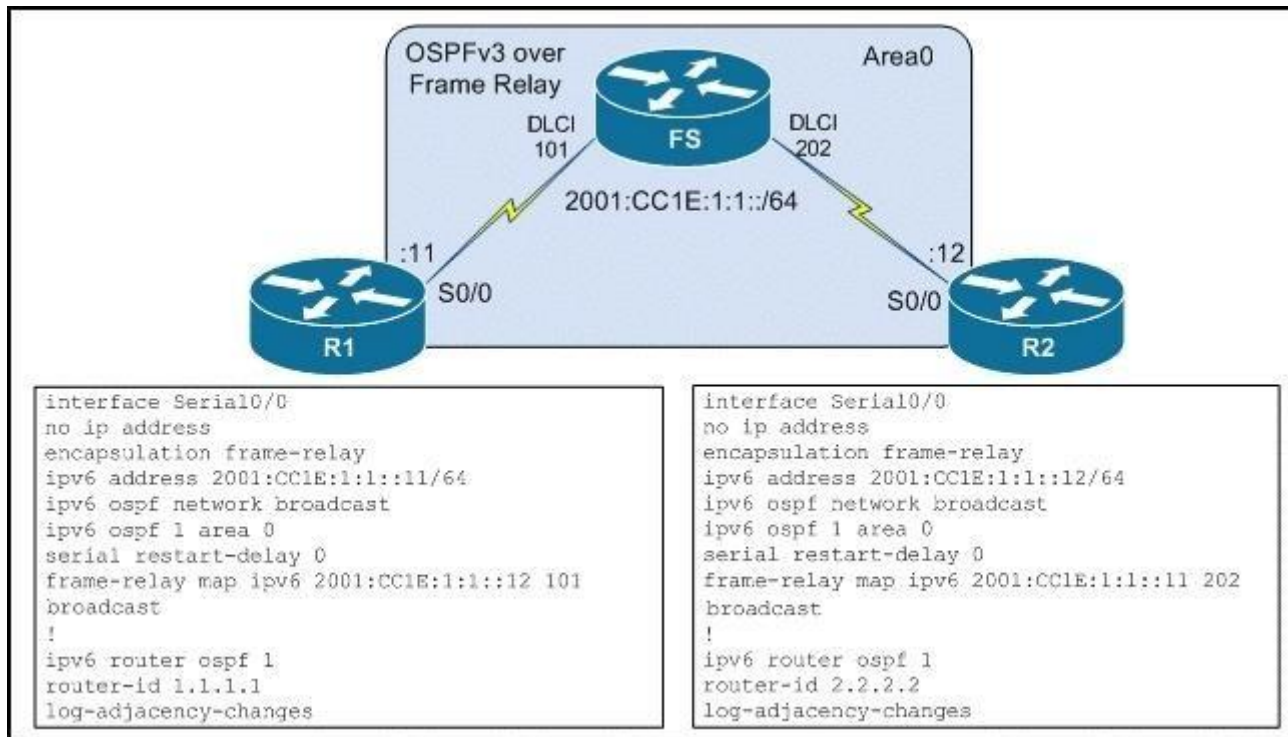
A. Both routers will be stuck in init state.
B. Both routers will be stuck in two-way state.
C. Both routers will be stuck in exstart/exchange state.
D. Both routers will be in full (DR or BDR) state.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 38
Refer to the exhibit. R4 is configured as an OSPF stub. Which action must be taken to avoid R4 from learning OSPF type 3 LSA inter-area routes from 209.165.202.130?

```
R4#show ip route
....
Gateway of last resort is 209.165.202.130 to network 0.0.0.0

      209.165.200.0/28 is subnetted, 1 subnets
O IA     209.165.200.240
              [110/782] via 209.165.202.130, 00:35:27,FastEthernet0/0
      209.165.201.0/27 is subnetted, 1 subnets
O IA     209.165.201.0 [110/783] via 209.165.202.130, 00:35:27,
         FastEthernet0/0
      209.165.202.0/27 is subnetted, 1 subnets
C        209.165.202.128 is directly connected, FastEthernet0/0
O*IA 0.0.0.0/0 [110/2] via 209.165.202.130, 00:35:27,
         FastEthernet0/0
```

A. Disable sending summary LSAs by adding no-summary to the stub command on the ABR.
B. R4 must filter the incoming OSPF updates using route maps.
C. Disable sending summary LSAs by adding no-summary to the stub command on the ASBR.
D. Control of inter-area route propagation is best handled with EIGRP.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 39
Which QoS mechanism will prevent a decrease in TCP performance?

A. Shaper
B. Policer
C. WRED
D. Rate-Limit
E. LLQ
F. Fair-Queue

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 40
What needs to be enabled for Unicast RPF?

A. BGP
B. OSPF
C. CEF
D. RIP

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 41
Refer to the exhibit. Which interface(s) will show ip rpf 1.1.1.2 indicate as RPF interface(s)?

```
Router#sh ip route
Codes: C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       ia - IS-IS inter area, * - candidate default, U - per-user static route
       o - ODR, P - periodic downloaded static route

Gateway of last resort is not set

     1.0.0.0/32 is subnetted, 2 subnets
C       1.1.1.1 is directly connected, Loopback0
O       1.1.1.2 [110/11] via 3.3.3.2, 00:00:06, Ethernet1/0
                [110/11] via 2.2.2.2, 00:00:06, Ethernet0/0
     2.0.0.0/24 is subnetted, 1 subnets
C       2.2.2.0 is directly connected, Ethernet0/0
     3.0.0.0/24 is subnetted, 1 subnets
C       3.3.3.0 is directly connected, Ethernet1/0

Router#sh ip pim neighbor
PIM Neighbor Table
Mode: B - Bidir Capable, DR - Designated Router, N - Default DR Priority,
      S - State Refresh Capable
Neighbor          Interface              Uptime/Expires      Ver    DR
Address                                                             Prio/Mode
2.2.2.2           Ethernet0/0            00:21:13/00:01:43 v2      1 / DR S
3.3.3.2           Ethernet1/0            00:01:04/00:01:39 v2      1 / DR S
```

A. Ethernet 1/0
B. Ethernet 0/0
C. Both Ethernet 0/0 and Ethernet 1/0
D. RPF will fail

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 42
In order to maintain security, with which hop count are IPv6 neighbor discovery packets sent?

A. 0
B. 1
C. 255
D. 256

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 43
Which command will define a VRF with name 'CCIE' in IPv6?

A. ip vrf CCIE

B. ipv6 vrf CCIE

C. vrf definition CCIE

D. ipv6 vrf definition CCIE

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Explanation:
Vrf definition CCIE creates a multiprotocol VRF for both IPv4 and IPv6

QUESTION 44
Refer to the exhibit. R4 is unable to establish an EIGRP adjacency with R3, the only other router on the Fa0/0 LAN segment, although it is able to ping R3. An EIGRP debug on R4 does not provide any clues. What might be the cause of the problem?

```
R4#show ip protocols
Routing Protocol is "eigrp 100"
  Outgoing update filter list for all interfaces is not set
  Incoming update filter list for all interfaces is not set
  Default networks flagged in outgoing updates
  Default networks accepted from incoming updates
  EIGRP metric weight K1=1, K2=0, K3=1, K4=0, K5=0
  EIGRP maximum hopcount 100
  EIGRP maximum metric variance 1
  Redistributing: eigrp 100
  EIGRP NSF-aware route hold timer is 240s
  Automatic network summarization is not in effect
  Maximum path: 4
  Routing for Networks:
    209.165.202.128/27
  Passive Interface(s):
    FastEthernet0/0
  Routing Information Sources:
    Gateway          Distance       Last Update
  Distance: internal 90 external 170

R4#ping 209.165.202.139
Sending 5, 100-byte ICMP Echos to 209.165.202.139, timeout is 2 seconds:
!!!!!
```

```
R3#show ip protocols
Routing Protocol is "eigrp 100"
  Outgoing update filter list for all interfaces not set
  Incoming update filter list for all interfaces not set
  Default networks flagged in outgoing updates
  Default networks accepted from incoming updates
  EIGRP metric weight K1=1, K2=0, K3=1, K4=0, K5=0
  EIGRP maximum hopcount 100
  EIGRP maximum metric variance 1
  Redistributing: static, eigrp 100
  EIGRP NSF-aware route hold timer is 240s
  Automatic network summarization is not in effect
  Maximum path: 4
  Routing for Networks:
    209.165.200.224/28
    209.165.202.128/28
  Routing Information Sources:
    Gateway          Distance       Last Update
    209.165.200.242       90        14:09:12
  Distance: internal 90 external 170
```

A. The passive interface has disabled the transmission of EIGRP multicast hello packets.
B. EIGRP on R4 should be routing to network 209.165.202.128/28.
C. The designated router/backup designated router (DR/BDR) selection requires that at least three routers are on a LAN.
D. The routing metrics on R4 and R3 are different.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Explanation:
The passive-interface command disables the transmission and receipt of EIGRP hello packets on an interface. Unlike IGRP or RIP, EIGRP sends hello packets in order to form and sustain neighbor adjacencies. Without a neighbor adjacency, EIGRP cannot exchange routes with a neighbor. Therefore, the passive-interface command prevents the exchange of routes on the interface. Although EIGRP does not send or receive routing updates on an interface configured with the passive-interface command, it still includes the address of the interface in routing updates sent out of other non-passive interfaces.

QUESTION 45
Refer to the exhibit. The static route to 150.189.131.6 on R3 is intended to serve as the gateway of last resort for the EIGRP network. However, while R3 installs the gateway of last resort, its EIGRP neighbor R4 does not. What might explain the problem?

```
R3#show running-config                          R4#show ip route
...                                              ...
router eigrp 100                                 Gateway of last resort is not set
 network 209.165.200.224 0.0.0.31
 network 209.165.202.128 0.0.0.31                    209.165.200.0/27 is subnetted, 1 subnets
 no auto-summary                                 D     209.165.200.224
!                                                          [90/20514560] via 209.165.202.139, Fa0/0
ip route 0.0.0.0 0.0.0.0 150.189.131.6               209.165.201.0/27 is subnetted, 1 subnets
                                                 D     209.165.201.0
R3#show ip route                                           [90/20517120] via 209.165.202.139, Fa0/0
...                                                  209.165.202.0/27 is subnetted, 1 subnets
Gateway of last resort is 150.189.131.6 to network 0.0.0.0   C     209.165.202.128 is directly connected, Fa0/0

     209.165.200.0/27 is subnetted, 1 subnets
C    209.165.200.224 is directly connected, Serial0/0/0
     209.165.201.0/27 is subnetted, 1 subnets
D    209.165.201.0 [90/20560] via 209.165.200.242, Ser0/0/0
     209.165.202.0/27 is subnetted, 1 subnets
C    209.165.202.128 is directly connected, FastEthernet0/0
     150.189.0.0/24 is subnetted, 1 subnets
C    150.189.131.0 is directly connected, FastEthernet0/1
S*   0.0.0.0/0 [1/0] via 150.189.131.6
```

A. R3 is missing the global command ip default-network 150.189.131.6.

B. Autosummary must be enabled on R3 in order for default-routes to be propagated.

C. Default-networks must be configured individually on each EIGRP router.

D. The static route on R3 must be redistributed into EIGRP.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Explanation:
http://www.cisco.com/en/US/tech/tk365/technologies_tech_note09186a00800c2d96.shtml (see potential problems)

QUESTION 46
Refer to the exhibit. Which statement would explain why R4 and R3 are unable to build an EIGRP adjacency?

```
R4#show ip protocols                              R3#show ip protocols
Routing Protocol is "eigrp 100"                   Routing Protocol is "eigrp 100"
  Outgoing update filter list for all interfaces is not set    Outgoing update filter list for all interfaces is not set
  Incoming update filter list for all interfaces is not set    Incoming update filter list for all interfaces is not set
  Default networks flagged in outgoing updates        Default networks flagged in outgoing updates
  Default networks accepted from incoming updates      Default networks accepted from incoming updates
  EIGRP metric weight K1=1, K2=0, K3=1, K4=0, K5=0     EIGRP metric weight K1=1, K2=255, K3=1, K4=0, K5=0
  EIGRP maximum hopcount 100                  EIGRP maximum hopcount 100
  EIGRP maximum metric variance 1              EIGRP maximum metric variance 1
  Redistributing: eigrp 100                   Redistributing: eigrp 100
  EIGRP NSF-aware route hold timer is 240s        EIGRP NSF-aware route hold timer is 240s
  Automatic network summarization is not in effect    Automatic network summarization is not in effect
  Maximum path: 4                         Maximum path: 4
  Routing for Networks:                      Routing for Networks:
    209.165.202.128/27                        209.165.200.224/28
  Routing Information Sources:                  209.165.202.128/28
    Gateway        Distance      Last Update     Routing Information Sources:
  Distance: internal 90 external 170             Gateway        Distance      Last Update
                                    209.165.200.242      90        00:01:26
                                 Distance: internal 90 external 170
```

A. The network masks on R4 (209.165.202.128/27) and R3 (209.165.202.128/28) are different.
B. The local EIGRP process on R4 and R3 are the same (but they must be unique).
C. The routing metrics on R4 and R3 are different.
D. R4 is not routing for the network 209.165.200.224/28.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Explanation:
http://packetlife.net/blog/2010/aug/9/eigrp-feasible-successor-routes/

QUESTION 47
Refer to the exhibit. Which action must you take to enable full reachability from router C to router D?
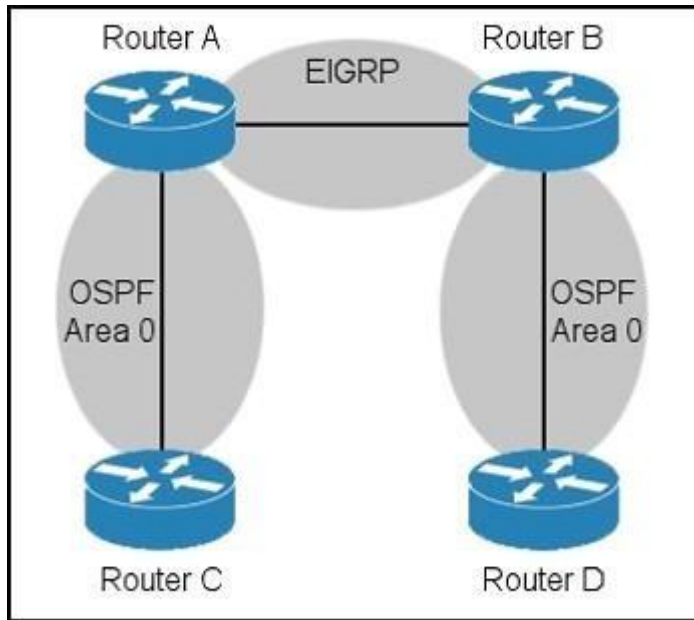
A. Build an OSPF virtual link.
B. Build an OSPF sham link.
C. Configure mutual redistribution between OSPF and EIGRP on routers A and B.
D. Add a static route on router D.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 48
Which two Cisco Express Forwarding tables are located in the data plane? (Choose two.)

A. the forwarding information base
B. the label forwarding information base
C. the IP routing table
D. the label information table

E. the adjacency table

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 49
Which option is the most effective action to avoid packet loss due to microbursts?

A. Implement larger buffers.
B. Install a faster CPU.
C. Install a faster network interface.
D. Configure a larger tx-ring size.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 50
Which two statements about packet fragmentation on an IPv6 network are true? (Choose two.)

A. The fragment header is 64 bits long.
B. The identification field is 32 bits long.
C. The fragment header is 32 bits long.
D. The identification field is 64 bits long.
E. The MTU must be a minimum of 1280 bytes.
F. The fragment header is 48 bits long.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 51
You are backing up a server with a 1 Gbps link and a latency of 2 ms. Which two statements about the backup 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 500 Mb.
E. The bandwidth delay product is 50 Mb.

Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 52
Which two pieces of information does RTCP use to inform endpoint devices about the RTP flow? (Choose two.)

A. the transmitted octet
B. the lost packet count
C. session control function provisioning information
D. the CNAME for session participants
E. the authentication method
F. MTU size changes in the path of the flow

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 53
Which two options are required parts of an EEM policy? (Choose two.)

A. event register keyword
B. body
C. environment must defines

D. namespace import

E. entry status

F. exit status

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 54
Which two actions can you take to allow the greatest number of pertinent packets to be stored in the temporary buffer of Cisco IOS Embedded Packet Capture? (Choose two.)

A. Specify the sampling interval.
B. Specify the capture buffer type.
C. Specify a reflexive ACL.
D. Specify the minimum packet capture rate.
E. Specify the packet size.
F. Store the capture simultaneously onto an external memory card as the capture occurs.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 55
Which technology can be used to secure the core of an STP domain?

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

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 56
What is the destination multicast MAC address for BPDUs on the native VLAN, for a switch that is running 802.1D?

A. 0185. C400. 0000
B. 0100.0CCC.CCCC
C. 0100.0CCC.CCCD
D. 0180. C200. 0000

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 57
Which three statements are true about VSS? (Choose three.)

A. VSS separates the control planes of the active and the standby chassis.
B. Configuration changes can be made on both active and standby chassis.
C. When the VSS active chassis recovers after a failure, it initiates a switchover and takes on the active role again.
D. VSS unifies the control planes of the active and the standby chassis.
E. HSRP configuration is not required to run VSS.
F. The VSS standby chassis monitors the VSS active chassis using the VSL.

Correct Answer: DEF
Section: (none)
Explanation

Explanation/Reference:

QUESTION 58
Refer to the exhibit. All switches have default bridge priorities, and originate BPDUs with MAC addresses as indicated. The numbers shown are STP link metrics.

Priority: 32768
MAC Address:
f4ac.c1c4.2b80

SWA

Priority: 32768
MAC Address:
f4ac.c1c4.2b81

19   19

SWB

19   19

Priority: 32768   Priority: 32768
MAC Address: MAC Address:
f4ac.c1c4.2b83   f4ac.c1c4.2b82

SWD   4   **SWC**

4   4

4   4

Priority: 32768   Priority: 32768
MAC Address: MAC Address:
f4ac.c1c4.2b84   **SWE**   **SWF**   f4ac.c1c4.2b85

4   4

SWG

Priority: 32768
MAC Address:
f4ac.c1c4.2b86
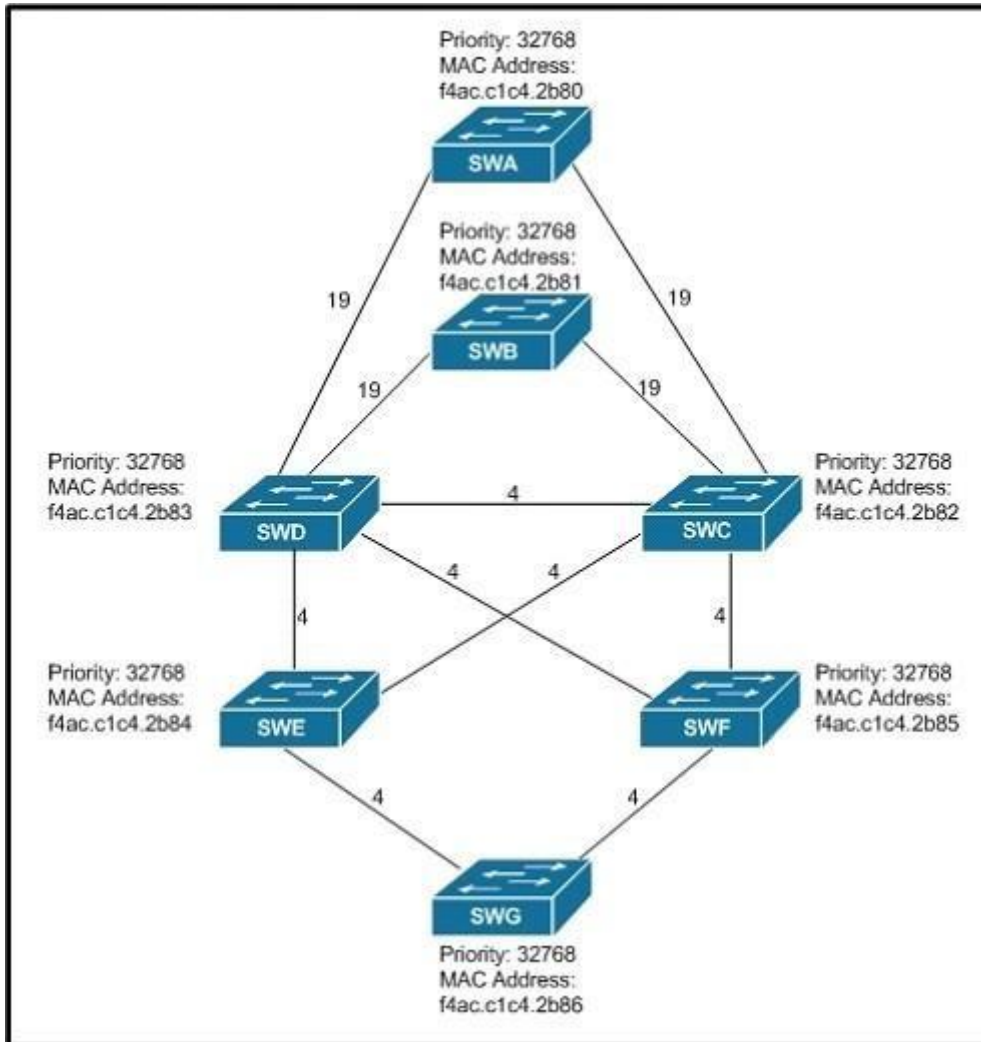
After STP converges, you discover that traffic from switch SWG toward switch SWD takes a less optimal path. What can you do to optimize the STP tree in this switched network?

A. Change the priority of switch SWA to a lower value than the default value.
B. Change the priority of switch SWB to a higher value than the default value.
C. Change the priority of switch SWG to a higher value than the default value.

D. Change the priority of switch SWD to a lower value than the default value.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 59
Which flag in a configuration BPDU instructs all switches to shorten their bridge table aging process from the default 300 seconds to the current forward delay value?

A. topology change bit
B. topology change acknowledgment bit
C. priority bit
D. max-age bit

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 60
Refer to the exhibit. Which technology can be used on the switch to enable host A to receive multicast packets for 239.2.2.2 but prevent host B from receiving them?
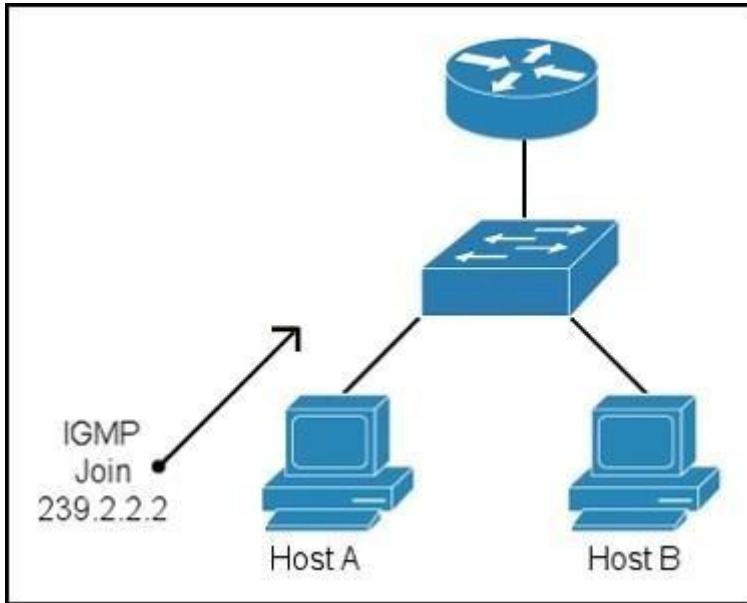
A. IGMP filtering
B. MLD snooping
C. IGMP snooping
D. MLD filtering

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 61
Which option describes the purpose of the PPP endpoint discriminator?

A. It identifies the maximum payload packet.
B. It notifies the peer that it prefers 12-bit sequence numbers.
C. It identifies the system attached to the link.
D. It determines whether a loopback is on the link.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 62
Which three statements about SPAN traffic monitoring are true? (Choose three.)

A. Traffic from a non-source VLAN is discarded when it arrives on a source VLAN.
B. Multiple sessions can send traffic to an individual destination port.
C. It supports up to 32 SPAN ports per switch.
D. The destination port acts as a normal switchport.
E. It supports up to 64 SPAN ports per switch.
F. Only one session can send traffic to an individual destination port.

Correct Answer: AEF
Section: (none)
Explanation

Explanation/Reference:

QUESTION 63
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.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 64

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

A. Bridge assurance must be enabled on both ends of a link.
B. Bridge assurance can be enabled on one end of a link or on both ends.
C. Bridge assurance is enabled on STP point-to-point links only.
D. Bridge assurance is enabled 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 disabled state.

Correct Answer: ACE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 65
What is the hop limit for an MLD message?

A. 1
B. 2
C. 15
D. 255

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 66
Refer to the exhibit. Which action must you take to enable the WAN link to function properly?
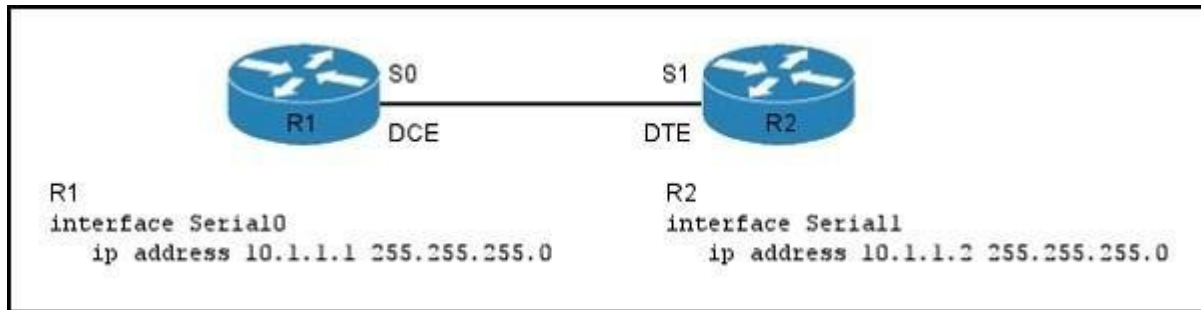
A. Enter a clock rate on the DCE interface.
B. Enter a clock rate on the DTE interface.
C. Enter a compression algorithm on both interfaces.
D. Configure both interfaces for HDLC encapsulation.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 67
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

Correct Answer: AD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 68
Which three statements about EVCs are true? (Choose three.)

A. Spanning Tree must use MST mode on EVC ports.
B. PAGP is supported on EVC ports.
C. Spanning Tree must use RSTP mode on EVC ports.
D. LACP is supported on EVC ports.
E. Layer 2 multicast framing is supported.
F. Bridge domain routing is required.

Correct Answer: ABD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 69
Refer to the exhibit. Why is the router out of memory?

```
Router#show version

Router processor (revision 0x00) with 524288K bytes of memory.


Router#show memory statistics
                Head      Total(b)      Used(b)      Free(b)     Lowest(b)    Largest(b)
Processor     38A6400    405117952    360086164    1031788      37130412     34036896

Router#show process memory
 PID TTY  Allocated       Freed      Holding      Getbufs      Retbufs Process
   0   0   73373216     1706280    69497168            0            0 *Init*
 154   0 1103256760  1247933568   311905892       204360            0 BGP Router
 327   0  212528944   322521272    44071084            0            0 IP RIB Update


Router#show ip bgp summary
BGP router identifier 1.1.1.1, local AS number 65000
BGP table version is 310248959, main routing table version 310248959
246316 network entries using 29557920 bytes of memory
1586197 path entries using 76137456 bytes of memory
256960/41528 BGP path/bestpath attribute entries using 27751680 bytes of memory
440 BGP rrinfo entries using 10560 bytes of memory
115467 BGP AS-PATH entries using 3047538 bytes of memory
5952 BGP community entries using 479704 bytes of memory
0 BGP route-map cache entries using 0 bytes of memory
230723 BGP filter-list cache entries using 2768676 bytes of memory
BGP using 139753534 total bytes of memory
Dampening enabled. 8 history paths, 0 dampened paths
631350 received paths for inbound soft reconfiguration
BGP activity 9798913/9552597 prefixes, 220384574/218798377 paths, scan interval 60 secs
Neighbor      V    AS MsgRcvd   MsgSent   TblVer   InQ OutQ Up/Down  State/PfxRcd
1.1.1.2       4 65001 39985912  1384531 310248959    0    0 9w1d       277030
1.1.1.3       4 65001 12269759   529250 310248959    0    0 26w0d      276929
1.1.1.4       4 65001 42728751 20209410 310248959    0    0 32w2d      200372
1.1.1.5       4 65001 46624114 20179383 310248959    0    0 1y14w      200372
```

A. The router is experiencing a BGP memory leak software defect.
B. The BGP peers have been up for too long.

C. The amount of BGP update traffic in the network is too high.

D. The router has insufficient memory due to the size of the BGP database.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 70
Refer to the exhibit. Why is the OSPF state in 2WAY/DROTHER?

```
R1#show ip ospf neighbor

Neighbor ID     Pri   State          Dead Time   Address       Interface
192.168.2.2      0    2WAY/DROTHER   00:00:35    10.25.123.2   Ethernet0/0
192.168.3.3      0    2WAY/DROTHER   00:00:38    10.25.123.3   Ethernet0/0
R1#
```

A. This is the expected output when the interface Ethernet0/0 of R1 is configured with OSPF Priority 0.

B. There is a duplicate router ID.

C. There is an MTU mismatch.

D. There is an OSPF timer (hello/dead) mismatch.

E. This is the expected output when R1 is the DR.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 71
In a nonbackbone OSPF area, all traffic that is destined to the Internet is routed by using a default route that is originated by the ABR. Which change in the configuration of the OSPF area type causes traffic from that area that is destined to the Internet to be dropped?

A. The OSPF area changes from NSSA to totally stubby area.

B. The OSPF area changes from NSSA to regular area.

C. The OSPF area changes from stub area to totally stubby area.

D. The OSPF area changes from stub area to NSSA.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 72
Refer to the exhibit. When the link between RtrB and RtrC goes down, multicast receivers stop receiving traffic from the source for multicast group 229.1.1.1.Which solution will resolve this?
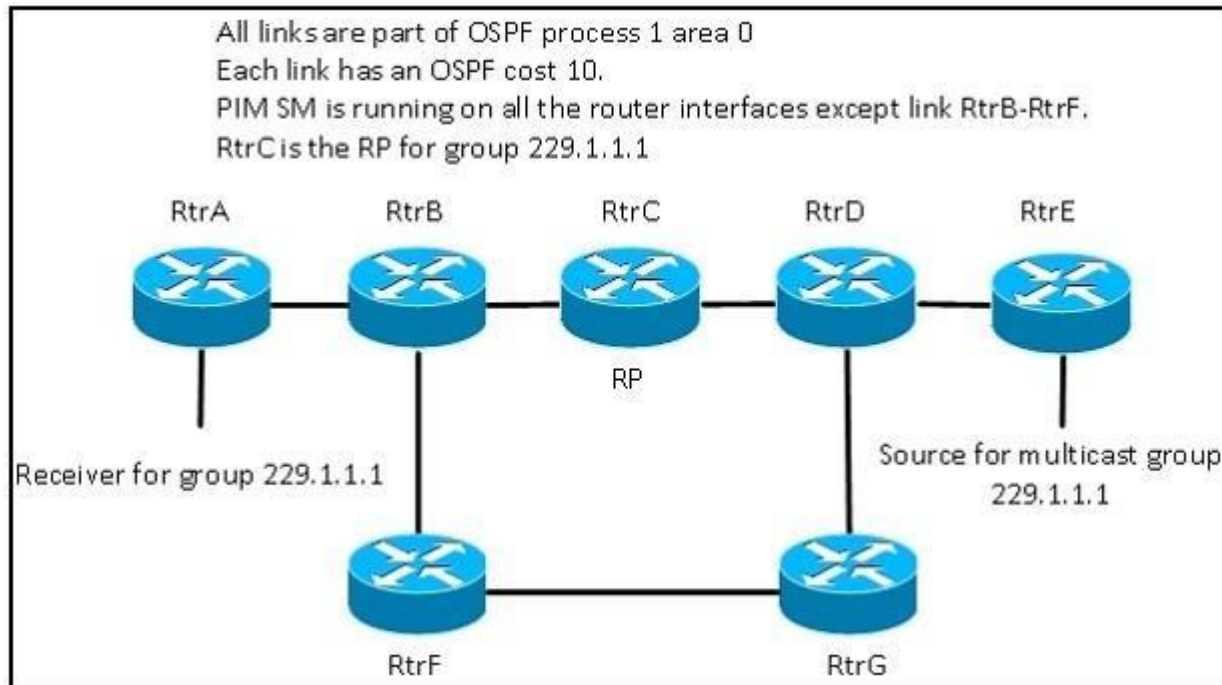
A. adding a static mroute on RtrB and RtrF

B. adding a static unicast route on RtrB and RtrF

C. creating a GRE tunnel between RtrB and RtrD

D. enabling PIM sparse mode on both ends of the link between RtrB and RtrF

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 73
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 full MTU.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 74
Which regular expression will match prefixes from the AS 200 that is directly connected to our AS?

A. ^$

B. ^200)

C. _200$

D. _200_

E. ^200_

Correct Answer: E
Section: (none)
Explanation

Explanation/Reference:

QUESTION 75
Refer to the exhibit. Assuming that the peer is configured correctly and the interface is up, how many neighbors will be seen in the EIGRPv6 neighbor table on this IPv6-only router?

```
!
interface Loopback10
 no ip address
 ipv6 address 6010:AB8::/64 eui-64
!
interface Loopback20
 no ip address
 ipv6 address 6020:AB8::/64 eui-64
!
interface Ethernet0/0
 no ip address
 ipv6 enable
 ipv6 eigrp 50
!
ipv6 router eigrp 50
!
```

A. one neighbor, which will use a local router-id of 6010. AB8. . /64
B. one neighbor, which will use a local router-id of 6020. AB8. . /64
C. none, because EIGRPv6 only supports authenticated peers
D. none, because of the mismatch of timers
E. none, because there is no EIGRP router ID configured

Correct Answer: E
Section: (none)
Explanation

Explanation/Reference:

QUESTION 76
What does a nonzero forwarding address indicate in a type-5 LSA?

A. It indicates that this link-state ID is eligible for ECMP.
B. It indicates that this router should have an OSPF neighbor relationship with the forwarding address before using this link-state ID.
C. It indicates that the receiving router must check that the next hop is reachable in its routing table before using this link-state ID.
D. It indicates that traffic can be directly routed to this next hop in shared segment scenarios where the external route source is directly connected.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 77
Which type of EIGRP routes are summarized by the auto-summary command?

A. internal routes that are learned from a peer that is outside the range of local network statements
B. external routes that are learned from a peer that is inside the range of local network statements
C. locally created routes that are outside the range of local network statements
D. external routes that are learned from a peer that is outside the range of local network statements

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 78
Refer to the exhibit. How can the EIGRP hello and hold time for Gig0/0 be changed to 5 and 15?

```
router eigrp foo
 !
 address-family ipv4 unicast autonomous-system 1
   !
   af-interface default
    hello-interval 10
    hold-time 30
   exit-af-interface
   !
   topology base
   exit-af-topology
   network 10.0.0.0
 exit-address-family
```

A. No action is required, since Gig0/0 is not listed with a nondefault hello and hold time.
B. Add the commands ip hello-interval eigrp 1 5 and ip hold-time eigrp 1 15 under interface Gig0/0.
C. Add the commands hello-interval 5 and hold-time 15 under "af-interface Gig0/0" under the address family.
D. Add the commands default hello-interval and default hold-time under the af-interface Gig0/0 statement under the address family.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 79
What is the range of addresses that is used for IPv4-mapped IPv6 addresses?

A. 2001. db9. . /32
B. 2001. db8. . /32
C. 2002. . /16
D. . . ffff. /16
E. . . ffff. 0. 0/96

Correct Answer: E
Section: (none)

Explanation

Explanation/Reference:

QUESTION 80
Which statement about the overload bit in IS-IS is true?

A. The IS-IS adjacencies on the links for which the overload bit is set are brought down.
B. Routers running SPF ignore LSPs with the overload bit set and hence avoid blackholing traffic.
C. A router setting the overload bit becomes unreachable to all other routers in the IS-IS area.
D. The overload bit in IS-IS is used only for external prefixes.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 81
Refer to the exhibit. Which statement is true?

```
R2#show ip mroute 225.1.1.1
(*, 225.1.1.1), 01:32:54/00:03:06, RP 10.100.1.2, flags: SJC
  Incoming interface: Ethernet1/0, RPF nbr 10.1.3.2
  Outgoing interface list:
    Ethernet3/0, Forward/Sparse, 01:32:54/00:03:06

(10.1.4.7, 225.1.1.1), 01:32:54/00:01:05, flags: JT
  Incoming interface: Ethernet1/0, RPF nbr 10.1.3.2
  Outgoing interface list:
    Ethernet3/0, Forward/Sparse, 00:37:38/00:02:26, A
```

A. R2 is directly connected to the receiver for this group and is the winner of an assert mechanism.
B. R2 is directly connected to the receiver for this group, and it forwards the traffic onto Ethernet3/0, but it is forwarding duplicate traffic onto Ethernet3/0.
C. R2 has the A flag (Accept flag) set on Ethernet 3/0. This is fine, since the group is in BIDIR PIM mode.

D. R2 is directly connected to the receiver for this group and is the loser of an assert mechanism.
E. The A flag is set until the SPT threshold is reached for this multicast group.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 82
Which three statements about IS-IS are true? (Choose three.)

A. IS-IS is not encapsulated in IP.
B. IS-IS is directly encapsulated in the data link layer.
C. 0XFEFE is used in the Layer 2 header to identify the Layer 3 protocol.
D. IS-IS uses protocol ID 93.
E. IS-IS can be used to route the IPX protocol.
F. IS-IS is an IETF standard.

Correct Answer: ABC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 83
Refer to the exhibit. Which statement is true?

```
PE1#show ip rpf 10.100.1.4
RPF information for ? (10.100.1.4)
  RPF interface: Ethernet1/0
  RPF neighbor: ? (10.1.1.4)
  RPF route/mask: 10.100.1.4/32
  RPF type: multicast (isis)
  Doing distance-preferred lookups across tables
  RPF topology: ipv4 multicast base
```

A. The command ip multicast rpf multitopology is missing from the configuration.

B. Multitopology routing for multicast has been enabled for IS-IS.

C. This output is invalid.

D. The command mpls traffic-eng multicast-intact is configured on this router.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 84
As a best practice, when a router is configured as an EIGRP Stub, which routes should be received from its distribution neighbor?

A. the default route

B. static routes

C. internal routes only

D. internal and external routes

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 85
Which BGP feature allows BGP routing tables to be refreshed without impacting established BGP sessions?

A. BGP synchronization

B. soft reconfiguration

C. confederations

D. hard reset

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 86
Which two options describe two functions of a neighbor solicitation message? (Choose two.)

A. It requests the link-layer address of the target.
B. It provides its own link-layer address to the target.
C. It requests the site-local address of the target.
D. It provides its own site-local address to the target.
E. It requests the admin-local address of the target.
F. It provides its own admin-local address to the target.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 87
Which three options are three of the default EIGRP administrative distances? (Choose three.)

A. Internal, 90
B. External, 170
C. Summary, 5
D. Outside Local, 100
E. Inside Local, 180
F. Inside Global, 1

Correct Answer: ABC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 88
Refer to the exhibit. Which two statements about this route table are true? (Choose two.)

```
O E2      172.17.108.128/25
             [110/20] via 10.169.73.12, 3d07h, TenGigabitEthernet8/0/0
O E2      10.167.111.216/29
             [110/20] via 10.169.73.12, 3d07h, TenGigabitEthernet8/0/0
O IA      10.68.2.0/31
             [110/489] via 10.169.73.12, 3d07h, TenGigabitEthernet8/0/0
O IA      10.68.2.2/31
             [110/488] via 10.169.73.12, 3d07h, TenGigabitEthernet8/0/0
B         10.1.50.0/24 [200/0] via 172.16.189.9, 3d07h
B         10.1.51.0/24 [200/0] via 172.16.189.9, 3d07h
```

A. The BGP routes are internal.

B. The OSPF routes with the E2 flag retain the same metric as they leave the router.

C. The OSPF routes with the IA flag have their administrative distances incremented as they leave the router.

D. The BGP routes are external.

E. The OSPF routes with the E2 flag have their metrics incremented as they leave the router.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 89
Refer to the exhibit. Which two statements about this configuration are true? (Choose two.)

```
interface GigabitEthernet0/1
    ip address 192.168.1.5 255.255.255.0
prefix-list FILTER seq 5 permit 172.16.0.0/16
prefix-list FILTER seq 10 permit 0.0.0.0/0
router eigrp 65000
    no auto-summary
    network 192.168.1.5 0.0.0.0
    distribute-list prefix FILTER out
```

A. It allows 172.16.0.0/16 to be distributed into EIGRP.

B. It allows a default route to be distributed into EIGRP.

C. It allows 172.16.0.0/16 and larger subnets to be distributed into EIGRP.

D. It prevents 172.16.0.0/16 from being distributed into EIGRP.

E. It prevents a default route from being distributed into EIGRP.

F. It creates summary routes and injects them into EIGRP.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 90
Refer to the exhibit. R1 is able to reach only some of the subnets that R2 is advertising. Which two configuration changes can you make to ensure that R1 can reach all routes from R2? (Choose two.)

```
R2

interface Loopback2
    ip address 172.16.2.2  255.255.255.0
interface Loopback3
    ip address 172.16.3.3  255.255.255.0
interface Loopback4
    ip address 172.16.5.4  255.255.255.0
interface GigabitEthernet1/0
    ip address 10.0.78.8  255.255.255.0
    ip router isis
router isis
    net 49.0001.0031.0031.00
    redistribute connected route-map LOOPBACKS
ip access-list standard LOOPBACKS
    permit 172.16.0.0 0.0.3.255
route-map LOOPBACKS permit 10
    match ip address LOOPBACKS
```

A. Add an additional permit statement to the LOOPBACKS route map.

B. Modify the LOOPBACKS access list to include all loopback subnets.

C. Add an additional statement in the LOOPBACKS route map to match both Level 1 and Level 2 circuits.

D. Add an additional statement in the LOOPBACKS route map to match the R1 CLNS address.

E. Configure the interfaces between R1 and R2 with a Level 1 IS-IS circuit.

F. Configure the interfaces between R1 and R2 with a Level 2 IS-IS circuit.

Correct Answer: AB
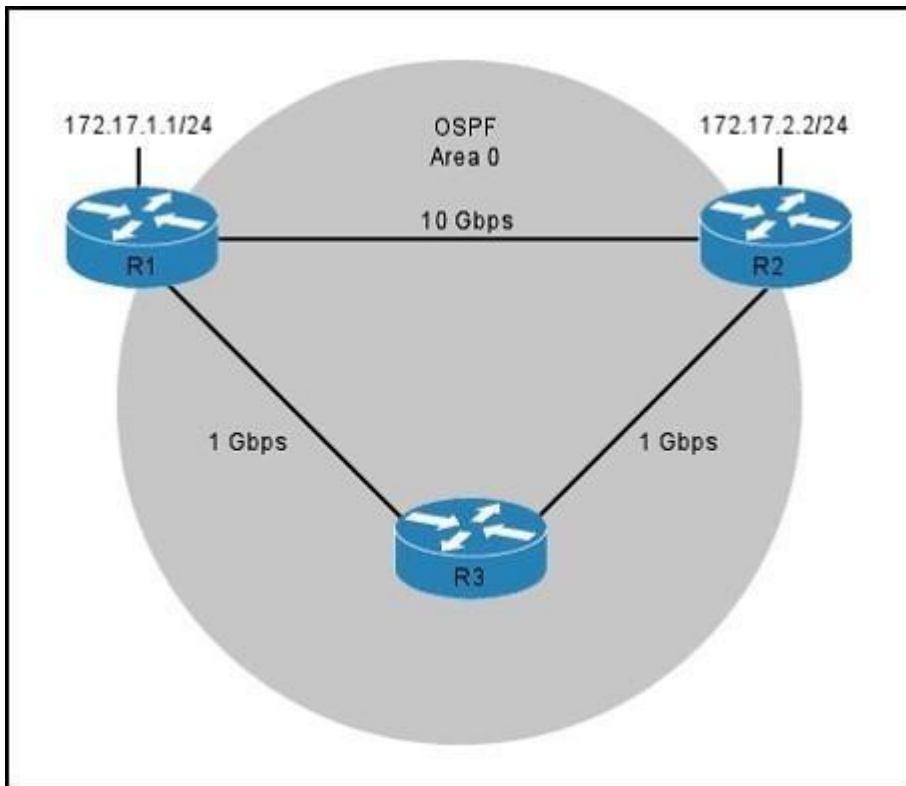**Section: (none)**
Explanation

Explanation/Reference:

QUESTION 91
Refer to the exhibit. R1, R2, and R3 have full network connectivity to each other, but R2 prefers the path through R3 to reach network 172.17.1.0/24.
Which two actions can you take so that R2 prefers the path through R1 to reach 172.17.1.0/24? (Choose two.)

A. Set the reference bandwidth to 10000 on R1, R2, and R3.

B. Configure the cost on the link between R1 and R3 to be greater than 100 Mbps.

C. Set the reference bandwidth on R2 only.

D. Configure a manual bandwidth statement with a value of 1 Gbps on the link between R1 and R3.

E. Modify the cost on the link between R1 and R2 to be greater than 10 Gbps.

F. Configure a manual bandwidth statement with a value of 100 Mbps on the link between R1 and R2.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 92
What are two advantages to using Asynchronous mode instead of Demand mode for BFD? (Choose two.)

A. Asynchronous mode requires half as many packets as Demand mode for failure detection.

B. Asynchronous mode can be used in place of the echo function.

C. Asynchronous mode supports a larger number of BFD sessions.

D. Asynchronous mode requires one fourth as many packets as Demand mode for failure detection.

E. Asynchronous mode's round-trip jitter is less than that of Demand mode.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 93
Which action does route poisoning take that serves 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.

Correct Answer: A

Section: (none)
Explanation

Explanation/Reference:

QUESTION 94
Which two statements about the ipv6 ospf authentication command are true? (Choose two.)

A. The command is required if you implement the IPsec AH header.
B. The command configures an SPI.
C. The command is required if you implement the IPsec TLV.
D. The command can be used in conjunction with the SPI authentication algorithm.
E. The command must be configured under the OSPFv3 process.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 95
Which two statements about SoO checking in EIGRP OTP deployments are true? (Choose two).

A. During the import process, the SoO value in BGP is checked against the SoO value of the site map.
B. During the reception of an EIGRP update, the SoO value in the EIGRP update is checked against the SoO value of the site map on the ingress interface.
C. At the ingress of the PE/CE link, the SoO in the EIGRP update is checked against the SoO within the PE/CE routing protocol.
D. At the egress of the PE/CE link, the SoO is checked against the SoO within the PE/CE routing protocol.
E. The SoO is checked at the ingress of the backdoor link.
F. The SoO is checked at the egress of the backdoor link.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 96
Which two OSPF LSA types are flooded within the originating area? (Choose two.)

A. type 1, Router LSA
B. type 2, Network LSA
C. type 3, Network Summary LSA
D. type 4, ASBR Summary LSA
E. type 6, Group Membership LSA
F. type 9, Opaque LSA

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 97
Which statement about the OSPF Loop-Free Alternate feature is true?

A. It is supported on routers that are configured with virtual links.
B. It is supported in VRF OSPF instances.
C. It is supported when a traffic engineering tunnel interface is protected.
D. It is supported when traffic can be redirected to a primary neighbor.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 98
Refer to the exhibit. ASN 64523 has a multihomed BGP setup to ISP A and ISP B. Which BGP attribute can you set to allow traffic that originates in ASN 64523 to exit the ASN through ISP B?
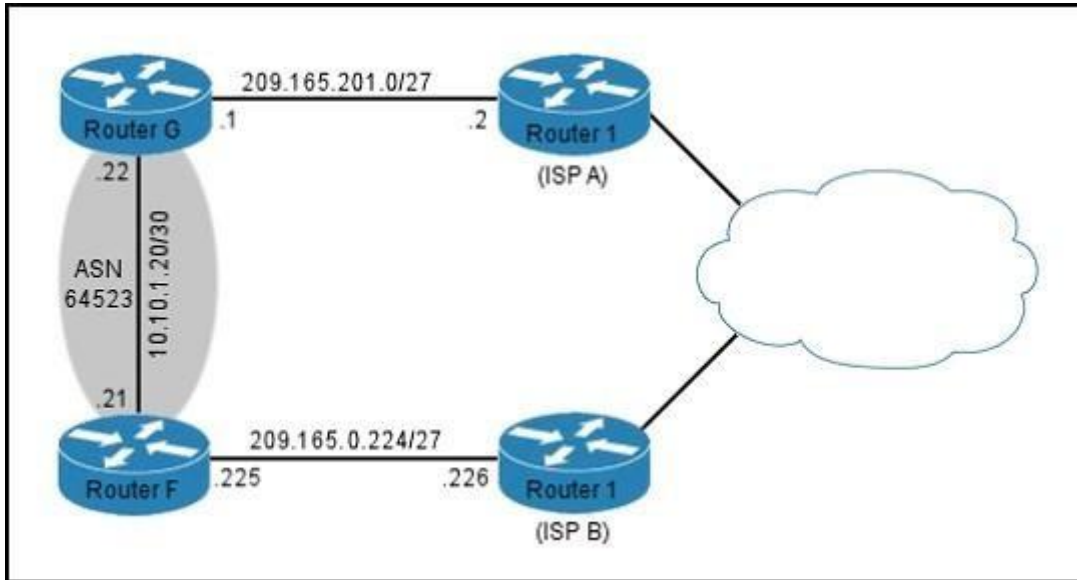
A. origin
B. next-hop
C. weight
D. multi-exit discriminator

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 99
When deploying redundant route reflectors in BGP, which attribute can you configure on the route reflector to allow routes to be identified as belonging to the same group?

A. ROUTER_ID
B. CLUSTER_ID
C. ORIGINATOR_ID
D. PEER_GROUP

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 100
Refer to the exhibit. R1 and R2 have a working VRF-Lite configuration, but R1 is receiving a route only to 10.2.2.2 from R2.
Which two changes can you make so that R1 receives all routes from R2? (Choose two.)

```
R1

ip vrf VPN
    rd 1:1
    import-map INBOUND
    route-target both 1:1
interface GigabitEthernet0/0
    ip vrf forwarding VPN
    ip address 192.168.0.1 255.255.255.0
access-list 10 5 permit 192.168.0.0 255.255.0.0
access-list 10 10 permit 10.2.2.2 255.255.255.255
route-map INBOUND 10
    match ip address 10
router ospf 1 vrf VPN
    network 192.168.0.0 0.0.0.255 area 0


R2

ip vrf VPN
    rd 1:1
    route-target both 1:1
interface Loopback1
    ip vrf forwarding VPN
    ip address 10.1.1.1 255.255.255.0
interface Loopback1
    ip vrf forwarding VPN
    ip address 10.2.2.2 255.255.255.0
interface Loopback2
    ip vrf forwarding VPN
    ip address 10.3.3.3 255.255.255.0
interface GigabitEthernet0/0
    ip vrf forwarding VPN
    ip address 192.168.0.2 255.255.255.0
router ospf 2 vrf VPN
    network 192.168.0.0 0.0.0.255 area 0
    network 10.1.1.1 0.0.0.0 area 0
    network 10.2.2.2 0.0.0.0 area 0
    network 10.3.3.0 0.0.0.15 area 0
```

A. Create an additional permit statement in the access list that is referenced by the import-map on R1.
B. Disable VRF filtering on R1.
C. Set the R1 and R2 OSPF process IDs to match.
D. Change the wildcard mask for the network 10.3.3.0 to 0.0.0.0.

E. Create a matching export map in the VRF for R2.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 101
Refer to the exhibit. R2 is unable to access the 172.16.1.0/30 network between R1 and R3.
Which option is a possible reason for the failure?

```
R1
interface GigabitEthernet0/0
ip address 172.16.1.1 255.255.255.252
router ospf 1
network 172.16.1.1 0.0.0.0 area 0


R2
interface GigabitEthernet0/0
ip address 192.168.254.2 255.255.255.254
router rip
version 2
no auto-summary
network 192.168.254.0
```

```
R3
interface GigabitEthernet0/0
ip address 192.168.254.3 255.255.255.254
interface GigabitEthernet0/1
ip address 172.16.1.2 255.255.255.252
router ospf 2
network 192.168.254.0 0.0.0.255 area 0
redistribute rip subnets
router rip
version 2
no auto-summary
redistribute ospf 2
network 172.16.0.0
```

A. The seed metric for redistributing into RIP on R3 is missing.
B. The OSPF processes on R2 and R3 are different.
C. Auto-summary is misconfigured under the RIP process of R3.
D. The subnet mask on the link between R2 and R3 is smaller than /30.
E. The wildcard mask on R3 is misconfigured.

Correct Answer: A

Section: (none)
Explanation

Explanation/Reference:

QUESTION 102
Which two options are mandatory components of a multiprotocol BGP VPN-IPv4 address? (Choose two.)

A. a route distinguisher
B. an IPv4 address
C. a route target
D. an MPLS label
E. a system ID
F. an area ID

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 103
Which BGP feature enables you to install a backup path in the forwarding table?

A. soft reconfiguration
B. prefix independent convergence
C. route refresh
D. synchronization

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 104
Refer to the exhibit. Which statement is true about a valid IPv6 address that can be configured on interface tunnel0?

```
interface tunnel0
 tunnel mode ipv6ip 6to4
 tunnel source 125.203.89.1
 ipv6 address ?
```

A. There is not enough information to calculate the IPv6 address.
B. 6to4 tunneling allows you to use any IPv6 address.
C. 2001. 7DCB. 5901. . /128 is a valid IPv6 address.
D. 2002. 7DCB. 5901. . /128 is a valid IPv6 address.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 105
Which technology is not necessary to set up a basic MPLS domain?

A. IP addressing
B. an IGP
C. LDP or TDP
D. CEF
E. a VRF

Correct Answer: E
Section: (none)
Explanation

Explanation/Reference:

QUESTION 106
What is the main component of Unified MPLS?

A. Multiple IGPs in the network are used, where the loopback IP addresses of the PE routers are aggregated on the area border routers.
B. Confederations are used to provide scalability.

C. The loopback prefixes from one IGP area are redistributed into BGP without changing the next hop.

D. The ABR is a BGP route reflector and sets next-hop to self for all reflected routes.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 107
For which feature is the address family "rtfilter" used?

A. Enhanced Route Refresh

B. MPLS VPN filtering

C. Route Target Constraint

D. Unified MPLS

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 108
Refer to the exhibit. What does the return code 3 represent in this output?

```
Codes: '!' - success, 'Q' - request not sent, '.' - timeout,
    'L' - labeled output interface, 'B' - unlabeled output interface,
    'D' - DS Map mismatch, 'F' - no FEC mapping, 'f' - FEC mismatch,
    'M' - malformed request, 'm' - unsupported tlvs, 'N' - no label entry,
    'P' - no rx intf label prot, 'p' - premature termination of LSP,
    'R' - transit router, 'I' - unknown upstream index,
    'X' - unknown return code, 'x' - return code 0

Type escape sequence to abort.
!    size 100, reply addr 70.169.72.33, return code 3
!    size 100, reply addr 70.169.72.33, return code 3
!    size 100, reply addr 70.169.72.33, return code 3
!    size 100, reply addr 70.169.72.33, return code 3
!    size 100, reply addr 70.169.72.33, return code 3

Success rate is 100 percent (5/5), round-trip min/avg/max = 4/4/4 ms
```

A. The mapping of the replying router for the FEC is different.
B. The packet is label-switched at stack depth.
C. The return code is reserved.
D. The upstream index is unknown.
E. The replying router was the proper egress for the FEC.

Correct Answer: E
Section: (none)
Explanation

Explanation/Reference:

QUESTION 109
Which two values comprise the VPN ID for an MPLS VPN? (Choose two.)

A. an OUI
B. a VPN index
C. a route distinguisher
D. a 16-bit AS number
E. a 32-bit IP address

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 110
Refer to the exhibit. Which LISP component do routers in the public IP network use to forward traffic between the two networks?
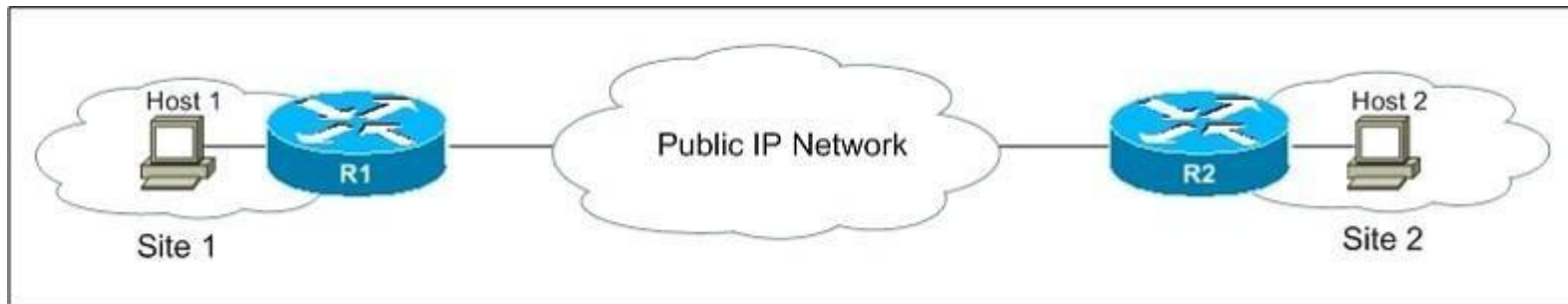
A. EID
B. RLOC
C. map server
D. map resolver

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 111
Refer to the exhibit. Which device role could have generated this debug output?

```
NHRP: Send Registration Request via Tunnel1 vrf 0, packet size: 108
    src: 172.30.10.66, dst: 172.30.10.1
    (F) afn: AF_IP(1), type: IP(800), hop: 255, ver: 1
        shtl: 4(NSAP), sstl: 0(NSAP)
        pktsz: 108 extoff: 52
    (M) flags: "unique nat ", reqid: 113922
        src NBMA: 10.100.100.193
        src protocol: 172.30.10.66, dst protocol: 172.30.10.1
    (C-1) code: no error(0)
        prefix: 32, mtu: 17912, hd_time: 600
        addr_len: 0(NSAP), subaddr_len: 0(NSAP), proto_len: 0, pref: 0
NHRP: Receive Registration Reply via
        addr_len: 0(NSAP), subaddr_len: 0(NSAP), proto_len: 0, pref: 0
```

A. an NHS only
B. an NHC only
C. an NHS or an NHC
D. a DMVPN hub router

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 112
Which statement about the NHRP network ID is true?

A. It is sent from the spoke to the hub to identify the spoke as a member of the same NHRP domain.
B. It is sent from the hub to the spoke to identify the hub as a member of the same NHRP domain.
C. It is sent between spokes to identify the spokes as members of the same NHRP domain.
D. It is a locally significant ID used to define the NHRP domain for an interface.

Correct Answer: D
Section: (none)
Explanation

QUESTION 113
You are configuring a DMVPN spoke to use IPsec over a physical interface that is located within a VRF. For which three configuration sections must you specify the VRF name? (Choose three.)

A. the ISAKMP profile
B. the crypto keyring
C. the IPsec profile
D. the IPsec transform set
E. the tunnel interface
F. the physical interface

Correct Answer: BEF
Section: (none)
Explanation

Explanation/Reference:

QUESTION 114
Which IPv6 prefix is used for 6to4 tunnel addresses?

A. 2001. . /23
B. 2002. . /16
C. 3ffe. . /16
D. 5f00. . /8
E. 2001. . /32

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 115
When you configure the ip pmtu command under an L2TPv3 pseudowire class, which two things can happen when a packet exceeds the L2TP path MTU? (Choose two.)

A. The router drops the packet.
B. The router always fragments the packet after L2TP/IP encapsulation.
C. The router drops the packet and sends an ICMP unreachable message back to the sender only if the DF bit is set to 1.
D. The router always fragments the packet before L2TP/IP encapsulation.
E. The router fragments the packet after L2TP/IP encapsulation only if the DF bit is set to 0.
F. The router fragments the packet before L2TP/IP encapsulation only if the DF bit is set to 0.

Correct Answer: CF
Section: (none)
Explanation

Explanation/Reference:

QUESTION 116
Which two parameters does the Tunnel Mode Auto Selection feature select automatically? (Choose two.)

A. the tunneling protocol
B. the transport protocol
C. the ISAKMP profile
D. the transform-set
E. the tunnel peer

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 117
By default, how does a GET VPN group member router handle traffic when it is unable to register to a key server?

A. All traffic is queued until registration is successful or the queue is full.
B. All traffic is forwarded through the router unencrypted.
C. All traffic is forwarded through the router encrypted.
D. All traffic through the router is dropped.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 118
Which two protocols are not protected in an edge router by using control plane policing? (Choose two.)

A. SMTP
B. RPC
C. SSH
D. Telnet

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 119
Which two statements are true about AAA? (Choose two.)

A. AAA can use RADIUS, TACACS+, or Windows AD to authenticate users.
B. If RADIUS is the only method configured in AAA, and the server becomes unreachable, the user will be able to log in to the router using a local username and password.
C. If the local keyword is not included and the AAA server does not respond, then authorization will never be possible and the connection will fail.
D. AAA can be used to authenticate the enable password with a AAA server.

Correct Answer: CD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 120
Which three types of traffic are allowed by IEEE 802.1X access control prior to getting authenticated? (Choose three.)

A. EAPOL
B. VTP
C. STP
D. ARP
E. CDP
F. HTTP

Correct Answer: ACE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 121
Which two statements about MAC ACLs are true? (Choose two.)

A. They support only inbound filtering.
B. They support both inbound and outbound filtering.
C. They are configured with the command mac access-list standard.
D. They can filter non-IP traffic on a VLAN and on a physical interface.

Correct Answer: AD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 122
Refer to the exhibit. What happens to packets when traffic in the icmp-class class exceeds the policed amount?

```
Router#sh policy-map control-plane
   Control Plane

      Service-policy output: control-plane-out

         Class-map: icmp-class (match-all)
            197314985 packets, 11510114428 bytes
            5 minute offered rate 1000 bps, drop rate 0000 bps
            Match: access-group name killicmpv2
            police:
                  cir 1000000 bps, bc 31250 bytes
               conformed 197138885 packets, 11499818077 bytes; actions:
                  transmit
               exceeded 176100 packets, 10296351 bytes; actions:
                  drop
               conformed 1000 bps, exceed 0000 bps

         Class-map: class-default (match-any)
            1126224901 packets, 158790413979 bytes
            5 minute offered rate 41000 bps, drop rate 0000 bps
            Match: any
```

A. Packets are discarded and a message is logged.
B. Packets are discarded and a trap is sent to any servers that are configured to receive traps.
C. Packets are discarded silently.
D. Packets are discarded and an inform is sent to any servers that are configured to receive informs.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 123
Which statement describes Cisco PfR link groups?

A. Link groups enable Cisco PfR Fast Reroute when NetFlow is enabled on the external interfaces of the border routers.
B. Link groups define a strict or loose hop-by-hop path preference.
C. Link groups are required only when Cisco PfR is configured to load-balance all traffic.

D. Link groups are enabled automatically when Cisco PfR is in Fast Reroute mode.

E. Link groups set a preference for primary and fallback (backup) external exit interfaces.

Correct Answer: E
Section: (none)
Explanation

Explanation/Reference:

QUESTION 124
Which two statements about NetFlow are true? (Choose two.)

A. It must be configured on each router in a network.

B. It supports ATM LAN emulation.

C. The existing network is unaware that NetFlow is running.

D. It uses SIP to establish sessions between neighbors.

E. It provides resource utilization accounting.

Correct Answer: CE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 125
You are installing a new device to replace a device that failed. The configuration of the failed device is stored on a networked server, and the new device has an RXBOOT image installed. Under which condition does the streamlined Setup mode fail?

A. The last four bits of the configuration register are not equal to the decimal value 0 or 1.

B. The startup configuration file was deleted.

C. Bit 6 is set in the configuration register.

D. The startup configuration is corrupt.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 126
Which option is the Cisco recommended method to secure access to the console port?

A. Configure the activation-character command.
B. Configure a very short timeout (less than 100 milliseconds) for the port.
C. Set the privilege level to a value less than 15.
D. Configure an ACL.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 127
Drag and Drop Question

Select and Place:

What is the correct order of the VSS initialization process? Drag the actions on the left to the correct initialization step on the right.	
bring up VSL links	initialization step 1
run VSLP	initialization step 2
preparse config	initialization step 3
run RRP	initialization step 4
continue system bootup	initialization step 5
interchassis SSO	initialization step 6

Correct Answer:

What is the correct order of the VSS initialization process? Drag the actions on the left to the correct initialization step on the right.

	preparse config
	bring up VSL links
	run VSLP
	run RRP
	interchassis SSO
	continue system bootup

Section: (none)
Explanation

Explanation/Reference:

QUESTION 128
Drag and Drop Question

Select and Place:

Drag and drop the IPv6 address on the left to the correct IPv6 address type on the right.

FF01::2	Link Local Unicast
FE80:2a5b::5	Global Unicast
FDF8:E5F3:83E4:FEAA::53	Multicast
2005:CA75:D095::5	Unique Local Unicast
F880:E6F4:B665::44	

Correct Answer:

Drag and drop the IPv6 address on the left to the correct IPv6 address type on the right.

	FE80:2a5b::5
	2005:CA75:D095::5
	FF01::2
	FDF8:E5F3:83E4:FEAA::53
F880:E6F4:B665::44	

Section: (none)
Explanation

Explanation/Reference:

☑VCEPlus

Select and Place:

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

Correct Answer:

Drag and drop the BGP attribute on the left to the correct category on the right.

Community		BGP Well-Known Mandatory Attribute
		AS_path
		Next-Hop

Aggregator		BGP Well-Known Discretionary Attribute
		Local-Pref

		BGP Optional Nontransitive Attribute
		Originator ID

Section: (none)
Explanation

Explanation/Reference:

QUESTION 130
Drag and Drop Question

Select and Place:

Encrypts the entire session	RADIUS
Uses less memory and CPU on a router	
Combines authentication and authorization	
Can limit router commands based on user groups	TACACS+

Correct Answer:

	RADIUS
	Uses less memory and CPU on a router
	Combines authentication and authorization
	TACACS+
	Encrypts the entire session
	Can limit router commands based on user groups

Section: (none)
Explanation

Explanation/Reference:

QUESTION 131
Drag and Drop Question

Select and Place:

Drag and drop the events on the left to display the correct sequence on the right when CoPP is enabled.

The packet gets forwarded to the switch CPU.	1
A packet enters the switch that is configured with CoPP on the ingress port.	2
The switch makes a routing or a switching decision, which determines whether or not the packet is destined for the control plane.	3
The port performs any applicable input port and QoS services.	4
Packets that are destined for the control plane are processed by CoPP and are dropped or delivered to the control plane according to each traffic class policy. Packets that have other destinations are forwarded normally.	5

Correct Answer:

Drag and drop the events on the left to display the correct sequence on the right when CoPP is enabled.

	A packet enters the switch that is configured with CoPP on the ingress port.
	The port performs any applicable input port and QoS services.
	The packet gets forwarded to the switch CPU.
	The switch makes a routing or a switching decision, which determines whether or r packet is destined for the control plane.
	Packets that are destined for the control plane are processed by CoPP and are dro or delivered to the control plane according to each traffic class policy. Packets that other destinations are forwarded normally.

Section: (none)
Explanation

Explanation/Reference:

QUESTION 132
Drag and Drop Question

Select and Place:

Drag and drop the QoS requirement on the left to the correct QoS technology on the right.

Guarantees an amount of bandwidth	Police
Is an application classification	CBWFQ
Prioritizes real-time voice traffic	Shaping
Buffers bursting traffic	LLQ
Limits an amount of bandwidth	NBAR

Correct Answer:

Drag and drop the QoS requirement on the left to the correct QoS technology on the right.

	Limits an amount of bandwidth
	Guarantees an amount of bandwidth
	Buffers bursting traffic
	Prioritizes real-time voice traffic
	Is an application classification

Section: (none)
Explanation

Explanation/Reference:

QUESTION 133
Drag and Drop Question

Select and Place:

Drag and drop the IPv6 multicast feature or protocol on the left to the correct address space on the right.	
All nodes	FF02::D
All routers	FF02::6
EIGRP	FF02::2
PIM routers	FF02::A
RIP routers	FF02::1
OSPFv3 all DR routers	FF02::9

Correct Answer:

Drag and drop the IPv6 multicast feature or protocol on the left to the correct address space on the right.

	PIM routers
	OSPFv3 all DR routers
	All routers
	EIGRP
	All nodes
	RIP routers

Section: (none)
Explanation

Explanation/Reference:

QUESTION 134
Drag and Drop Question

Select and Place:

Drag and drop the multicast protocol definition on the left to the correct default time interval on the right.

IGMPv2 query interval	30 seconds
IGMPv2 querier timeout	
IGMPv1 query interval	60 seconds
PIMv1 query interval	
IGMPv3 query interval	
	120 seconds

Correct Answer:

Drag and drop the multicast protocol definition on the left to the correct default time interval on the right.

	30 seconds
	PIMv1 query interval

	60 seconds
	IGMPv2 query interval
	IGMPv1 query interval
	IGMPv3 query interval

	120 seconds
	IGMPv2 querier timeout

Section: (none)
Explanation

Explanation/Reference:

QUESTION 135
Drag and Drop Question

Select and Place:

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

Broadcast		Unicast
Nonbroadcast		
Point-to-Point		
Loopback		Multicast
Point-to-Multipoint		
Point-to-Multipoint Nonbroadcast		
		Stub

Correct Answer:

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

	Unicast
	Nonbroadcast
	Point-to-Multipoint Nonbroadcast
	Multicast
	Broadcast
	Point-to-Point
	Point-to-Multipoint
	Stub
	Loopback

Section: (none)
Explanation

Explanation/Reference:

QUESTION 136
Drag and Drop Question

Select and Place:

Drag and drop the multicast protocol or feature on the left to the correct address space on the right.

Auto-RP announcement	224.0.0.13
PIMv2	232.0.0.0/8
GLBP	224.0.1.40
Auto-RP discovery	224.0.0.102
Source Specific Multicast (SSM)	224.0.1.39

Correct Answer:

Drag and drop the multicast protocol or feature on the left to the correct address space on the right.

	PIMv2
	Source Specific Multicast (SSM)
	Auto-RP discovery
	GLBP
	Auto-RP announcement

Section: (none)
Explanation

Explanation/Reference:

QUESTION 137
Drag and Drop Question

Select and Place:

Drag and drop the router preference on the left to the correct routing sequence (from most preferred to least preferred) on the right.	
EBGP route	1
Static route	2
Most specific prefix	3
Directly connected route	4

Correct Answer:

Drag and drop the router preference on the left to the correct routing sequence (from most preferred to least preferred) on the right.	
	Most specific prefix
	Directly connected route
	Static route
	EBGP route

Section: (none)
Explanation

Explanation/Reference:

QUESTION 138
Refer to the exhibit. A tunnel is configured between R3 to R4 sourced with their loopback interfaces. The ip pim sparse-dense mode command is configured on the tunnel interfaces and multicast-routing is enabled on R3 and R4. The IP backbone is not configured for multicast routing.
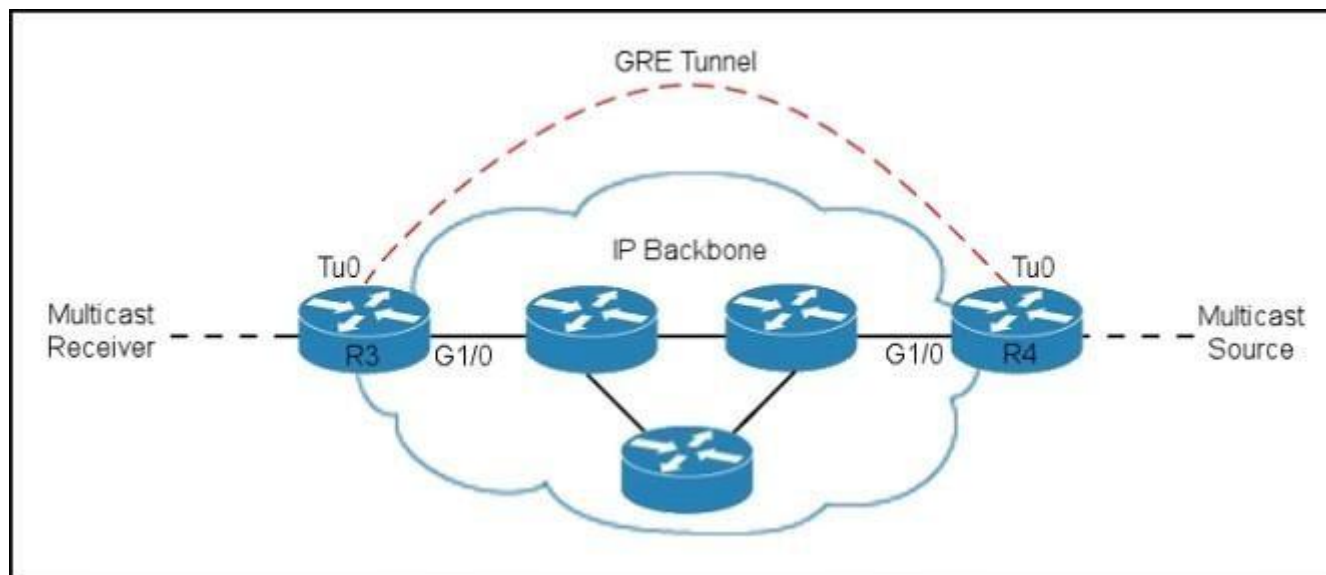
The RPF check has failed toward the multicast source.
Which two conditions could have caused the failure? (Choose two.)

A. The route back to the RP is through a different interface than tunnel 0.
B. The backbone devices can only route unicast traffic.
C. The route back to the RP is through the same tunnel interface.
D. A static route that points the RP to GigabitEthernet1/0 is configured.

Correct Answer: AD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 139
Which option is the default number of routes over which EIGRP can load balance?

A. 1
B. 4
C. 8
D. 16

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 140
Which OSPF feature supports LSA rate limiting in milliseconds to provide faster convergence?

A. LSA throttling
B. incremental SPF
C. fast hello
D. SPF tuning

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

Exam C

QUESTION 1
Which statement about passive interfaces is true?

A. The interface with the OSPF passive interface configuration appears as a not-so-stubby network.
B. The interface with the EIGRP passive interface configuration ignores routes after the exchange of hello packets.
C. The interface with the IS-IS passive interface configuration sends the IP address of that interface in the link-state protocol data units.
D. Passive interface can be configured on the interface for IS-IS.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 2
Refer to the exhibit. Which two routes are included in the route update? (Choose two.)

```
access-list 1 permit 10.3.5.0 0.0.3.255
router eigrp 1
    network 10.0.0.0
    no auto-summary
    distribute-list 1 out
```

A. 10.3.0.0
B. 10.3.2.0
C. 10.3.4.0
D. 10.3.6.0

Correct Answer: CD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 3

Which two statements about the metric-style wide statement as it applies to route redistribution are true? (Choose two.)

A. It is used in IS-IS.
B. It is used in OSPF.
C. It is used in EIGRP.
D. It is used for accepting TLV.
E. It is used in PIM for accepting mroutes.
F. It is used for accepting external routes.

Correct Answer: AD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 4
You are tasked with configuring a router on an OSPF domain to import routes from an EIGRP domain and summarize the routes to 192.168.64.0.
Which statement configures the summarized route and provides equal-path route redundancy?

A. area 32 range 192.168.64.0 255.255.192.0 cost 100
B. area 32 range 192.168.64.0 255.255.63.0 cost 100
C. area 32 range 192.168.64.0 255.255.64.0 cost 100
D. area 32 range 192.168.64.0 255.255.192.0 multi-path

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 5
Packets from a router with policy-based routing configured are failing to reach the next hop. Which two additions can you make to the router configuration to enable the packets to flow correctly? (Choose two.)

A. Enable ip proxy-arp on the exiting interface.
B. Specify the next hop as an address.
C. Specify the next hop as an interface.
D. Add a match-any permit statement to the route map.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 6
Which two options are EIGRP route authentication encryption modes? (Choose two.)

A. MD5
B. HMAC-SHA2-256bit
C. ESP-AES
D. HMAC-AES

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 7
Which technology facilitates neighbor IP address resolution in DMVPN?

A. CEF
B. mGRE
C. a dynamic routing protocol
D. NHRP

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 8
Which two are features of DMVPN? (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.

Correct Answer: DE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 9
Refer to the exhibit. What is wrong with the configuration of this tunnel interface?

```
interface tunnel 1
 tunnel source ethernet 0
 tunnel mode ipv6ip isatap
 ipv6 address 2001:DB8::/64 eui-64
```

A. ISATAP tunnels cannot use the EUI-64 address format.
B. No tunnel destination has been specified.
C. The tunnel source of an ISATAP tunnel must always point to a loopback interface.
D. Router advertisements are disabled on this tunnel interface.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 10
Which two statements are true about a 6to4 tunnel connecting two IPv6 islands over the IPv4 Internet? (Choose two.)

A. It embeds the IPv6 packet into the IPv4 payload with the protocol type set to 51.
B. It works by appending the private IPv4 address (converted into hexadecimal format) to the 2002::/16 prefix.

C. It embeds the IPv6 packet into the IPv4 payload with the protocol type set to 41.
D. It works by appending the public IPv4 address (converted into hexadecimal format) to the 2002::/16 prefix.

Correct Answer: CD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 11
Refer to the exhibit. What will be the IP MTU of tunnel 0?

```
interface GigabitEthernet0/0
ip address 10.10.10.1 255.255.255.0
duplex auto
speed auto
media-type rj45
!
interface Tunnel0
ip address 192.168.1.1 255.255.255.252
tunnel source GigabitEthernet0/0
tunnel destination 192.168.1.240
```

A. 1500
B. 1524
C. 1476
D. 1452
E. 1548

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 12

On an MPLS L3VPN, which two tasks are performed by the PE router? (Choose two.)

A. It exchanges VPNv4 routes with other PE routers.
B. It typically exchanges iBGP routing updates with the CE device.
C. It distributes labels and forwards labeled packets.
D. It exchanges VPNv4 routes with CE devices.
E. It forwards labeled packets between CE devices.

Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 13
Refer to the exhibit. Which statement describes what the authoritative flag indicates?

```
R1#show ip nhrp detail
10.1.0.2/32 via 10.1.0.2, Tunnel0 created 00:06:35, expire 00:00:29
  Type: dynamic, Flags: authoritative unique registered used
  NBMA address: 192.168.2.2
10.1.0.3/32 via 10.1.0.3, Tunnel0 created 00:05:28, expire 00:00:52
  Type: dynamic, Flags: authoritative unique registered used
  NBMA address: 192.168.3.3
```

A. Authentication was used for the mapping.
B. R1 learned about the NHRP mapping from a registration request.
C. Duplicate mapping in the NHRP cache is prevented.
D. The registration request had the same flag set.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 14
Refer to the exhibit. Which two statements about this configuration are true? (Choose two.)

```
                 Fa0/0
         R1      172.168.1.1/29
      10.10.10.1 Lo0

                           .1

                    192.168.1.0/24
                    Tunnel 0        .4
             .2
                       .3
        Fa0/0          Fa0/0           Fa0/0
        172.168.1.2/29 172.168.1.3/29 172.168.1.4/29

         R2             R3              R4
      10.10.10.2 Lo0  10.10.10.3 Lo0  10.10.10.4 Lo0
```

```
hostname R1
!
crypto isakmp policy 1
    authentication pre-share
crypto isakmp key dmvpn address
    0.0.0.0 0.0.0.0
!
crypto ipsec transform-set vpntrans
    ah-sha-hmac esp-aes 256 esp-sha-hmac
!
crypto ipsec profile DMV_PRO
    set transform-set vpntrans
!
<output omitted>
!
interface Tunnel0
    ip address 192.168.1.1 255.255.255.0
    no ip redirects
    ip nhrp authentication dmvpn
    ip nhrp map multicast dynamic
    ip nhrp network-id 99
    tunnel source FastEthernet0/1
    tunnel mode gre multipoint
    tunnel protection ipsec profile
       DMV_PRO
!
```

A. Spoke devices will be dynamically added to the NHRP mappings.
B. The next-hop server address must be configured to 172.168.1.1 on all spokes.
C. The next-hop server address must be configured to 192.168.1.1 on all spokes.
D. R1 will create a static mapping for each spoke.

Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 15
Which two tunneling techniques determine the IPv4 destination address on a per-packet basis? (Choose two.)

A. 6to4 tunneling
B. ISATAP tunneling
C. manual tunneling
D. GRE tunneling

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 16
Which two services are used to transport Layer 2 frames across a packet-switched network? (Choose two.)

A. Frame Relay
B. ATM
C. AToM
D. L2TPv3

Correct Answer: CD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 17
Which two statements about the C-bit and PW type are true? (Choose two.)

A. The C-bit is 1 byte and the PW type is 15 bytes.
B. The PW type indicates the type of pseudowire.
C. The C-bit is 3 bits and the PW type is 10 bits.
D. The C-bit set to 1 indicates a control word is present.

E. The PW type indicates the encryption type.

Correct Answer: BD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 18
Which statement describes the function of rekey messages?

A. They prevent unencrypted traffic from passing through a group member before registration.
B. They refresh IPsec SAs when the key is about to expire.
C. They trigger a rekey from the server when configuring the rekey ACL.
D. They authenticate traffic passing through a particular group member.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 19
Which three statements about GET VPN are true? (Choose three.)

A. It encrypts WAN traffic to increase data security and provide transport authentication.
B. It provides direct communication between sites, which reduces latency and jitter.
C. It can secure IP multicast, unicast, and broadcast group traffic.
D. It uses a centralized key server for membership control.
E. It enables the router to configure tunnels.
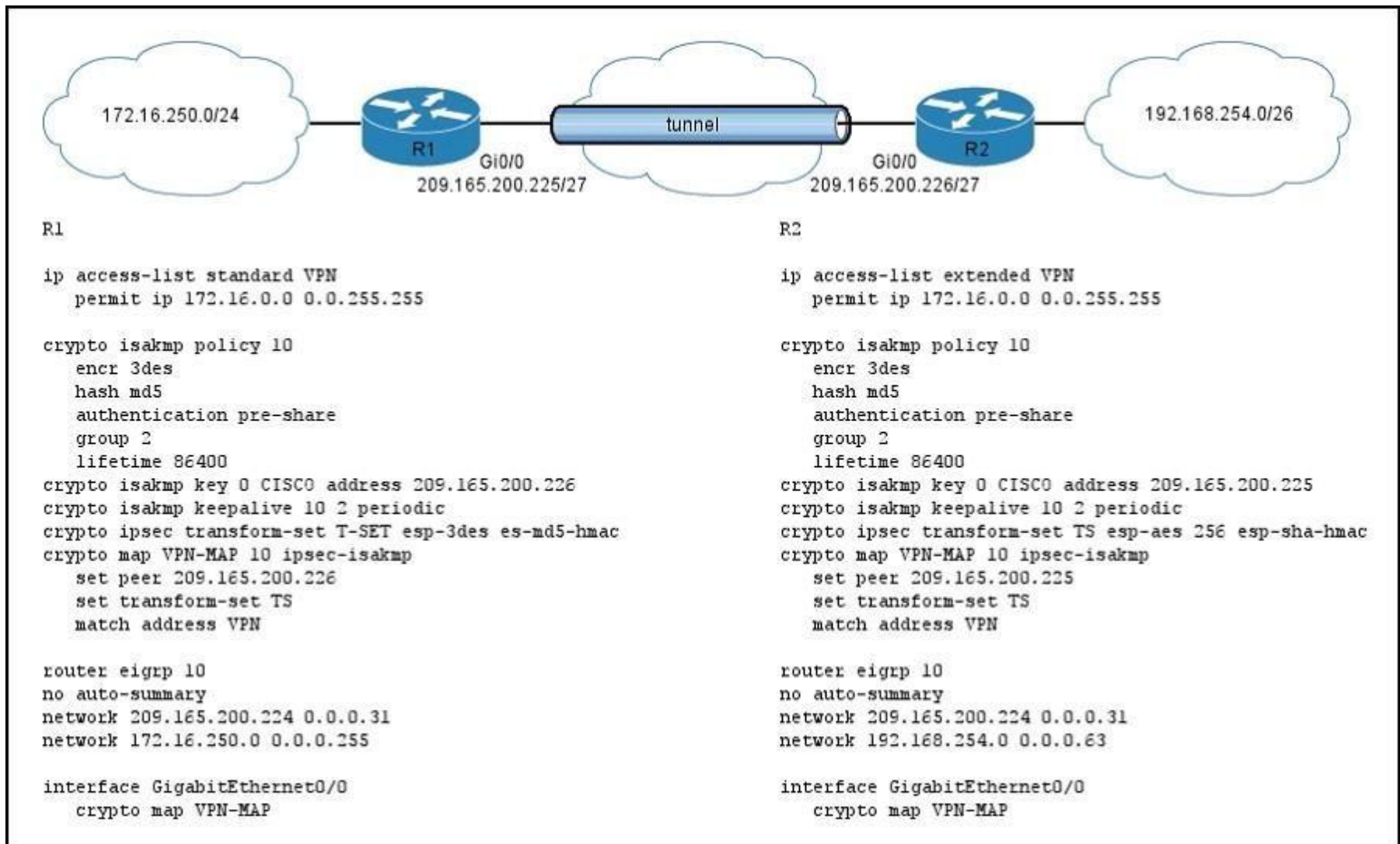F. It maintains full-mesh connectivity for IP networks.

Correct Answer: ABD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 20
Refer to the exhibit. If the traffic flowing from network 192.168.254.0 to 172.16.250.0 is unencrypted, which two actions must you take to enable encryption? (Choose two).

```
                                         ┌─────────────┐
  172.16.250.0/24      [R1]              │   tunnel    │              [R2]      192.168.254.0/26
                       Gi0/0             └─────────────┘              Gi0/0
                       209.165.200.225/27                             209.165.200.226/27
```

R1

```
ip access-list standard VPN
   permit ip 172.16.0.0 0.0.255.255

crypto isakmp policy 10
   encr 3des
   hash md5
   authentication pre-share
   group 2
   lifetime 86400
crypto isakmp key 0 CISCO address 209.165.200.226
crypto isakmp keepalive 10 2 periodic
crypto ipsec transform-set T-SET esp-3des es-md5-hmac
crypto map VPN-MAP 10 ipsec-isakmp
   set peer 209.165.200.226
   set transform-set TS
   match address VPN


router eigrp 10
no auto-summary
network 209.165.200.224 0.0.0.31
network 172.16.250.0 0.0.0.255

interface GigabitEthernet0/0
   crypto map VPN-MAP
```

R2

```
ip access-list extended VPN
   permit ip 172.16.0.0 0.0.255.255

crypto isakmp policy 10
   encr 3des
   hash md5
   authentication pre-share
   group 2
   lifetime 86400
crypto isakmp key 0 CISCO address 209.165.200.225
crypto isakmp keepalive 10 2 periodic
crypto ipsec transform-set TS esp-aes 256 esp-sha-hmac
crypto map VPN-MAP 10 ipsec-isakmp
   set peer 209.165.200.225
   set transform-set TS
   match address VPN


router eigrp 10
no auto-summary
network 209.165.200.224 0.0.0.31
network 192.168.254.0 0.0.0.63

interface GigabitEthernet0/0
   crypto map VPN-MAP
```

A. Configure the transform-set on R2 to match the configuration on R1.
B. Configure the crypto map on R2 to include the correct subnet.
C. Configure the ISAKMP policy names to match on R1 and R2.
D. Configure the crypto map names to match on R1 and R2.
E. Configure the Diffie-Hellman keys used in the ISAKMP policies to be different on R1 and R2.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 21
Which service is disabled by the no service tcp-small-servers command?

A. the finger service
B. the Telnet service
C. the Maintenance Operation Protocol service
D. the chargen service

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 22
What is the ip dhcp snooping information option command used for?

A. It displays information about the DHCP snooping table.
B. It sends a syslog and an SNMP trap for a DHCP snooping violation.
C. It enables the DHCP snooping host tracking feature.
D. It enables DHCP option 82 data insertion.

Correct Answer: D
Section: (none)
Explanation

QUESTION 23
Which two statements are true about unicast RPF? (Choose two.)

A. Unicast RPF requires CEF to be enabled.
B. Unicast RPF strict mode works better with multihomed networks.
C. Unicast RPF strict mode supports symmetric paths.
D. Unicast RPF strict mode supports asymmetric paths.
E. CEF is optional with Unicast RPF, but when CEF is enabled it provides better performance.

Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 24
Under Cisco IOS Software, which two features are supported in RADIUS Change of Authorization requests? (Choose two.)

A. session identification
B. session reauthentication
C. session termination
D. host termination

Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 25
In a PfR environment, which two statements best describe the difference between active mode monitoring and fast mode monitoring? (Choose two.)

A. Active mode monitoring can monitor and measure actual traffic via NetFlow data collection.
B. Fast mode monitoring can measure bursty traffic better than active mode.
C. Active mode monitoring uses IP SLA probes for the purpose of obtaining performance characteristics of the current WAN exit link.

D. Fast mode monitoring uses IP SLA probes via all valid exits continuously to quickly determine an alternate exit link.

Correct Answer: CD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 26
Refer to the exhibit. Which two statements are true regarding prefix 10.1.0.0/24? (Choose two.)

```
MC#sh pfr master traffic-class

OER Prefix Statistics:
 Pas - Passive, Act - Active, S - Short term, L - Long term, Dly - Delay (ms),
 P - Percentage below threshold, Jit - Jitter (ms),
 MOS - Mean Opinion Score
 Los - Packet Loss (packets-per-million), Un - Unreachable (flows-per-million),
 E - Egress, I - Ingress, Bw - Bandwidth (kbps), N - Not applicable
 U - unknown, * - uncontrolled, + - control more specific, @ - active probe all
 # - Prefix monitor mode is Special, & - Blackholed Prefix
 % - Force Next-Hop, ^ - Prefix is denied

DstPrefix         Appl_ID Dscp Prot     SrcPort     DstPort SrcPrefix
        Flags                  State     Time            CurrBR  CurrI/F Protocol
      PasSDly   PasLDly   PasSUn    PasLUn   PasSLos  PasLLos       EBw        IBw
      ActSDly   ActLDly   ActSUn    ActLUn   ActSJit  ActPMOS  ActSLos   ActLLos
------------------------------------------------------------------------------
10.1.0.0/24                N    N    N           N            N N
                 INPOLICY*       @83          10.4.5.4 Et0/1           U
           52        52        0         0        0        0        67         7
           51        51        0         0        N        N         N         N
```

A. The prefix is in policy, and Cisco PfR rerouted the traffic via 10.4.5.3 Et0/1 because of an OOP event.
B. Cisco PfR is monitoring the prefix via passive NetFlow mode only.

C. Cisco PfR is monitoring the prefix via active, fast, or active throughput IP SLA probe mode only.
D. The prefix is in policy, and Cisco PfR did not reroute the traffic via 10.4.5.3 Et0/1 because the traffic was previously in policy.
E. Cisco PfR is monitoring the prefix via mode monitor, which provides both NetFlow and IP SLA measurements.

Correct Answer: DE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 27
In the DiffServ model, which class represents the lowest priority with the highest drop probability?

A. AF11
B. AF13
C. AF41
D. AF43

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 28
Which two hashing algorithms can be used when configuring SNMPv3? (Choose two.)

A. MD5
B. SHA-1
C. Blowfish
D. DES
E. AES
F. SSL

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 29
Which two statements about the default router settings for SSH connections are true? (Choose two.)

A. The default timeout value for the SSH negotiation phase is 120 seconds.
B. Data is exchanged in clear text by default unless AAA authentication is enabled on the console.
C. The default number of authentication retries is 3.
D. SSH is enabled by default when you configure the username command.

Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 30
Refer to the exhibit. Which statement about the R1 configuration is true?

```
R1#sh logging
Syslog logging: enabled (12 messages dropped, 0 messages rate-limited, 0 flushes, 0 overruns, xml disabled, filtering disabled)

No Active Message Discriminator.

No Inactive Message Discriminator.

    Console logging: level debugging, 28 messages logged, xml disabled, filtering disabled
    Monitor logging: level debugging, 0 messages logged, xml disabled, filtering disabled
    Buffer logging:  level debugging, 7 messages logged, xml disabled, filtering disabled
    Logging Exception size (4096 bytes)
    Count and timestamp logging messages: disabled
    Persistent logging: disabled

No active filter modules.

ESM: 0 messages dropped

%SYS-5-CONFIG_I: Configured from console by console
    Trap logging: level informational, 32 message lines logged

Log Buffer (4096 bytes):

%BGP-5-ADJCHANGE: neighbor 209.165.200.226 Down Interface flap
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to administratively down
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to down
%SYS-5-CONFIG_I: Configured from console by console
```

A. It supports the service timestamps log uptime command to display time stamps.
B. The logging buffer command was used to increase the default of the buffer.
C. The logging of warning messages is disabled.
D. Log message sequence numbering is disabled.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 31
Which two statements about class maps are true? (Choose two.)

A. As many as eight DSCP values can be included in a match dscp statement.
B. The default parameter on a class map with more than one match command is match-any.
C. The match class command can nest a class map within another class map.
D. A policy map can be used to designate a protocol within a class map.
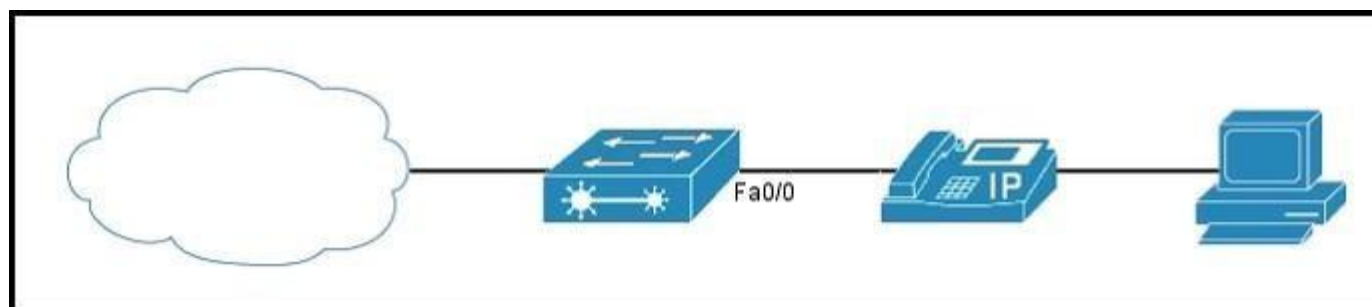
Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 32
Refer to the exhibit. Which statement about configuring the switch to manage traffic is true?

A. The switchport priority extend cos command on interface FastEthernet0/0 prevents traffic to and from the PC from taking advantage of the high-priority data queue that is assigned to the IP phone.
B. The switchport priority extend cos command on interface FastEthernet0/0 enables traffic to and from the PC to use the high priority data queue that is assigned to the IP phone.
C. When the switch is configured to trust the CoS label of incoming traffic, the trusted boundary feature is disabled automatically.
D. The mls qos cos override command on interface FastEthernet0/0 configures the port to trust the CoS label of traffic to and from the PC.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 33
Which IP SLA operation type is enhanced by the use of the IP SLAs Responder?

A. DNS
B. HTTP
C. ICMP Echo
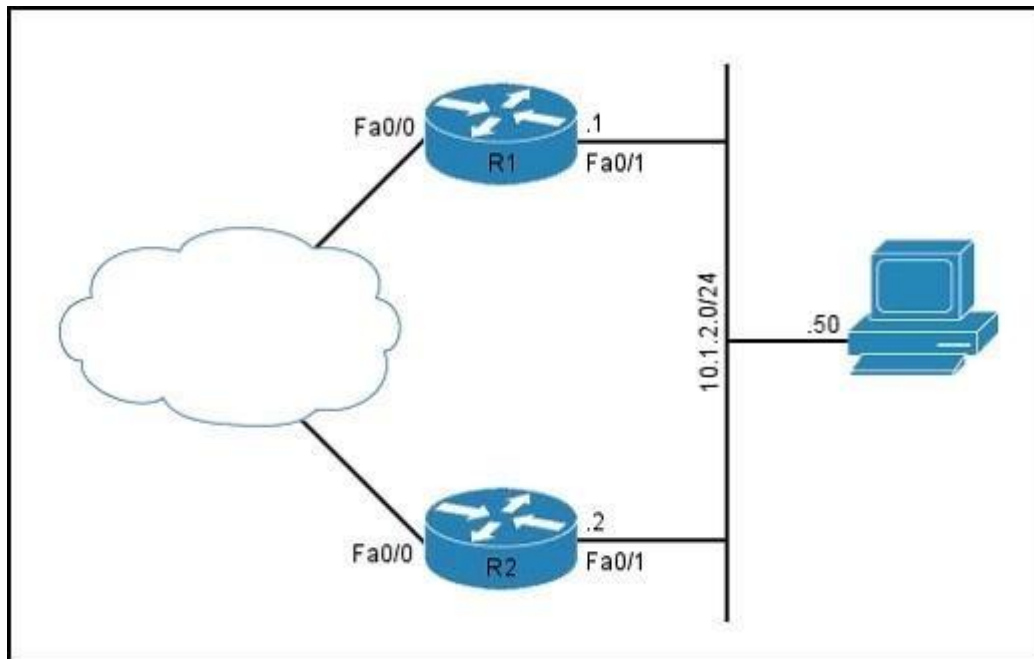D. UDP Echo

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 34
Refer to the exhibit. Router 1 and Router 2 use HSRP to provide first hop redundancy for hosts on the 10.1.2.0/24 network.

Which feature can provide additional failover coverage for the PC?

A. Cisco Express Forwarding
B. NetFlow
C. Accounting
D. Enhanced Object Tracking

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 35
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

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 36
Refer to the exhibit. Which two possible network conditions can you infer from this configuration? (Choose two.)

```
R2#show ntp associations
    address      ref clock     st  when  poll reach  delay  offset   disp
  ~10.1.1.1      0.0.0.0       16   61    64   0       0.0    0.00    16000.
   * master (synced), # master (unsynced), + selected, - candidate, ~ configured

R2#show ip route | include 10.1.1.1
O     10.1.1.1/32 [110/11] via 10.1.12.1, 00:20:28, FastEthernet0/0.12

R2#show run | include ntp
ntp authentication-key 1 md5 110A1016141D 7
ntp authenticate
ntp trusted-key 1
ntp clock-period 17179894
ntp server 10.1.1.1 key 1

R1#show ip route connected
    209.165.200.0/27 is subnetted, 1 subnets
C     209.165.200.224 is directly connected, FastEthernet0/0.112
    10.0.0.0/8 is variably subnetted, 7 subnets, 2 masks
C     10.1.13.0/24 is directly connected, FastEthernet0/1.13
C     10.1.12.0/24 is directly connected, FastEthernet0/0.12
C     10.1.1.0/24 is directly connected, Loopback0
```

A. The authentication parameters on R1 and R2 are mismatched.
B. R1 is using the default NTP source configuration.
C. R1 and R2 have established an NTP session.
D. R2 is configured as the NTP master with a stratum of 7.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 37
Which three message types are used for prefix delegation in DHCPv6? (Choose three.)

A. DHCP Discover
B. Renew

C. Solicit
D. DHCP Offer
E. Advertise
F. DHCP Ack

Correct Answer: BCE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 38
Which two statements about static NAT are true? (Choose two.)

A. An outside local address maps to the same outside global IP address.
B. An inside local address maps to a different inside global IP address.
C. An outside local address maps to a different outside global IP address.
D. An inside local address maps to the same inside global IP address.

Correct Answer: AD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 39
What is Nagle's algorithm used for?

A. To increase the latency
B. To calculate the best path in distance vector routing protocols
C. To calculate the best path in link state routing protocols
D. To resolve issues caused by poorly implemented TCP flow control.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 40
Which statement is true regarding the UDP checksum?

A. It is used for congestion control.
B. It cannot be all zeros.
C. It is used by some Internet worms to hide their propagation.
D. It is computed based on the IP pseudo-header.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 41
How many hash buckets does Cisco Express Forwarding use for load balancing?

A. 8
B. 16
C. 24
D. 32

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 42
Which statement describes the purpose of the Payload Type field in the RTP header?

A. It identifies the signaling protocol.
B. It identifies the codec.
C. It identifies the port numbers for RTP.
D. It identifies the port numbers for RTCP.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 43
Which Cisco IOS XE process administers routing and forwarding?

A. Forwarding manager
B. Interface manager
C. Cisco IOS
D. Host manager

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 44
Which circumstance can cause packet loss due to a microburst?

A. slow convergence
B. a blocked spanning-tree port
C. process switching
D. insufficient buffers

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 45
When you migrate a network from PVST+ to rapid-PVST+, which two features become inactive? (Choose two.)

A. Root guard

B. Loop guard
C. UplinkFast
D. UDLD
E. BackboneFast
F. Bridge Assurance

Correct Answer: CE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 46
Which three condition types can be monitored by crypto conditional debug? (Choose three.)

A. Peer hostname
B. SSL
C. ISAKMP
D. Flow ID
E. IPsec
F. Connection ID

Correct Answer: ADF
Section: (none)
Explanation

Explanation/Reference:

QUESTION 47
Refer to the exhibit. Which two pieces of information in this Wireshark capture indicate that you are viewing EIGRP traffic? (Choose two.)

```
Internet Protocol, Src: 192.168.0.2 (192.168.0.2), Dst: 224.0.0.10 (224.0.0.10)
Version: 4
Header length: 20 bytes
Differentiated Services Field: 0xc0 (DSCP 0x30: Class Selector 6; ECN: 0x00)
Total Length: 60
Identification: 0x0000 (0)
Flags: 0x00
Fragment offset: 0
Time to live: 2
Protocol: EIGRP (88)
Header checksum: 0x16f6 [correct]
Source: 192.168.0.2 (192.168.0.2)
Destination: 224.0.0.10 (224.0.0.10)
```

A. the header length
B. the protocol number
C. the destination address
D. the Class Selector
E. the source address
F. the header checksum

Correct Answer: BC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 48
Which statement is true about MLD?

A. MLD v1 gives hosts the ability to receive multicast packets from specific source addresses.
B. All MLD messages are sent with a link-local IPv6 source address of FF02::D.
C. The multicast address field is cleared to zero when sending an MLD report message.
D. MLD is used by IPv6 routers to discover multicast listeners on a directly attached link.

Correct Answer: D
Section: (none)

Explanation

Explanation/Reference:

QUESTION 49
Which statement is true about LLDP?

A. LLDP provides VTP support.
B. LLDP does not use a multicast address to communicate.
C. LLDP can indicate only the duplex setting of a link, and not the speed capabilities.
D. LLDP does not support native VLAN indication.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 50
Which statement is true when using a VLAN ID from the extended VLAN range (1006?094)?

A. VLANs in the extended VLAN range can be used with VTPv2 in either client or server mode.
B. VLANs in the extended VLAN range can only be used as private VLANs.
C. STP is disabled by default on extended-range VLANs.
D. VLANs in the extended VLAN range cannot be pruned.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 51
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.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 52
Which three statements are true about an EtherChannel? (Choose three.)

A. PAGP and LACP can be configured on the same switch if the switch is not in the same EtherChannel.

B. EtherChannel ports in suspended state can receive BPDUs but cannot send them.

C. An EtherChannel forms between trunks that are using different native VLANs.

D. LACP can operate in both half duplex and full duplex, if the duplex setting is the same on both ends.

E. Ports with different spanning-tree path costs can form an EtherChannel.

Correct Answer: ABE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 53
Which technology can be affected when switches are used that do not support jumbo frames?

A. 802.1x

B. BFD

C. OSPFv3

D. 802.1q

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 54
Which statement describes the native VLAN concept in an ISL trunk?

A. It is the VLAN ID that is assigned to untagged packets.
B. It is the VLAN with highest priority.
C. It is the default VLAN for a trunk.
D. There is no native VLAN concept in an ISL trunk.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 55
Which protocol is the encapsulating protocol for mtrace packets?

A. ICMP
B. IGMP
C. PIM
D. GRE

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 56
Assume that the following MAC addresses are used for the bridge ID MAC address by four different switches in a network. Which switch will be elected as the spanning-tree root bridge?

A. SwitchA uses MAC 1000.AA-AA-AA-AA-AA-AA.
B. SwitchB uses MAC 2000.BB-BB-BB-BB-BB-BB.
C. SwitchC uses MAC 3000.CC-CC-CC-CC-CC-CC.
D. SwitchD uses MAC 4000.DD-DD-DD-DD-DD-DD.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 57
What is the destination MAC address of a BPDU frame?

A. 01-80-C2-00-00-00
B. 01-00-5E-00-00-00
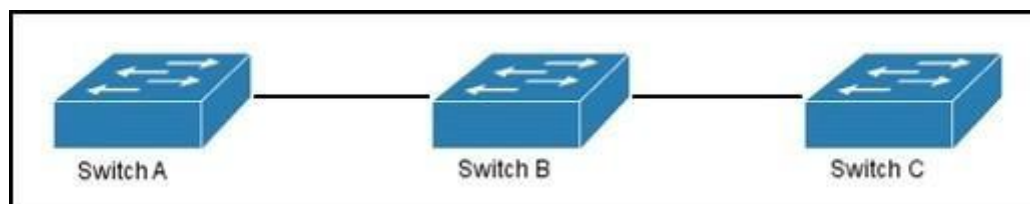C. FF-FF-FF-FF-FF-FF
D. 01-80-C6-00-00-01

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 58
Refer to the exhibit. All switches are Cisco switches. Assume that Cisco Discovery Protocol is enabled only on switches A and C.

Which information is returned when you issue the command show cdp neighbors on switch C?

A. a limited amount of information about switch B
B. no neighbor details will be returned
C. neighbor details for switch B
D. neighbor details for switch A
E. neighbor details for switch C

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 59
Which two features are supported when Cisco HDLC is implemented? (Choose two.)

A. error recovery
B. error detection
C. asynchronous links
D. multiple protocols

Correct Answer: BD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 60
Refer to the exhibit. With these configurations for R1 and R2, which statement about PPP authentication is true?

```
R1
interface Serial0/0
    encapsulation ppp
    ppp pap sent-username SITE2 password cisco

R2
username SITE2 password cisco
    interface Serial0/0
    encapsulation ppp
    ppp authentication pap
```

A. Authentication fails because R1 is missing a username and password.
B. R2 responds with the correct authentication credentials.

C. R2 requires authentication from R1.

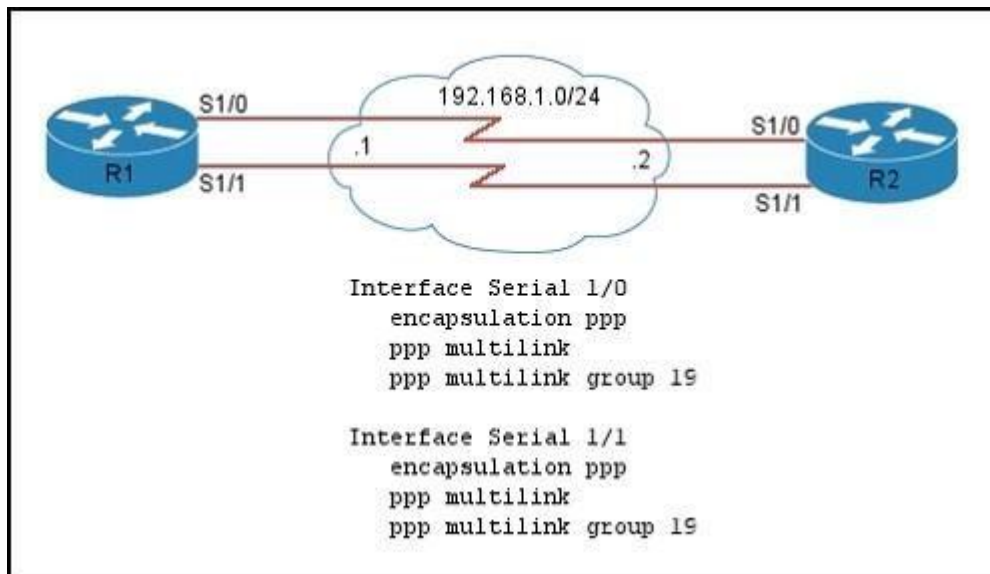D. R1 requires authentication from R2.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 61
Refer to the exhibit. You must complete the configuration on R1 so that a maximum of three links can be used and fragmentation is supported.


```
Interface Serial 1/0
    encapsulation ppp
    ppp multilink
    ppp multilink group 19

Interface Serial 1/1
    encapsulation ppp
    ppp multilink
    ppp multilink group 19
```

Which additional configuration accomplishes this task?

A. interface Multilink19
   ip address 192.168.1.1 255.255.255.0
   ppp multilink
   ppp multilink group 19
   ppp multilink links minimum 1
   ppp multilink links maximum 3
   ppp multilink interleave

B. interface Multilink19
    ip address 192.168.1.1 255.255.255.0
    ppp multilink
    ppp multilink group 19
    ppp multilink links maximum 3
    ppp multilink fragment delay 20

C. interface Multilink19
    ip address 192.168.1.1 255.255.255.0
    ppp multilink
    ppp multilink group 19
    ppp multilink links maximum 3
    ppp multilink fragment delay 20
    ppp multilink interleave

D. interface Multilink19
    ip address 192.168.1.1 255.255.255.252
    ppp multilink
    ppp multilink group 19
    ppp multilink links maximum 3
    ppp multilink interleave

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 62
Refer to the exhibit. Which statement is true about the downward bit?

```
Router#sh ip osp data summ

              OSPF Router with ID (100.1.1.1) (Process ID 1)

                 Summary Net Link States (Area 0)

  LS age: 22
  Options: (No TOS-capability, DC, Downward)
  LS Type: Summary Links(Network)
  Link State ID: 2.2.0.0 (summary Network Number)
  Advertising Router: 2.3.4.101
  LS Seq Number: 80000001
  Checksum: 0x3316
  Length: 28
  Network Mask: /24
        MTID: 0           Metric: 1
```

A. It forces the CE router to use a backup link instead of sending traffic via MPLS VPN.
B. It informs the PE router that the LSA metric has been recently decreased to 1 and that partial SPF calculation cannot be delayed.
C. It forces the CE router to install the LSA with the downward bit set into its routing table as a discard route.
D. It informs the PE router that the LSA was already redistributed into BGP by another PE router and that the LSA must not be redistributed into BGP again.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 63
When BGP route reflectors are used, which attribute ensures that a routing loop is not created?

A. weight
B. local preference
C. multiexit discriminator
D. originator ID

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 64
Which regular expression will match prefixes that originated from AS200?

A. ^$
B. ^200_
C. _200$
D. ^200)
E. _200_

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 65
Which statement describes the difference between a stub area and a totally stub area?

A. The ABR advertises a default route to a totally stub area and not to a stub area.
B. Stub areas do not allow LSA types 4 and 5, while totally stub areas do not allow LSA types 3, 4, and 5.
C. Totally stub areas allow limited external routes in the area via a special type 7 LSA, while stub areas do not
D. Stub areas do not allow external LSAs, ASBR summary LSAs, or summary LSAs with the exception of a default route originated by the ABR via a summary LSA.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 66
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.

Correct Answer: CD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 67
Which command do you use to connect a dense-mode domain to a sparse-mode multicast domain?

A. none, because there is no such command

B. ip pim spt-threshold infinity

C. ip pim register dense-mode

D. ip pim dense-mode proxy-register

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 68
Which two statements about the function of a PIM designated router are true? (Choose two.)

A. It forwards multicast traffic from the source into the PIM network.

B. It registers directly connected sources to the PIM rendezvous point.

C. It sends PIM Join/Prune messages for directly connected receivers.

D. It sends IGMP queries.

E. It sends PIM asserts on the interfaces of the outgoing interface list.

Correct Answer: BC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 69
Refer to the exhibit. Which IP packets will be accepted from EBGP neighbor 10.1.1.1?

```
router bgp 1
neighbor 10.1.1.1 remote-as 2
neighbor 10.1.1.1 ttl-security hops 2
```

A. IP packets with a TTL count in the header that is equal to or greater than 253
B. IP packets with a TTL count in the header that is equal to 253
C. IP packets with a TTL count in the header that is equal to or greater than 2
D. IP packets with a TTL count in the header that is equal to 2

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 70
Which two statements about proxy ARP are true? (Choose two.)

A. It is supported on networks without ARP.
B. It allows machines to spoof packets.
C. It requires larger ARP tables
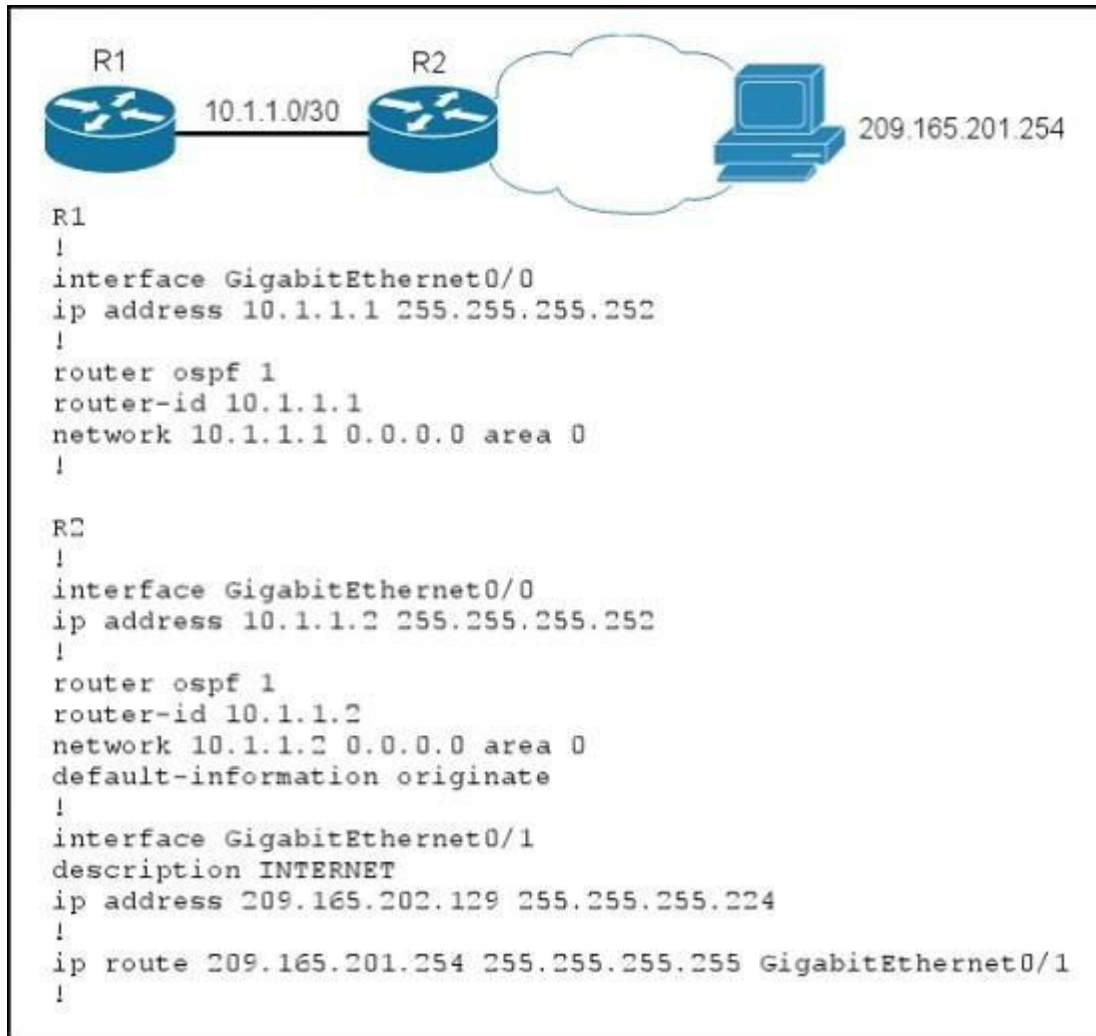D. It reduces the amount of ARP traffic.

Correct Answer: BC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 71

Refer to the exhibit. Routers R1 and R2 are configured as shown, and traffic from R1 fails to reach host 209.165.201.254.

```
            R1                  R2
         [router]  10.1.1.0/30  [router]  ( cloud )   [PC]   209.165.201.254

R1
!
interface GigabitEthernet0/0
ip address 10.1.1.1 255.255.255.252
!
router ospf 1
router-id 10.1.1.1
network 10.1.1.1 0.0.0.0 area 0
!


R2
!
interface GigabitEthernet0/0
ip address 10.1.1.2 255.255.255.252
!
router ospf 1
router-id 10.1.1.2
network 10.1.1.2 0.0.0.0 area 0
default-information originate
!
interface GigabitEthernet0/1
description INTERNET
ip address 209.165.202.129 255.255.255.224
!
ip route 209.165.201.254 255.255.255.255 GigabitEthernet0/1
!
```

Which action can you take to correct the problem?

A. Ensure that R2 has a default route in its routing table.
B. Change the OSPF area type on R1 and R2.
C. Edit the router configurations so that address 209.165.201.254 is a routable address.

D. Remove the default-information originate command from the OSPF configuration of R2.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 72
Which authentication method does OSPFv3 use to secure communication between neighbors?

A. plaintext
B. MD5 HMAC
C. PKI
D. IPSec

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 73
Which three statements are true about OSPFv3? (Choose three.)

A. The only method to enable OSPFv3 on an interface is via the interface configuration mode.
B. Multiple instances of OSPFv3 can be enabled on a single link.
C. There are two methods to enable OSPFv3 on an interface, either via the interface configuration mode or via the router configuration mode.
D. For OSPFv3 to function, IPv6 unicast routing must be enabled.
E. For OSPFv3 to function, IPv6 must be enabled on the interface.
F. Only one instance of OSPFv3 can be enabled on a single link.

Correct Answer: BDE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 74
Refer to the exhibit. Which statement is true?

```
P#show mpls forwarding-table

Local        Outgoing     Prefix          Bytes Label    Outgoing      Next Hop

Label        Label        or Tunnel Id    Switched       interface


19           21           [mdt 1000:2000 0]    \

                                               33516       Et2/0         10.1.2.2

             19           [mdt 1000:2000 0]    \

                                               912         Et1/0         10.1.1.1

20           24           [mdt 1000:2000 0]    \

                                               1932        Et3/0         10.1.3.3

             21           [mdt 1000:2000 0]    \

                                               1932        Et2/0         10.1.2.2

23           24           [mdt 1000:2000 0]    \

                                               33940       Et3/0         10.1.3.3

             19           [mdt 1000:2000 0]    \

                                               912         Et1/0         10.1.1.1
```

A. This is an MPLS TE point-to-multipoint LSP in an MPLS network.
B. This is an MPLS TE multipoint-to-point LSP in an MPLS network.
C. This is a point-to-multipoint LSP in an MPLS network.
D. This is a multipoint-to-multipoint LSP in an MPLS network.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 75
Which statement about OSPF multiaccess segments is true?

A. The designated router is elected first.
B. The designated and backup designated routers are elected at the same time.
C. The router that sent the first hello message is elected first.
D. The backup designated router is elected first.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 76
Refer to the exhibit. Which statement is true?

```
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: Tu1, imposed label stack {12307 20}
  Create time: 00:00:11, last status change time: 00:00:11
  Signaling protocol: LDP, peer 2.2.2.3:0 up
    MPLS VC labels: local 21, remote 20
    Group ID: local 0, remote 2
    MTU: local 1500, remote 1500
    Remote interface description:
  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
```

A. R1 routes this pseudowire 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 pseudowire, because the IP path is not available.
D. R1 has preferred-path configured for the pseudowire.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 77
What are the minimal configuration steps that are required to configure EIGRP HMAC-SHA2 authentication?

A. classic router mode, interface XX, authentication mode hmac-sha-256 <password>
B. named router mode, address-family statement, authentication mode hmac-sha-256 <password>
C. named router mode, address-family statement, af-interface default, authentication mode hmac- sha-256 <password>

D. named router mode, address-family statement, authentication mode hmac-sha-256 <password>

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 78
Refer to the exhibit. How many EIGRP routes will appear in the routing table of R2?

```
R1:

interface Loopback0
 ip address 1.1.1.1 255.255.255.0
 ipv6 address 2001:12::1/128
 ipv6 eigrp 100
!
interface FastEthernet0/0
 ip address 10.1.12.1
255.255.255.0
 duplex auto
 speed auto
 ipv6 address 2001:112::1/64
 ipv6 eigrp 100
!
interface FastEthernet0/1
 no ip address
 shutdown
 duplex auto
 speed auto
!
ip forward-protocol nd
!
!
no ip http server
no ip http secure-server
!
!
ipv6 router eigrp 100
 no shutdown
!
!
control-plane
!
```
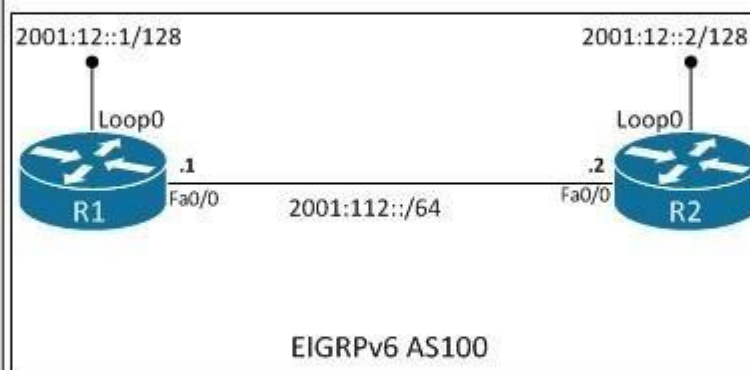
```
R2:

interface Loopback0
 ip address 2.2.2.2 255.255.255.0
 ipv6 address 2001:12::2/128
 ipv6 eigrp 100
!
interface FastEthernet0/0
 ip address 10.1.12.2
255.255.255.0
 duplex auto
 speed auto
 ipv6 address 2001:112::2/64
 ipv6 eigrp 100
!
interface FastEthernet0/1
 no ip address
 shutdown
 duplex auto
 speed auto
!
ip forward-protocol nd
!
!
no ip http server
no ip http secure-server
!
!
ipv6 router eigrp 100
 shutdown
!
!
control-plane
!
```

```
2001:12::1/128                          2001:12::2/128

Loop0                                   Loop0
      .1                          .2
  R1  Fa0/0    2001:112::/64   Fa0/0  R2

            EIGRPv6 AS100
```

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

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 79
For which kind of MPLS deployment is the next-hop-self all keyword used on a BGP neighbor command?

A. 6VPE
B. MPLS Carrier's carrier
C. inter-AS MPLS VPN option D
D. inter-AS MPLS VPN option C
E. Unified MPLS

Correct Answer: E
Section: (none)
Explanation

Explanation/Reference:

QUESTION 80
What is a reason for 6PE to use two MPLS labels in the data plane instead of one?

A. 6PE allows penultimate hop popping and has a requirement that all P routers do not have to be IPv6 aware.
B. 6PE does not allow penultimate hop popping.
C. It allows MPLS traffic engineering to work in a 6PE network.
D. It allows 6PE to work in an MPLS network where 6VPE is also deployed.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 81
Which two configuration changes should be made on the OTP interface of an EIGRP OTP route reflector? (Choose two.)

A. passive-interface
B. no split-horizon
C. no next-hop-self
D. hello-interval 60, hold-time 180

Correct Answer: BC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 82
Which statement about the function of poison reverse in EIGRP is true?

A. It tells peers to remove paths that previously might have pointed to this router.
B. It tells peers to remove paths to save memory and bandwidth.
C. It provides reverse path information for multicast routing.
D. It tells peers that a prefix is no longer reachable.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 83
What is the preferred method to improve neighbor loss detection in EIGRP?

A. EIGRP natively detects neighbor down immediately, and no additional feature or configuration is required.
B. BFD should be used on interfaces that support it for rapid neighbor loss detection.
C. Fast hellos (subsecond) are preferred for EIGRP, so that it learns rapidly through its own mechanisms.
D. Fast hellos (one-second hellos) are preferred for EIGRP, so that it learns rapidly through its own mechanisms.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 84
Drag and Drop Question

Select and Place:

Drag and drop the IPv6 prefix on the left to the correct address type on the right.	
FF00::/8	Unique Local Unicast
FEC0::/10	Global Unicast
2000::/3	Link Local Unicast
FE80::/10	Multicast
FC00::/7	
FE00::/9	

Correct Answer:

Drag and drop the IPv6 prefix on the left to the correct address type on the right.

	FC00::/7
FEC0::/10	2000::/3
	FE80::/10
	FF00::/8
FE00::/9	

Section: (none)
Explanation

Explanation/Reference:

QUESTION 85
Drag and Drop Question

Select and Place:

Drag and drop the BGP attribute on the left to the correct category on the right.

Community	**BGP Well-Known Mandatory Attribute**
	Target
Atomic-Aggregate	
Aggregator	**BGP Well-Known Discretionary Attribute**
	Target
Cluster List	
Next-Hop	**BGP Optional Nontransitive Attribute**
	Target
MED	
	Target

Correct Answer:

Drag and drop the BGP attribute on the left to the correct category on the right.

Community

Aggregator

BGP Well-Known Mandatory Attribute

Next-Hop

BGP Well-Known Discretionary Attribute

Atomic-Aggregate

BGP Optional Nontransitive Attribute

Cluster List

MED

Section: (none)
Explanation

Explanation/Reference:

QUESTION 86
Drag and Drop Question

Select and Place:

Uses UDP	TACACS+
Separates authentication, authorization, and accountability	
Is proprietary to Cisco	
Encrypts only the password	RADIUS

Correct Answer:

	TACACS+
	Is proprietary to Cisco
	Separates authentication, authorization, and accountability
	RADIUS
	Uses UDP
	Encrypts only the password

Section: (none)
Explanation

Explanation/Reference:

QUESTION 87
Drag and Drop Question

Select and Place:

Drag and drop the protocol on the left to the corresponding administrative distance on the right.	
ODR	0
connected	1
external EIGRP	160
static	115
IS-IS	200
iBGP	170

Correct Answer:

Drag and drop the protocol on the left to the corresponding administrative distance on the right.

	connected
	static
	ODR
	IS-IS
	iBGP
	external EIGRP

Section: (none)
Explanation

Explanation/Reference:

QUESTION 88
Drag and Drop Question

Select and Place:

Drag and drop the PPPoE packet type on the left to the corresponding description on the right.

PADR	A packet that is sent with the destination_addr set to the broadcast address. The p indicates the type of service requested.
PADT	A packet that is sent with the destination_addr set to the unicast address of the PP 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 ch 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.

Correct Answer:

Drag and drop the PPPoE packet type on the left to the corresponding description on the right.

	PADI
	PADO
	PADR
	PADS
	PADT

Section: (none)
Explanation

Explanation/Reference:

QUESTION 89
Drag and Drop Question

Select and Place:

Drag and drop the BGP state on the left to the action that defines it on the right.

OpenConfirm	The BGP routing process detects that a peer is trying to establish a TCP session w... local BGP speaker.
Idle	The BGP routing process tries to establish a TCP session with a peer device.
Active	The TCP connection is established.
Connect	The BGP routing process waits to receive an intial keepalive message from the p...
Established	The initial BGP state.
OpenSent	The router exchanges update messages with the peer.

Correct Answer:

Drag and drop the BGP state on the left to the action that defines it on the right.

	Connect
	Active
	OpenSent
	OpenConfirm
	Idle
	Established

Section: (none)
Explanation

Explanation/Reference:

QUESTION 90
Drag and Drop Question

Select and Place:

Drag and drop the extended ping command field on the left to its usage on the right.

type of service	discovering framing issues on serial lines
sweep range of sizes	adjusting delay, throughput, and reliability preferences for the ping
data pattern	configuring the IP header options of the ping
loose, strict, record, timestamp, verbose	determining the minimum MTU in a path

Correct Answer:

Drag and drop the extended ping command field on the left to its usage on the right.

	data pattern
	type of service
	loose, strict, record, timestamp, verbose
	sweep range of sizes

Section: (none)
Explanation

Explanation/Reference:

QUESTION 91
Drag and Drop Question

Select and Place:

Drag and drop the argument of the **mls ip cef load-sharing** command on the left to the function it performs on the right.

simple	configures CEF load balancing to use Layer 3 and Layer 4 information, excluding m adjacencies
full	configures CEF load balancing to use only destination Layer 4 ports
full simple	configures CEF load balancing to use only Layer 3 information, excluding multip adjacencies
exclude-port source	configures CEF load balancing to use only source Layer 4 ports
exclude-port destination	configures CEF load balancing to use source and destination Layer 3 and Layer 4 information, including multiple adjacencies

Correct Answer:

Drag and drop the argument of the **mls ip cef load-sharing** command on the left to the function it performs on the right.

	full simple
	exclude-port source
	simple
	exclude-port destination
	full

Section: (none)
Explanation

Explanation/Reference:

QUESTION 92
Drag and Drop Question

Select and Place:

Drag and drop the method for refreshing BGP prefixes on the left to the corresponding description on the right.

hard reset	requests a complete refresh of the Adj-RIB-Out
soft reset	tears down the peering session and deletes prefixes from the peer
dynamic inbound soft reset	uses extra prefix information stored locally
Enhanced Route Refresh	finds route inconsistencies and synchronizes with the peer

Correct Answer:

Drag and drop the method for refreshing BGP prefixes on the left to the corresponding description on the right.

	dynamic inbound soft reset
	hard reset
	soft reset
	Enhanced Route Refresh

Section: (none)
Explanation

Explanation/Reference:

QUESTION 93
Drag and Drop Question

Select and Place:

Drag and drop the IS-IS component on the left to the function that it performs on the right.

Component	Function
attached bits	instructs other devices to route around the sending device until its LSDB is full converged
overload bit	discovers neighboring IS-IS systems
TLV	carries additional data within an IS-IS packet
IIH	synchronizes the LSDB within an IS-IS domain
PNSP	indicates to a Level 1 device that the sending device has reachability to other areas
CNSP	requests retransmission of the latest version of an LSP

Correct Answer:

Drag and drop the IS-IS component on the left to the function that it performs on the right.

	overload bit
	IIH
	TLV
	CNSP
	attached bits
	PNSP

Section: (none)
Explanation

Explanation/Reference:

QUESTION 94
Drag and Drop Question

Select and Place:

Drag and drop the NHRP flag on the left to the corresponding meaning on the right.

authoritative	NHRP information was learned from a forwarded NHRP packet.
implicit	The NHRP mapping entry is active and process-switched.
negative	NHRP information was obtained from the next hop server that maintains the NBMA mapping.
used	The requested NBMA mapping failed.

Correct Answer:

Drag and drop the NHRP flag on the left to the corresponding meaning on the right.

	implicit
	used
	authoritative
	negative

Section: (none)
Explanation

Explanation/Reference:

QUESTION 95
Drag and Drop Question

Select and Place:

Drag and drop the RIP configuration command on the left to the function it performs on the right.

ip rip triggered	configures the router to verify the IP address of routers that send updates
output-delay	configures the router to send information only when the routing database is updated
validate-update-source	configures the router to modify routing metrics
offset-list	configures the router to throttle RIP updates

Correct Answer:

Drag and drop the RIP configuration command on the left to the function it performs on the right.

	validate-update-source
	ip rip triggered
	offset-list
	output-delay

Section: (none)
Explanation

Explanation/Reference:

QUESTION 96
Drag and Drop Question

Select and Place:

Drag and drop the NetFlow Export feature on the left to the NetFlow version that first supported it on the right.

exports data from the aggregation cache only	Version 5
exports data from the main and aggregation caches	
exports data from the main cache only	
supports BGP next-hop	Version 8
supports BGP AS information	
supports IPv6	Version 9

Correct Answer:

Drag and drop the NetFlow Export feature on the left to the NetFlow version that first supported it on the right.

Version 5

exports data from the main cache only

supports BGP AS information

Version 8

exports data from the aggregation cache only

Version 9

supports IPv6

exports data from the main and aggregation caches

supports BGP next-hop

Section: (none)
Explanation

Explanation/Reference:

QUESTION 97
Drag and Drop Question

Select and Place:

Drag and drop the BGP attribute on the left to the correct category on the right.

Local-Pref	**BGP Well-Known Mandatory Attribute**
Community	Target
Atomic-Aggregate	**BGP Optional Nontransitive Attribute**
AS_path	Target
Cluster List	Target
Originator ID	**BGP Optional Transitive Attribute**
	Target

Correct Answer:

Drag and drop the BGP attribute on the left to the correct category on the right.

Local-Pref

Atomic-Aggregate

BGP Well-Known Mandatory Attribute

AS_path

BGP Optional Nontransitive Attribute

Originator ID
Cluster List

BGP Optional Transitive Attribute

Community

Section: (none)
Explanation

Explanation/Reference:

QUESTION 98
Drag and Drop Question

Select and Place:

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

Correct Answer:

Drag and drop the NAT operations on the left into the correct sequential order on the right.

	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.

Section: (none)

Explanation

Explanation/Reference:

QUESTION 99
Drag and Drop Question

Select and Place:

Drag and drop the argument of the **ip cef load-sharing algorithm** command on the left to the function it performs on the right.	
original	sets the load-balancing algorithm to use a source, a destination, and an ID hash
universal	sets the load-balancing algorithm for environments with a small number of source destination IP address pairs
tunnel	sets the load-balancing algorithm to use Layer 4 information
include-ports source destination	sets the load-balancing algorithm to use a source and destination hash

Correct Answer:

Drag and drop the argument of the **ip cef load-sharing algorithm** command on the left to the function it performs on the right.

	universal
	tunnel
	include-ports source destination
	original

Section: (none)
Explanation

Explanation/Reference:

QUESTION 100
Drag and Drop Question

Select and Place:

☑VCEPlus

Drag and drop the Cisco IOX XE subpackage on the left to the function it performs on the right.

RPIOS	provisions the Cisco IOS Software kernel from which the IOS software features are housed and run
ESPBase	produces the ESP software, ESP operating system, and control processes
SIPBase	manages the Cisco IOS Software and the rest of the platform via the control plane
RPControl	manages the Session Initiation Protocol carrier card operating system and control processes

Correct Answer:

Drag and drop the Cisco IOX XE subpackage on the left to the function it performs on the right.

	RPIOS
	ESPBase
	RPControl
	SIPBase

Section: (none)
Explanation

Explanation/Reference:

QUESTION 101
Drag and Drop Question

Select and Place:

Drag and drop the LACP elements on the left into the correct priority order in the hot-standby port-selection process on the right.	
switch MAC address	1
port number	2
LACP system priority	3
LACP port priority	4

Correct Answer:

Drag and drop the LACP elements on the left into the correct priority order in the hot-standby port-selection process on the right.	
	LACP system priority
	switch MAC address
	LACP port priority
	port number

Section: (none)
Explanation

Explanation/Reference:

QUESTION 102
Drag and Drop Question

Select and Place:

Drag and drop the RIP configuration command on the left to the function it performs on the right.

ip rip triggered	controls the advertisement of routes on an interface
default-information originate	divides traffic among routes with the lowest cost
ip split-horizon	configures the router to send information only when the routing database is updated
traffic-share min	configures the router to source the network with RIP

Correct Answer:

Drag and drop the RIP configuration command on the left to the function it performs on the right.

	ip split-horizon
	traffic-share min
	ip rip triggered
	default-information originate

Section: (none)
Explanation

Explanation/Reference:

QUESTION 103
Drag and Drop Question

Select and Place:

Drag and drop each step in the performance-monitoring configuration process on the left into the correct order on the right.

Configure a policy with at least one performance-monitor type flow monitor.	1
Configure a flow record.	2
Configure a class that describes the filtering criteria.	3
Associate a performance-monitor type policy with its corresponding interface.	4
Configure a flow monitor that includes the flow record and flow exporter.	5

Correct Answer:

Drag and drop each step in the performance-monitoring configuration process on the left into the correct order on the right.

	Configure a flow record.
	Configure a flow monitor that includes the flow record and flow exporter.
	Configure a class that describes the filtering criteria.
	Configure a policy with at least one performance-monitor type flow monitor.
	Associate a performance-monitor type policy with its corresponding interface.

Section: (none)
Explanation

Explanation/Reference:

QUESTION 104
Drag and Drop Question

Select and Place:

Drag and drop each EIGRP element on the left to the corresponding definition on the right.

Feasibility Condition	the metric for a route advertised by EIGRP
Feasible Distance	the lowest sum of the EIGRP metric and the metric used to reach the next hop
Feasible Successor	a route that could become the best path
Neighbor Table	the route currently in use as the best path
Reported Distance	a list of EIGRP devices that have a direct physical connection
Successor	the requirement that the RD of a new route is lower than the FD of the current route

Correct Answer:

Drag and drop each EIGRP element on the left to the corresponding definition on the right.

	Reported Distance
	Feasible Distance
	Feasible Successor
	Successor
	Neighbor Table
	Feasibility Condition

Section: (none)
Explanation

Explanation/Reference:

QUESTION 105
Drag and Drop Question

Select and Place:

Drag and drop each BGP attribute on the left to the matching description on the right.

AS_PATH	sets the value used to reach the advertising router
community	an attribute whose value can affect the preferred path for eBGP peers
LOCAL_PREF	an attribute whose value is shared within iBGP
MED	supports values of IGP, EGP, and INCOMPLETE
NEXT_HOP	a Cisco proprietary attribute that is local to the individual router
origin	allows the administrator to customize path selection by grouping routes
weight	a list that shows the path through which a route has passed

Correct Answer:

Drag and drop each BGP attribute on the left to the matching description on the right.

	NEXT_HOP
	MED
	LOCAL_PREF
	origin
	weight
	community
	AS_PATH

Section: (none)
Explanation

Explanation/Reference:

QUESTION 106
Drag and Drop Question

Select and Place:

Drag and drop each GET VPN feature on the left to the corresponding function it performs on the right.

GDOI	uses pseudotime to prevent replay
KEK	encrypts the rekey message
SAR	encrypts data between group members
TEK	handles communication between group members and a group controller or key server

Correct Answer:

Drag and drop each GET VPN feature on the left to the corresponding function it performs on the right.

	SAR
	KEK
	TEK
	GDOI

Section: (none)
Explanation

Explanation/Reference:

QUESTION 107
Drag and Drop Question

Select and Place:

Drag and drop each SNMP security model and level on the left to the corresponding mode of authentication on the right.

SNMPv2c-noAuthNoPriv	provides HMAC-MD5 or HMAC-SHA authentication with DES 56-bit encryption
SNMPv3-authNoPriv	authenticates with a user name match
SNMPv3-authPriv	provides HMAC-MD5 or HMAC-SHA authentication without encryption
SNMPv3-noAuthNoPriv	authenticates with a community string match

Correct Answer:

Drag and drop each SNMP security model and level on the left to the corresponding mode of authentication on the right.

	SNMPv3-authPriv
	SNMPv3-noAuthNoPriv
	SNMPv3-authNoPriv
	SNMPv2c-noAuthNoPriv

Section: (none)
Explanation

Explanation/Reference:

QUESTION 108
Drag and Drop Question

Select and Place:

Drag and drop each description of IPv6 transition technology on the left to the matching IPv6 transition technology category on the right.

encapsulates IPv6 packets within IPv4 packets	**Dual-Stack Network**
supports translation between IPv4 and IPv6 by using algorithms to map addresses	
supports stateful translation between IPv4 and IPv6 with static and manual mappings	
requires IPv6-capable infrastructure	**Tunneling**
uses routing protocols to maintain IPv4 and IPv6 routing adjacencies	
encapsulates IPv4 packets within IPv6 packets	
	NAT64

Correct Answer:

Drag and drop each description of IPv6 transition technology on the left to the matching IPv6 transition technology category on the right.

Dual-Stack Network

requires IPv6-capable infrastructure

uses routing protocols to maintain IPv4 and IPv6 routing adjacencies

Tunneling

encapsulates IPv6 packets within IPv4 packets

encapsulates IPv4 packets within IPv6 packets

NAT64

supports translation between IPv4 and IPv6 by using algorithms to map addresses

supports stateful translation between IPv4 and IPv6 with static and manual mappings

Section: (none)
Explanation

Explanation/Reference:

QUESTION 109

Refer to the exhibit. You are configuring the S1 switch for the switchport connecting to the client computer. Which option describes the effect of the command mls qos map cos-dscp 0 8 16 24 32 40 46 56?
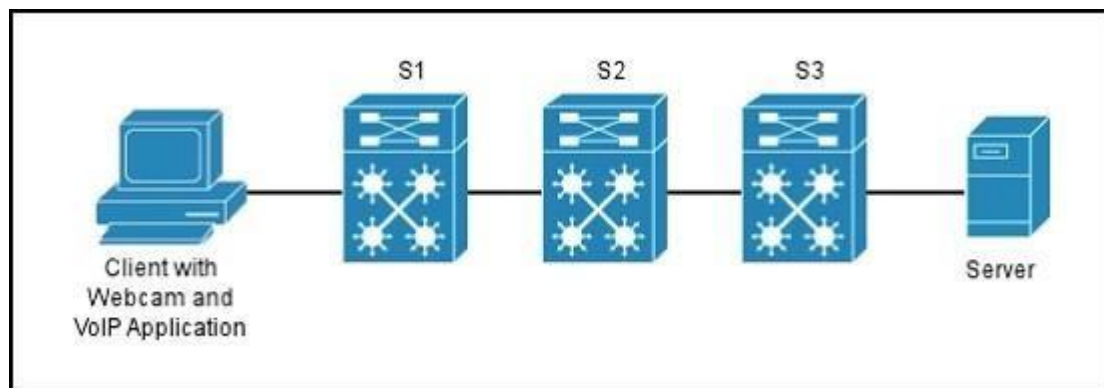
A. Voice traffic is excluded from the default priority queue.
B. Voice packets are given a class selector of 5.
C. Video conferencing is marked CS3.
D. Voice packets are processed in the priority queue.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 110
Refer to the exhibit. If the network switch is configured as shown, which two statements about network traffic are true? (Choose two.)

```
class-map match-any voice
match dscp ef
class-map match-any router
match dscp cs6
class-map match-any gold
match dscp af41
class-map match-any silver
match dscp af31

policy-map egress_queue
class voice
priority percent 25
class gold
bandwidth percent 40
class silver
bandwidth percent 15
class router
bandwidth percent 5
class class-default
bandwidth percent remaining

policy-map egress_queue_2
class class-default
shape average 6000000
service-policy egress_queue

interface GigabitEthernet0/1
service-policy output egress_queue_2
```

A. Traffic enters the shaper on a FIFO basis.
B. Traffic enters the shaper on a weighted fair queueing basis.
C. Drop behavior is random for traffic in excess of 6 Mbps.
D. Voice traffic is given priority until it reaches 1.5 Mbps.
E. Voice traffic is given priority until it reaches 6 Mbps.

Correct Answer: AD
Section: (none)

Explanation

Explanation/Reference:

QUESTION 111
Which two options are two characteristics of the HSRPv6 protocol? (Choose two.)

A. It uses virtual MAC addresses 0005.73a0.0000 through 0005.73a0.0fff.
B. It uses UDP port number 2029.
C. It uses virtual MAC addresses 0005.73a0.0000 through 0005.73a0.ffff.
D. It uses UDP port number 2920.
E. If a link local IPv6 address is used, it must have a prefix.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 112
Which statement about VRRP is true?

A. It supports load balancing.
B. It can be configured with HSRP on a switch or switch stack.
C. It supports IPv4 and IPv6.
D. It supports encrypted authentication.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 113
Refer to the exhibit. What is the polling frequency set by this configuration?

```
ip sla monitor 10
    type echo protocol ipIcmpEcho 10.1.1.1 source-ipaddr 10.1.1.2
    frequency 60

ip sla monitor schedule 10 life 360
```

A. 60 seconds
B. 10 seconds
C. 360 seconds
D. 60 milliseconds
E. 10 milliseconds

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 114
Refer to the exhibit. Which additional information must you specify in this configuration to capture NetFlow traffic?

```
configure terminal
    interface Ethernet 0/0
    ip address 10.1.1.2 255.255.255.0
ip flow-export destination 10.1.1.1
```

A. ingress or egress traffic
B. the number of cache entries
C. the flow cache active timeout
D. the flow cache inactive timeout

Correct Answer: A
Section: (none)

Explanation

Explanation/Reference:

QUESTION 115
For which three routing protocols can Cisco PfR provide direct route control? (Choose three.)

A. OSPF
B. ISIS
C. BGP
D. EIGRP
E. static routing
F. ODR

Correct Answer: CDE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 116
Which three features require Cisco Express Forwarding? (Choose three.)

A. NBAR
B. AutoQoS
C. fragmentation
D. MPLS
E. UplinkFast
F. BackboneFast

Correct Answer: ABD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 117

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.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 118
Which option describes a limitation of Embedded Packet Capture?

A. It can capture data only on physical interfaces and subinterfaces.
B. It can store only packet data.
C. It can capture multicast packets only on ingress.
D. It can capture multicast packets only on egress.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 119
Which statement about Cisco Discovery Protocol is true?

A. The multicast address 0100.0cdd.dddd is used as the destination address for periodic advertisements.
B. An inactive VLAN that is configured on an access port passes periodic Cisco Discovery Protocol advertisements.
C. The multicast address 0100.0ccc.ccd is used as the destination address for periodic advertisements.
D. A VLAN must be active on an access port before periodic Cisco Discovery Protocol advertisements are passed.

Correct Answer: D
Section: (none)

Explanation

Explanation/Reference:

QUESTION 120
Which three TLVs does LLDP use to discover network devices? (Choose three.)

A. Management address
B. Port description
C. Network policy
D. System name
E. Location information
F. Power management

Correct Answer: ABD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 121
Which command enables L2 QoS support in all VLANs (including the native VLAN)?

A. switchport priority extend cos
B. mls qos trust dscp
C. mls qos rewrite ip dscp
D. switchport trunk native vlan tag

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 122
Which three modes are valid for forming an EtherChannel between the ports of two switches? (Choose three.)

A. Active/active
B. Active/passive
C. Passive/passive
D. Auto/auto
E. Auto/desirable
F. Desirable/on

Correct Answer: ABE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 123
In which 802.1D port state are the root bridge, the root port, and the designated port(s) elected?

A. Listening
B. learning
C. forwarding
D. blocking
E. disabled

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 124
Refer to the exhibit.

```
switch#show mls cef exception status
Current IPv4 FIB exception state = TRUE
Current IPv6 FIB exception state = FALSE
Current MPLS FIB exception state = FALSE
```

A Cisco Catalyst 6500 Series Switch experiences high CPU utilization. What can be the cause of this issue, and how can it be prevented?

A.   The hardware routing table is full. Redistribute from BGP into IGP.

B.   The software routing table is full. Redistribute from BGP into IGP.

C.   The hardware routing table is full. Reduce the number of routes in the routing table.

D.   The software routing table is full. Reduce the number of routes in the routing table.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 125
In a network where a Layer 2 switch interconnects several routers, which feature restricts multicast packets for each IP multicast group to only those mulicast router ports that have downstream receivers joined to that group?

A.   PIM snooping

B.   IGMP snooping

C.   IGMP filter

D.   IGMP proxy

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 126
Which three statements about Cisco HDLC are true? (Choose three.)

A.   HDLC serial encapsulation provides asynchronous framing and error detection.

B.   Serial link keepalives are maintained by SLARP.

C.   HDLC serial encapsulation provides synchronous framing without retransmission.

D.   HDLC frame size can be reduced with MPPC compression.

E.   The interface is brought down after five ignored keepalives.

F.   The interface is brought down after three ignored keepalives.

Correct Answer: BCF

Section: (none)
Explanation

Explanation/Reference:

QUESTION 127
Which two fields reside in the initial CHAP challenge packet? (Choose two.)

A. the authentication name of the challenger
B. a random hash value generated by the device
C. the hashed packet type ID
D. the packet type ID in clear text

Correct Answer: AD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 128
Which statement about WAN Ethernet Services is true?

A. Rate-limiting can be configured per EVC.
B. Point-to-point processing and encapsulation are performed on the customer network.
C. Ethernet multipoint services function as a multipoint-to-multipoint VLAN-based connection.
D. UNIs can perform service multiplexing and all-in-one bundling.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 129
What is the maximum number of secondary IP addresses that can be configured on a router interface?

A. 1

B. 2

C. 4

D. 1024

E. 65535

F. no limit to the number of addresses

Correct Answer: F
Section: (none)
Explanation

Explanation/Reference:

QUESTION 130
Which address is a MAC address that is mapped from an IPv6 address (RFC 2464)?

A. 3333.FF17.FC0F

B. FFFE. FF17.FC0F

C. FF34.3333.FF17

D. FF7E.FF17.FC0F

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 131
Which multicast protocol uses source trees and RPF?

A. DVMRP

B. PIM sparse mode

C. CBT

D. mOSPF

Correct Answer: A
Section: (none)
Explanation

QUESTION 132
What is the function of the command ip pim autorp listener?

A. It allows a border PIM sparse mode router to accept autorp information from another autonomous system.
B. It allows the mapping agents to accept autorp information from the PIM rendezvous point.
C. It allows the routers to flood the autorp information in a sparse-mode-only network.
D. It allows a BSR to accept autorp information and translate it into BSR messages.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 133
Refer to the exhibit.

```
FHR#show ipv6 mroute FF7E::1234
(2001:db8::7, FF7E::1234), 00:02:27/00:01:02, flags: SFT
  Incoming interface: Ethernet1/0
  RPF nbr: FE80::A8BB:CCFF:FE00:701, Registering
  Immediate Outgoing interface list:
    Tunnel2, Forward, 00:01:38/never
```

Which statement is true about why the first-hop PIM IPv6 router is stuck in registering?

A. The scope of the IPv6 multicast address is link-local.
B. The outgoing interface for the IPv6 multicast group should not be a tunnel interface.
C. The R-bit is set in the IPv6 address, but this is not an embedded RP multicast IPv6 address.
D. The S flag should not be set on a first-hop PIM router.
E. A multicast IPv6 address does not start with FF.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 134
Refer to the exhibit.

```
!
ip access-list extended REDIRECT
permit tcp any any eq 25
!
route-map REDIRECT 10
match ip address REDIRECT-SNMP
set interface GigabitEthernet1/0
!
interface loopback0
ip address 172.21.254.254 255.255.252.0
!
ip local policy route-map REDIRECT-SNMP
!
```

Which option is the result of this configuration?

A. All SNMP traffic coming into the router is redirected to interface GigabitEthernet1/0.
B. All SNMP traffic generated from the router is redirected to interface GigabitEthernet1/0.
C. All SMTP traffic generated from the router is redirected to interface GigabitEthernet1/0.
D. All POP3 traffic coming into the router is redirected to interface GigabitEthernet1/0.
E. All SMTP traffic coming into the router is redirected to interface GigabitEthernet1/0.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 135
Which three statements about EIGRP and BFD are true? (Choose three.)

A. BFD is independent of the routing protocol, so it can be used as a generic failure detection mechanism for EIGRP.
B. Some parts of BFD can be distributed to the data plane, so it can be less CPU-intensive than reduced timers, which exist wholly at the control plane.
C. Reduced EIGRP timers have an absolute minimum detection timer of 1-2 seconds; BFD can provide sub-second failure detection.
D. BFD is tied to specific routing protocols and can be used for generic fault detection for the OSPF, EIGRP, and BGP routing protocols.
E. BFD is dependent on the EIGRP routing protocol, so it can be used as a specific failure detection mechanism.
F. BFD resides on the control plane, so it is less CPU-intensive than if it resided on the data plane.

Correct Answer: ABC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 136
You are implementing new addressing with EIGRP routing and must use secondary addresses, which are missing from the routing table. Which action is the most efficient solution to the problem?

A. Disable split-horizon on the interfaces with secondary addresses.
B. Disable split-horizon inside the EIGRP process on the router with the secondary interface addresses.
C. Add additional router interfaces and move the secondary addresses to the new interfaces.
D. Use a different routing protocol and redistribute the routes between EIGRP and the new protocol.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

Exam D

QUESTION 1
Which timer expiration can lead to an EIGRP route becoming stuck in active?

A. hello
B. active
C. query
D. hold

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 2
Which three values can be used to tag external EIGRP routes? (Choose three.)

A. The router ID of the router that redistributed the route
B. The administrative distance of the external protocol
C. The protocol ID of the external protocol
D. The cost to reach the router that redistributed the route
E. The metric from the external protocol
F. The router ID of the router from which the external protocol route was learned

Correct Answer: ACE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 3
Which data plane protocol does EIGRP Over the Top use?

A. MPLS
B. GRE
C. LISP

D. IP-in-IP

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 4
Which statement about the feasible distance in EIGRP is true?

A. It is the maximum metric that should feasibly be considered for installation in the RIB.
B. It is the minimum metric to reach the destination as stored in the topology table.
C. It is the metric that is supplied by the best next hop toward the destination.
D. It is the maximum metric possible based on the maximum hop count that is allowed.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 5
Which statement about the EIGRP RTO is true?

A. It is six times the SRTT.
B. It is the time that it normally takes for an update to be received by a peer.
C. It is the time that it normally takes to receive a reply to a query.
D. It is the average time that it takes for a reliable packet to be acknowledged.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 6
Which option describes the purpose of the leak-map keyword in the command eigrp stub connected leak-map EigrpLeak?

A. It allows the specified static routes to be advertised.
B. It allows exceptions to the route summarization that is configured.
C. It allows specified EIGRP-learned routes to be advertised.
D. It restricts specified connected routes from being advertised.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 7
Refer to the exhibit.
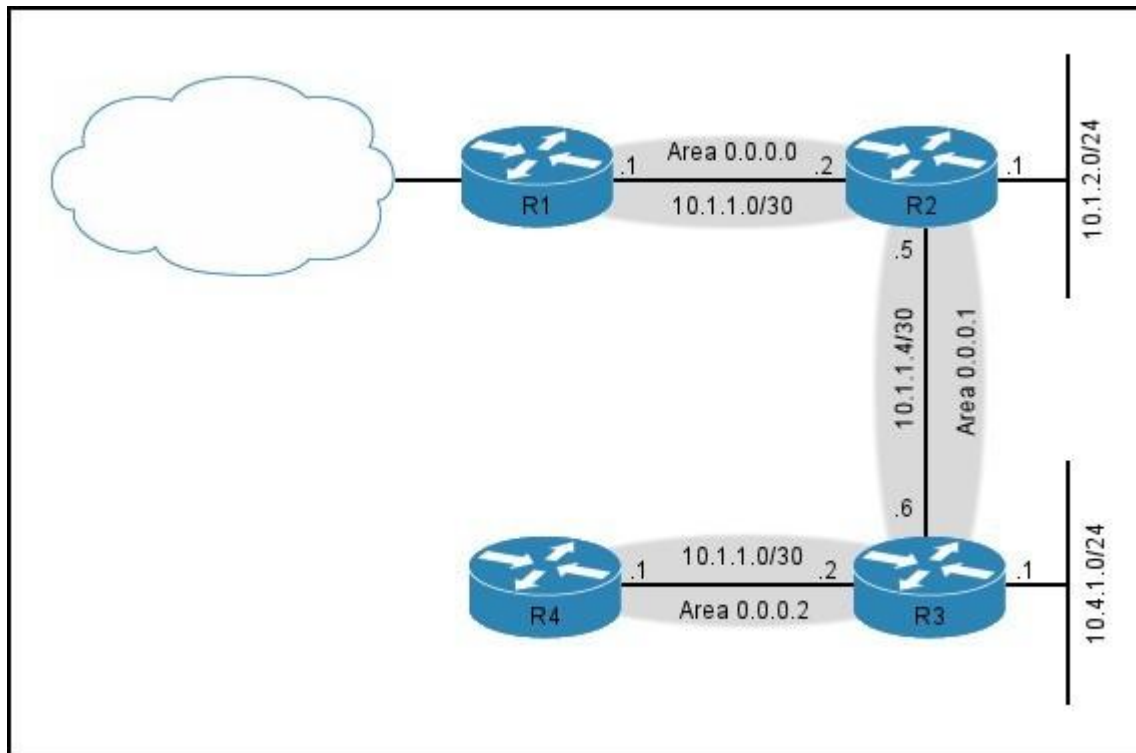
If OSPF is implemented on the network, which additional configuration is needed to allow traffic from host 10.4.1.15/24 to host 10.1.2.20/24?

A. A virtual link between router 2 and router 4
B. A virtual link between router 3 and router 4
C. A virtual link between router 2 and router 3
D. The current design allows traffic between the two hosts.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 8
Refer to the exhibit.

R1:

```
interface Loopback0
 ip address 1.1.1.1 255.255.255.0
 ipv6 address 2001:12::1/128
 ipv6 rip RIPNG enable
!
interface FastEthernet0/0
 ip address 10.1.12.1
255.255.255.0
 duplex auto
 speed auto
 ipv6 address 2001:112::1/64
 ipv6 ospf 1 area 0
!
interface FastEthernet0/1
 no ip address
 shutdown
 duplex auto
 speed auto
!
ip forward-protocol nd
!
!
no ip http server
no ip http secure-server
!
!
ipv6 router ospf 1
 log-adjacency-changes
 redistribute rip RIPNG
!
ipv6 router rip RIPNG
!
```

R2:

```
interface Loopback0
 ip address 2.2.2.2 255.255.255.0
 ipv6 address 2001:12::2/128
 ipv6 rip RIPNG enable
!
interface FastEthernet0/0
 ip address 10.1.12.2
255.255.255.0
 duplex auto
 speed auto
 ipv6 address 2001:112::2/64
 ipv6 ospf 1 area 0
!
interface FastEthernet0/1
 no ip address
 shutdown
 duplex auto
 speed auto
!
ip forward-protocol nd
!
!
no ip http server
no ip http secure-server
!
!
ipv6 router ospf 1
 log-adjacency-changes
 redistribute rip RIPNG include-
connected
!
ipv6 router rip RIPNG
!
```

RIPNG
2001:12::1/128
Loop0

RIPNG
2001:12::2/128
Loop0

R1 Fa0/0   .1   2001:112::/64   .2   Fa0/0 R2

OSPFv3 Area 0

Which OSPFv3 routes will be visible in the routing table of R2?

A. 2001:12::1/128

B. 2001:12::1/128, 2001:112::1/128

C. 2001:12::2/128

D. No OSPFv3 routes will be visible.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 9
Refer to the exhibit.
R1 is configured as shown. R1 is able to establish a neighbor adjacency only with R2. Which addition must you make to the R1 configuration to allow it to establish an adjacency with R3?

A. interface gigabitethernet 0/1
     ip address 10.1.0.1 255.255.255.0
     ip ospf network point-to-point

B. interface gigabitethernet 0/1
     ip address 10.1.0.1 255.255.255.0
     ip ospf 1 area 0

C. router ospf 1
     network 10.1.0.0 0.0.0.255 area 1

D. router ospf 1
     area 0 stub

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 10
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.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 11
Which two options are valid for the number of bytes in a BGP AS number? (Choose two.)

A. 2 bytes
B. 4 bytes
C. 6 bytes
D. 8 bytes
E. 16 bytes

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 12
Refer to the exhibit.

```
hostname R3
!
router ospf 1
 network 0.0.0.0 255.255.255.255 area 0
!
router bgp 65001
 network 3.3.3.0 mask 255.255.255.0
 neighbor 10.1.23.2 remote-as 65001
 neighbor 10.1.23.2 route-reflector-client
 neighbor 10.1.34.4 remote-as 65001
 neighbor 10.1.34.4 route-reflector-client
 no auto-summary
```

BGP AS65001

Loopback0
3.3.3.3/24

Fa0/0   R3   Fa0/1

BGP AS65105

Loopback0
1.1.1.1/24

Loopback0
2.2.2.2/24

Loopback0
4.4.4.4/24

BGP AS65105

Loopback0
5.5.5.5/24

Fa0/0   10.1.23.0/24   10.1.34.0/24   Fa0/1
.2   .4
.3   .3

FaO/1   Fa0/1   FaO/0   Fa0/0
10.1.12.0/24   10.1.45.0/24

R1   R2   R4   R5
.1   .2   .4   .5
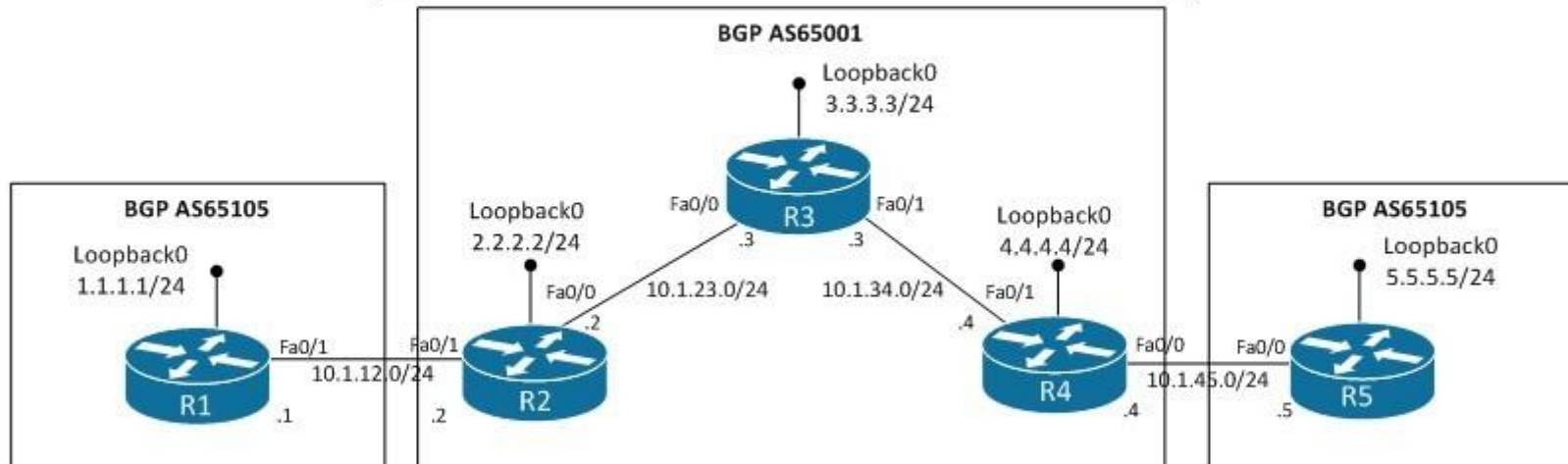
```
R2#sh ip bgp
BGP table version is 1, local router ID is 3.3.3.3
Status codes: s suppressed, d damped, h history, * valid, > best, i - internal,
              r RIB-failure, S Stale
Origin codes: i - IGP, e - EGP, ? - incomplete

   Network          Next Hop          Metric   LocPrf   Weight   Path
*  1.1.1.0/24       10.1.12.1         0        0        65105    i
*  2.2.2.0/24       0.0.0.0           0                 32768    i
```

Why is the loopback 0 interface of R4 missing in the routing table of R2?

A. R2 is configured as a route reflector client.
B. There is no peering between R2 and R3.
C. The next hop is not reachable from R2.
D. The route originated within the same AS.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 13
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.

Correct Answer: E
Section: (none)
Explanation

Explanation/Reference:

QUESTION 14
Which statement is true about conditional advertisements?

A. Conditional advertisements create routes when a predefined condition is met.
B. Conditional advertisements create routes when a predefined condition is not met.
C. Conditional advertisements delete routes when a predefined condition is met.
D. Conditional advertisements create routes and withhold them until a predefined condition is met.
E. Conditional advertisements do not create routes, they only withhold them until a predefined condition is met.

Correct Answer: E
Section: (none)

Explanation

Explanation/Reference:

QUESTION 15
Refer to the exhibit.
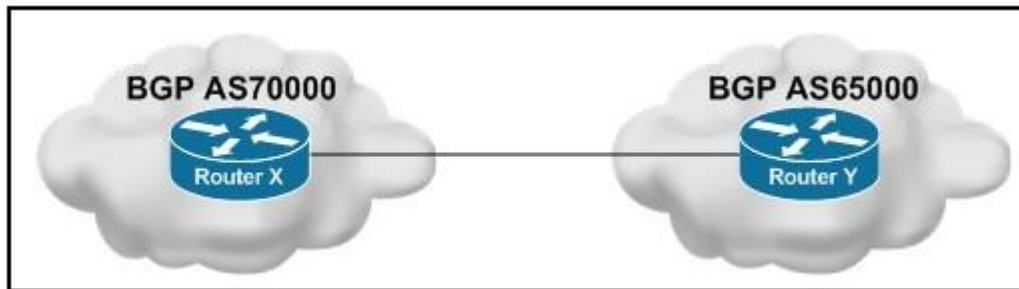
How can Router X in AS70000 peer with Router Y in AS65000, in case Router Y supports only 2-byte ASNs?

A. Router X should be configured with a remove-private-as command, because this will establish the peering session with a random private 2-byte ASN.
B. It is not possible. Router Y must be upgraded to an image that supports 4-byte ASN.
C. Router Y should be configured with a 4-byte AS using the local-as command.
D. Router X should be configured with a 2-byte AS using the local-as command.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 16
Which statement about BGP and diverse path advertisement is true?

A. The BGP best-path selection must be disabled.
B. The BGP best-path selection algorithm has been changed to always ignore the IGP metric.
C. The BGP best-path selection algorithm has been changed so that two BGP paths can be flagged as best in the BGP table.
D. The BGP best-path selection algorithm has not been changed.

E. The BGP best-path selection is disabled for BGP routes for which the feature is enabled.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 17
For which two conditions is Cisco Express Forwarding recursion disabled by default when the BGP Prefix Independent Convergence functionality is enabled? (Choose two.)

A. next hops learned with a /24 mask
B. next hops learned with any mask shorter than /32
C. next hops learned with a /32 mask
D. next hops that are directly connected

Correct Answer: CD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 18
How many bytes comprise the system ID within an IS-IS NET?

A. 4 bytes
B. 6 bytes
C. 8 bytes
D. 16 bytes
E. 20 bytes

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 19
Which two statements about IS-IS are true? (Choose two.)

A. The default hello interval is 10 seconds and the default hold timer is 30 seconds.
B. The hello interval can be changed on a per-interface basis with the command isis hello- multiplier.
C. Both routers need to have the same hello intervals and hold timers in order to form IS-IS neighbors.
D. Both IS-IS routers need to have the same capabilities in the hello packet in order to form neighbors.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 20
Which bit should be set in the link-state PDU of an IS-IS L1/L2 router to indicate that it is a potential exit point of the area?

A. the ABR bit
B. the ATT bit
C. the down bit
D. the P bit

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 21
MPLS LDP IGP synchronization is configured on a link. The OSPF adjacency on that link is UP but MPLS LDP synchronization is not achieved. Which statement about this scenario is true?

A. The router excludes the link from its OSPF LSA type 1.
B. The router flushes its own router LSA.
C. The router advertises the link in its router LSA with max-metric.
D. The router advertises an LSA type 2 for this link, with the metric set to max-metric.
E. The router advertises the link and OSPF adjacency as it would when the synchronization is achieved.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 22
What is the new designation for the MPLS EXP (experimental) bits?

A. QoS bits
B. traffic class bits
C. flow bits
D. precedence bits

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 23
Which two options are signaling protocols that are used in MPLS? (Choose two.)

A. LDP
B. RSVP
C. BFD
D. LISP
E. CLNS
F. CDP

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 24
Which option is an incorrect design consideration when deploying OSPF areas?

A. area 1 - area 0 - MPLS VPN backbone - area 0 - area 2
B. area 1 - MPLS VPN backbone - area 2
C. area 1 - MPLS VPN backbone - area 1
D. area 2 - area 0 - MPLS VPN backbone - area 1
E. area 0 - area 2 - MPLS VPN superbackbone - area 1

Correct Answer: E
Section: (none)
Explanation

Explanation/Reference:

QUESTION 25
Refer to the exhibit.

```
ip vrf 10051
    rd 10.1.1.1:10051
    route-target export 64512:100010051
    route-target import 64512:100010051

ip access-list standard mgmt1-10051
    permit 192.168.1.0 0.0.0.255

route-map 10051-export permit 10
    match ip address mgmt1-10051
    set extcommunity rt 64512:3002300

route-map 10051-export permit 20
    match ip address mgmt1-10051
    set extcommunity rt 64512:2002250 64512:3002300 additive
```

Which statement about the route target for 192.168.1.0/24 is true?

A. Its route target is 64512:100010051.
B. Its route targets are 64512:100010051, 64512:2002250, and 64512:3002300.

C. Its route target is 64512:3002300.
D. Its route targets are 64512:100010051 and 64512:3002300.
E. Its route targets are 64512:2002250 and 64512:3002300.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 26
Which two options are benefits of EIGRP OTP? (Choose two.)

A. It allows EIGRP routers to peer across a service provider without the service provider involvement.
B. It allows the customer EIGRP domain to remain contiguous.
C. It requires only minimal support from the service provider.
D. It allows EIGRP neighbors to be discovered dynamically.
E. It fully supports multicast traffic.
F. It allows the administrator to use different autonomous system numbers per EIGRP domain.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 27
Which three options are best practices for implementing a DMVPN? (Choose three.)

A. Use IPsec in tunnel mode.
B. Implement Dead Peer Detection to detect communication loss.
C. Configure AES for encryption of transported data.
D. Configure SHA-1 for encryption of transported data.
E. Deploy IPsec hardware acceleration to minimize router memory overhead.
F. Configure QoS services only on the head-end router.

Correct Answer: ABC

Section: (none)
Explanation

Explanation/Reference:

QUESTION 28
Which two Cisco IOS AAA features are available with the local database? (Choose two.)

A. command authorization
B. network access authorization
C. network accounting
D. network access authentication

Correct Answer: AD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 29
What is the most secure way to store ISAKMP/IPSec preshared keys in Cisco IOS?

A. Use the service password-encryption command.
B. Encrypt the ISAKMP preshared key in secure type 5 format.
C. Encrypt the ISAKMP preshared key in secure type 7 format.
D. Encrypt the ISAKMP preshared key in secure type 6 format.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 30
Which two statements about the protected ports feature and the private VLAN feature are true? (Choose two.)

A. The protected ports feature is limited to the local switch.

B. The protected ports feature can isolate traffic between two "protected" ports on different switches.
C. The private VLAN feature is limited to the local switch.
D. The private VLAN feature prevents interhost communication within a VLAN across one or more switches.

Correct Answer: AD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 31
Which two features are used for inspection when IPv6 address glean is enabled? (Choose two.)

A. DHCP messages
B. ND messages
C. ICMPv6 messages
D. UDP messages
E. TCP messages

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 32
Refer to the exhibit.

```
R1#show run

ip ssh time-out 30
ip ssh authentication-retries 2

access-list 10 permit 10.1.1.2
no cdp log mismatch duplex

control-plane

line con 0
    exec-timeout 5 30
    logging synchronous
line aux 0
line vty 0 4
    access-class 10 in
    login
    transport input ssh
```

Which statement about the R1 configuration is true?

A. It permits host 10.1.1.2 to establish a Telnet connection to R1.
B. It limits remote hosts to two SSH connection attempts.
C. SSH connections to R1 will log out after a 5-minute idle interval.
D. Hosts that reside on network 10.0.0.0/8 can SSH to R1.
E. The R1 timeout for outgoing SSH connection attempts is 30 seconds.

Correct Answer: E
Section: (none)
Explanation

Explanation/Reference:

QUESTION 33
Which two statements about the default SNMP configuration are true? (Choose two.)

A. The SNMP agent is enabled.
B. The SNMP trap receiver is configured.

C. All SNMP notification types are sent.
D. SNMPv1 is the default version.
E. SNMPv3 is the default version.

Correct Answer: CD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 34
Which two statements about logging are true? (Choose two.)

A. Log messages are sent to the console port by default.
B. Log messages are displayed in a Telnet session by default.
C. Interface status changes are logged at the Notification level.
D. Interface status changes are logged at the Informational level.
E. System restart messages are logged at the Critical level.
F. Reload requests are logged at the Notification level.

Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 35
Refer to the exhibit.

```
access-switch-1#show interface fastethernet0/9
FastEthernet0/9 is up, line protocol is up (connected)
    Hardware is Fast Ethernet, address is 04da.d237.9f09 (bia 04da.d237.9f09)
    Auto-duplex, Auto-speed, media type is 10/100BaseTX
    Last clearing of "show interface" counters never
    Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 59137853

access-switch-1#show mls qos interface fastethernet0/9 statistics
Queueset: 1
output queues dropped:
    queue:      threshold1     threshold2     threshold3
    ------------------------------------------------------
    queue 0:            0              0          48252
    queue 1:     23164955       35924645              1
    queue 2:            0              0              0
    queue 3:            0              0              0
```

Your network is suffering excessive output drops. Which two actions can you take to resolve the problem? (Choose two.)

A. Install a switch with larger buffers.
B. Configure a different queue set.
C. Reconfigure the switch buffers.
D. Configure the server application to use TCP.
E. Update the server operating system.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 36
Refer to the exhibit.

```
mls qos queue-set output 1 threshold 2 80 90 100 100
mls qos queue-set output 1 threshold 3 400 400 100 800
mls qos queue-set output 1 threshold 4 60 100 100 100
```

If the remaining configuration uses default values, what is the expected output of the show mls qos queue-set command?

A.

```
Queueset: 1
Queue      :      1       2       3       4
----------------------------------------------
buffers    :      25      25      25      25
threshold1:       100     80      400     60
threshold2:       100     90      400     100
reserved   :      50      100     100     100
maximum    :      400     100     800     100
```

B.

```
Queueset: 1
Queue      :      1       2       3       4
----------------------------------------------
buffers    :      25      25      25      25
threshold1:       100     80      400     60
threshold2:       100     90      400     100
reserved   :      50      100     100     100
maximum    :      100     100     800     100
```

C.

```
Queueset: 1
Queue      :       1       2       3       4
-------------------------------------------------
buffers    :      25      25      25      25
threshold1:      50      80     400      60
threshold2:      50      90     400     100
reserved   :      50     100     100     100
maximum    :     400     100     800     100
```

D.

```
Queueset: 1
Queue      :       1       2       3       4
-------------------------------------------------
buffers    :      25      25      25      25
threshold1:     100      80     400      60
threshold2:     100      90     400     100
reserved   :     100     100     100     100
maximum    :     400     100     800     100
```

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

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 37
Which two statements about HSRP are true? (Choose two.)

A. Its virtual MAC is 0000.0C07.Acxx.

B. Its multicast virtual MAC is 0000.5E00.01xx.

C. Its default configuration allows for pre-emption.
D. It supports tracking.
E. It supports unique virtual MAC addresses.

Correct Answer: AD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 38
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.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 39
Refer to the exhibit.
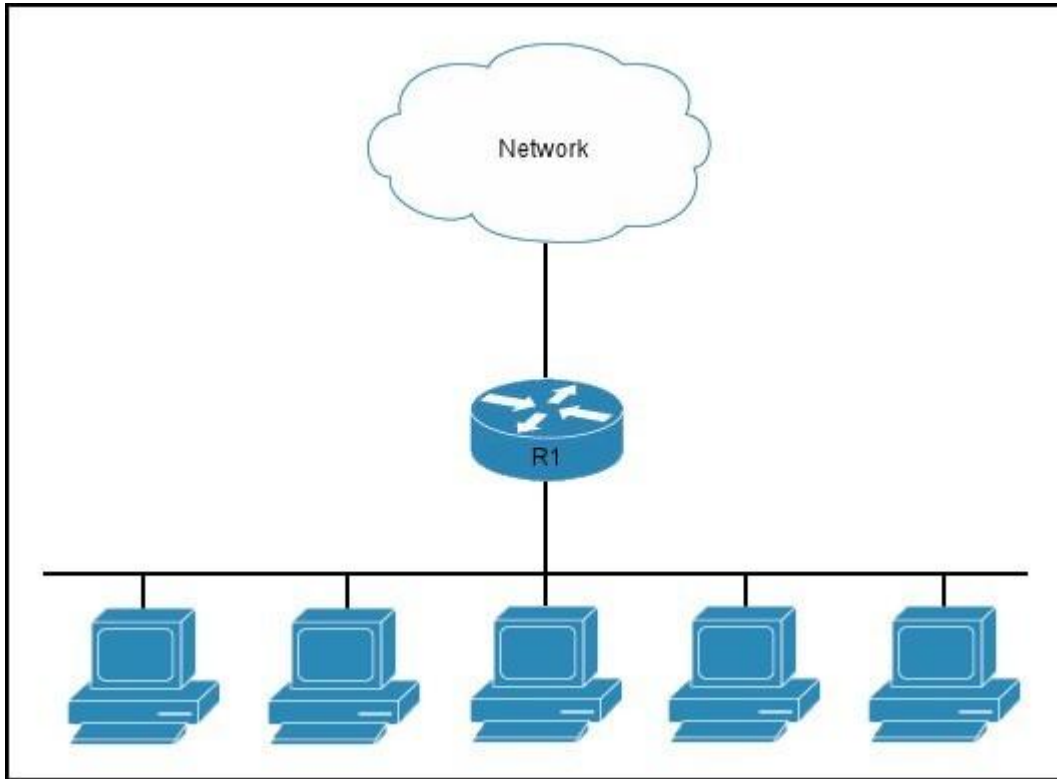
If router R1 is functioning as a DHCPv6 server and you enter the command show ipv6 dhcp binding, which two options are pieces of information in the output? (Choose two.)

A. The IA PD
B. The DUID
C. The prefix pool
D. The DNS server
E. The Rapid-Commit setting

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 40
Which two statements about NPTv6 are true? (Choose two.)

A. The translation is invisible to applications that hard code IP information within the application logic.
B. It is a one-way stateful translation for the IPv6 address.
C. Translation is 1:1 at the network layer.
D. It is a two-way stateless translation for the network prefix.

Correct Answer: CD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 41
Which three protocols can use enhanced object tracking? (Choose three.)

A. HSRP
B. Proxy-ARP
C. VRRP
D. GLBP
E. NTP
F. DHCP

Correct Answer: ACD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 42
What are the three primary components of NetFlow? (Choose three.)

A. Flow caching
B. A flow collector
C. The data analyzer
D. Flow sequence numbers

E. Cisco Express Forwarding
F. Multicast

Correct Answer: ABC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 43
Which two options are actions that EEM can perform after detecting an event? (Choose two.)

A. Place a port in err-disabled.
B. Generate an SNMP trap.
C. Reload the Cisco IOS Software.
D. Send an SMS.

Correct Answer: BC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 44
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 IOS version

Correct Answer: CDE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 45
Which two routing protocols are not directly supported by Cisco PfR route control, and rely on the Cisco PfR subfeature PIRO? (Choose two.)

A. BGP
B. EIGRP
C. Static routing
D. OSPF
E. IS-IS

Correct Answer: DE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 46
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.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 47
Drag and drop each STP port role on the left to the matching statement on the right.

Select and Place:

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

Correct Answer:

	root port
	designated port
	alternate port
	backup port

Section: (none)
Explanation

Explanation/Reference:

QUESTION 48
Drag and drop the Cisco IOS XE subpackage on the left to the function it performs on the right.

Select and Place:

RPBase		administers the shared port adaptor driver and related field-programmable device images
RPControl		provisions the software needed to access the router
SIPSPA		manages the Cisco IOS Software and the rest of the platform via the control plane
RPAccess		provisions the operating system software route processor

Correct Answer:

	SIPSPA
	RPAccess
	RPControl
	RPBase

Section: (none)
Explanation

Explanation/Reference:

QUESTION 49
Drag and drop the VLAN number on the left to the corresponding default VLAN name on the right.

Select and Place:

1001	fddi-default
1002	fddinet-default
1003	trnet-default
1004	ethernet
1005	token-ring-default

Correct Answer:

| 1002 |

| 1004 |

| 1005 |

| 1001 |

| 1003 |

Section: (none)
Explanation

Explanation/Reference:

QUESTION 50
Drag and drop the StackWise stack master election rule on the left into the correct priority order on the right.

Select and Place:

the switch with the highest software priority	1
the switch with the lowest MAC address	2
the current stack master	3
the switch with a defined interface-level configuration	4
the switch with the highest priority value	5
the switch with the longest up time	6

Correct Answer:

the current stack master

the switch with the highest priority value

the switch with a defined interface-level configuration

the switch with the highest software priority

the switch with the longest up time

the switch with the lowest MAC address

Section: (none)
Explanation

Explanation/Reference:

QUESTION 51
Drag and drop the IGMPv2 timer on the left to its default value on the right.

Select and Place:

Group Membership Interval	1 second
Last Member Query Interval	10 seconds
Query Interval	60 seconds
Query Response Interval	255 seconds
Other Querier Present Interval	260 seconds
Version 1 Router Present Timeout	400 seconds

Correct Answer:

Last Member Query Interval

Query Response Interval

Query Interval

Other Querier Present Interval

Group Membership Interval

Version 1 Router Present Timeout

Section: (none)
Explanation

Explanation/Reference:
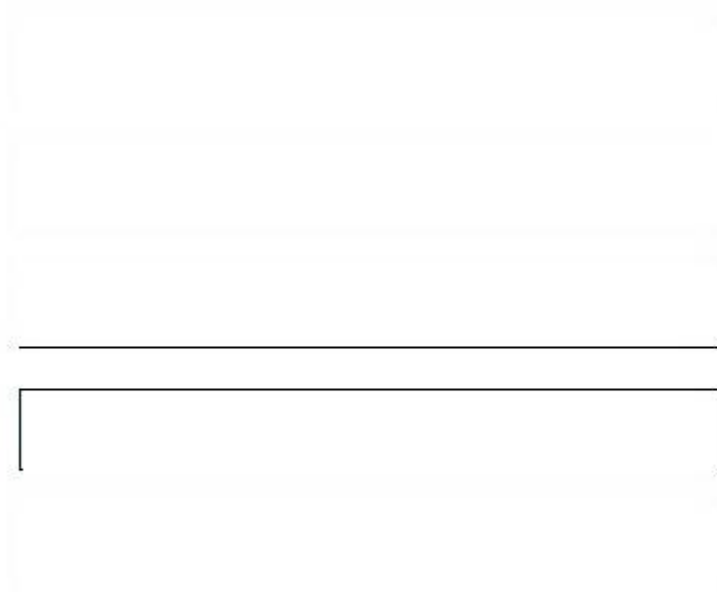
QUESTION 52
Drag and drop the Metro Ethernet circuit on the left to the corresponding Service Type category on the right.

Select and Place:

Ethernet Virtual Private Line

Ethernet Private Tree

Ethernet Private LAN

Ethernet Virtual Private LAN

Ethernet Private Line

Port Based

1
2
3

VLAN Based

1
2

Correct Answer:

Section: (none)
Explanation

Explanation/Reference:

QUESTION 53
Drag and drop the OSPFv3 LSA type on the left to the functionality it provides on the right.

Select and Place:

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

Correct Answer:

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)

Section: (none)
Explanation

Explanation/Reference:

QUESTION 54
Drag and drop the OSPF network type on the left to the correct category of timers on the right.

Select and Place:

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

Correct Answer:

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

Section: (none)
Explanation

Explanation/Reference:

QUESTION 55
Drag and drop the BGP attribute on the left to the correct category on the right.

Select and Place:

Originator ID

Community

Local-Preference

AS_Path

Cluster List

Origin

BGP Well-Known Mandatory Attribute

1

2

BGP Well-Known Discretionary Attribute

1

BGP Optional Transitive Attribute

1

Correct Answer:

Originator ID	BGP Well-Known Mandatory Attribute
	AS_Path
	Origin

	BGP Well-Known Discretionary Attribute
	Local-Preference

Cluster List	BGP Optional Transitive Attribute
	Community

Section: (none)
Explanation

Explanation/Reference:
Explanation:

http://www.deepsh.it/networking/BGP/bgp-attributes.png
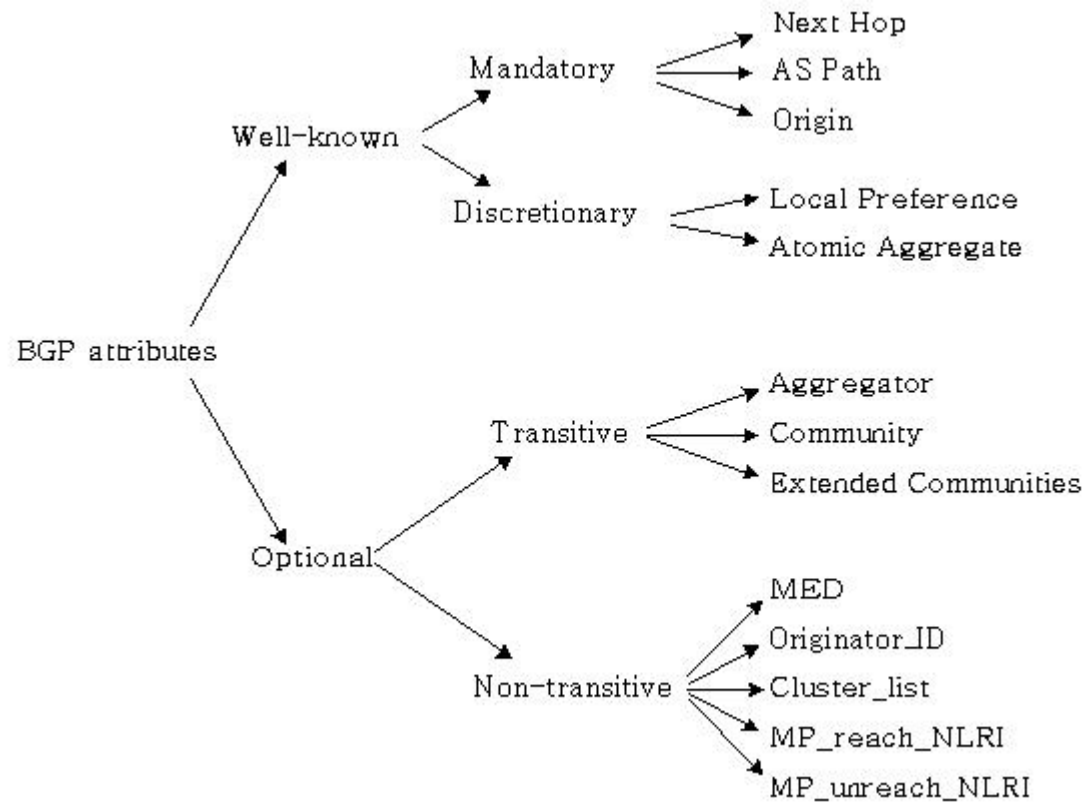
QUESTION 56
Drag and drop the DMVPN command on the left to the corresponding function on the right.

Select and Place:

ip nhrp map group		configures mapping from an ip adress to an NBMA mapping
ip nhrp group		associates an NHRP group to a QoS policy
ip nhrp map		allows broadcast packets to be sent over a tunnel
ip nhrp map multicast		configured an NHRP group
ip nhrp nhs		designates the IP to use for communication to the next hop server
ip nhrp responder		specifies the next hop server

Correct Answer:

	ip nhrp map
	ip nhrp map group
	ip nhrp map multicast
	ip nhrp group
	ip nhrp nhs
	ip nhrp responder

Section: (none)
Explanation

Explanation/Reference:

QUESTION 57
Drag and drop the OTV component on the left to the function it performs on the right.

Select and Place:

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

Correct Answer:

	authoritative edge device
	internal interface
	site VLAN
	join interface
	overlay interface
	edge device

Section: (none)
Explanation

Explanation/Reference:

QUESTION 58
Drag and drop the TACACS+ configuration command on the left to the correct function it performs on the right.

Select and Place:

tacacs-server host 192.168.1.250	globally configures a pre-shared TACACS+ key
tacacs-server host 10.1.1.93 key CISCO	configures a device to send only a portion of the username
tacacs-server key CISCO	configures the device to send TACACS+ requests to a
tacacs-server directed-request	maintains a single open connection between the device and
tacacs-server packet 12000	configures the device to securely send TACACS+ requests to a TACACS+ server
tacacs-server host 172.16.16.25 single-connection	configured the maximum TACACS+ packet size

Correct Answer:

tacacs-server key CISCO

tacacs-server directed-request

tacacs-server host 192.168.1.250

tacacs-server host 172.16.16.25 single-connection

tacacs-server host 10.1.1.93 key CISCO

tacacs-server packet 12000

Section: (none)
Explanation

Explanation/Reference:

QUESTION 59
Drag and drop the DSCP PHB on the left to the corresponding binary representation on the right.

Select and Place:

AF31		10111000
AF43		01010000
AF22		1110000
AF13		01101000
EF		00111000
CS7		10011000

Correct Answer:

	EF
	AF22
	CS7
	AF31
	AF13
	AF43

Section: (none)
Explanation

Explanation/Reference:

QUESTION 60
Which two options does Cisco PfR use to control the entrance link selection with inbound optimization? (Choose two.)

A. Prepend extra AS hops to the BGP prefix.
B. Advertise more specific BGP prefixes (longer mask).
C. Add (prepend) one or more communities to the prefix that is advertised by BGP.
D. Have BGP dampen the prefix.

Correct Answer: AC
Section: (none)

Explanation

Explanation/Reference:

QUESTION 61
While you are troubleshooting network performance issues, you notice that a switch is periodically flooding all unicast traffic. Further investigation reveals that periodically the switch is also having spikes in CPU utilization, causing the MAC address table to be flushed and relearned. What is the most likely cause of this issue?

A. a routing protocol that is flooding updates
B. a flapping port that is generating BPDUs with the TCN bit set
C. STP is not running on the switch
D. a user that is downloading the output of the show-tech command
E. a corrupted switch CAM table

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 62
Your network is suffering from regular outages. After troubleshooting, you learn that the transmit lead of a fiber uplink was damaged. Which two features can prevent the same issues in the future? (Choose two.)

A. root guard
B. loop guard
C. BPDU guard
D. UDLD
E. BPDU skew detection

Correct Answer: BD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 63

Which feature would prevent guest users from gaining network access by unplugging an IP phone and connecting a laptop computer?

A. IPSec VPN
B. SSL VPN
C. port security
D. port security with statically configured MAC addresses
E. private VLANs

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 64
Which two statements are true about the role of split horizon? (Choose two.)

A. It is a function used by routing protocols to install routes into routing table
B. It is a function that prevents the advertising of routes over an interface that the router is using to reach a route
C. Its function is to help avoid routing loops.
D. It is a redistribution technique used by routing protocols

Correct Answer: BC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 65
Which two statements about Cisco Express Forwarding are true? (Choose two.)

A. Cisco Express Forwarding tables contain reachability information and adjacency tables contain forwarding information.
B. Cisco Express Forwarding tables contain forwarding information and adjacency tables contain reachability information.
C. Changing MAC header rewrite strings requires cache validation.
D. Adjacency tables and Cisco Express Forwarding tables can be built separately.
E. Adjacency tables and Cisco Express Forwarding tables require packet process-switching.

Correct Answer: AD

Section: (none)
Explanation

Explanation/Reference:

QUESTION 66
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

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 67
Which two solutions can reduce UDP latency? (Choose two.)

A. fast retransmission
B. fast recovery
C. fast start
D. low-latency queuing
E. IP service level agreements
F. congestion-avoidance algorithm

Correct Answer: DE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 68
You are configuring Wireshark on a Cisco Catalyst 4500E Switch with a Supervisor 8.

Which three actions can you take to prevent the capture from overloading the CPU? (Choose three.)

A. Attach the specific ports that are part of the data path.
B. Use an in-line filter.
C. Use an appropriate ACL.
D. Add memory to the Supervisor.
E. Reconfigure the buffers to accommodate the additional traffic.
F. Configure a policy map, class map, and an access list to express the match conditions.

Correct Answer: ABC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 69
Which three statements about VTP version 3 are true? (Choose three.)

A. It supports other databases in addition to VLAN.
B. It supports VLANs up to 4095.
C. It supports the synchronization of switch configuration templates between switches in the domain.
D. It supports the transfer of information about private VLAN structures.
E. It supports the transfer of PVST+ configuration information.
F. It supports RSTP.

Correct Answer: ABD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 70
In an STP domain, which two statements are true for a nonroot switch, when it receives a configuration BPDU from the root bridge with the TC bit set? (Choose two.)

A. It sets the MAC table aging time to max_age + forward_delay time.
B. It sets the MAC table aging time to forward_delay time.

C. It recalculates the STP topology upon receiving topology change notification from the root switch.
D. It receives the topology change BPDU on both forwarding and blocking ports.

Correct Answer: BD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 71
Which two statements about RSTP and MSTP BPDUs are true? (Choose two.)

A. MSTP switches can detect boundary ports when they receive RSTP version 2 BPDUs.
B. MSTP switches can detect boundary ports when they receive RSTP version 1 BPDUs.
C. RSTP switches can process MSTP version 3 BPDUs.
D. When all boundary switches are running RSTP, MST sends only version 0 configuration BPDUs.

Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 72
Which three options are sources from which a SPAN session can copy traffic? (Choose three.)

A. ports
B. EtherChannels
C. VLANs
D. subnets
E. primary IP addresses
F. secondary IP addresses

Correct Answer: ABC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 73
Which three capabilities are provided by MLD snooping? (Choose three.)

A. dynamic port learning
B. IPv6 multicast router discovery
C. user-configured ports age out automatically
D. a 5-minute aging timer
E. flooding control packets to the egress VLAN
F. a 60-second aging timer

Correct Answer: ABD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 74
Refer to the exhibit.

```
Interface Serial0/1
    ppp multilink
    multilink-group 2
    ppp multilink interleave
    ppp multilink multiclass
```

Which two statements about the implementation are true? (Choose two.)

A. The PPP multilink protocol header is omitted on delay-sensitive packets.
B. The maximum number of fragments is 1.
C. Small real-time packets are multilink-encapsulated.
D. A transmit queue is provided for smaller packets.

Correct Answer: AD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 75
Which two statements are characteristics of Ethernet private LAN circuits? (Choose two.)

A. They support communication between two or more customer endpoints.
B. They utilize more than one bridge domain.
C. They support point-to-multipoint EVC.
D. They support multipoint-to-multipoint EVC.

Correct Answer: AD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 76
Which two statements about Inverse ARP are true? (Choose two.)

A. It uses the same operation code as ARP.
B. It uses the same packet format as ARP.
C. It uses ARP stuffing.
D. It supports static mapping.
E. It translates Layer 2 addresses to Layer 3 addresses.
F. It translates Layer 3 addresses to Layer 2 addresses.

Correct Answer: BE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 77
Refer to the exhibit.

```
R1
interface GigabitEthernet0/0
ip address 192.168.1.1 255.255.255.248
ip pim sparse-mode
interface Tunnel10
tunnel-source GigabitEthernet0/0
tunnel-destination 10.2.2.3
ip address 172.28.8.1 255.255.255.248
ip pim sparse-mode
router ospf 1
network 192.168.1.1 0.0.0.0 area 0
ip mroute 224.1.1.0 255.255.255.0 172.28.8.2

R2
interface GigabitEthernet0/0
ip address 192.168.1.2 255.255.255.248
ip pim sparse-mode
interface GigabitEthernet0/1
ip address 10.2.2.2 255.255.255.248
ip pim sparse-mode
router ospf 1
network 0.0.0.0 255.255.255.255 area 0
```

```
R3
interface GigabitEthernet0/0
ip address 10.2.2.3 255.255.255.248
ip pim sparse-mode
ip igmp join-group 224.1.1.1
interface Tunnel10
tunnel-source GigabitEthernet0/0
tunnel-destination 192.168.1.1
ip address 172.28.8.3 255.255.255.248
ip pim sparse-mode
router ospf 1
network 10.2.2.3 0.0.0.0 area 0
```

R3 is failing to join the multicast group 224.1.1.1 that is sourcing from R1. Which two actions can you take to allow multicast traffic to flow correctly? (Choose two.)

A. Remove the static multicast route on R1.

B. Configure OSPF on R1 and R3 to include the tunnel interfaces.
C. Add an additional static multicast route on R2 for multicast group 224.1.1.1 toward R3.
D. Replace the static multicast route on R1 to send traffic toward R2.
E. Remove the static unicast route on R1.
F. Add an additional static unicast route on R2 toward the loopback interface of R3.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 78
Which two modes of operation does BFD support? (Choose two.)

A. synchronous mode
B. asynchronous mode
C. demand mode
D. echo mode
E. aggressive mode
F. passive mode

Correct Answer: BC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 79
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_LIST is dropped automatically when the route reenters its own AS.
C. The command bgp allowas-in 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 AS_PATH.
E. The command bgp bestpath med missing-as-worst assigns the smallest possible MED, which directly prevents a loop.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 80
Refer to the exhibit.

```
key chain kc1
    key 1
    key-string ripauth
interface Serial0
    ip address 10.1.1.1 255.255.255.252
    ip rip authentication key-chain kc1
router rip
    version 2
    network 10.0.0.0
```

RIPv2 authentication is failing on a device with this configuration. Which two actions can you take to enable it? (Choose two.)

A. Set the RIP authentication mode to text.
B. Set the RIP authentication mode to MD5.
C. Configure the password encryption for the key.
D. Set the password encryption to AES.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 81
Which three routing protocols utilize TLVs? (Choose three.)

A. BGP
B. IS-IS

C. ODR
D. OSPF
E. EIGRP
F. RIP

Correct Answer: ABE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 82
Which two statements about the command distance bgp 90 60 120 are true? (Choose two.)

A. Implementing the command is a Cisco best practice.
B. The external distance it sets is preferred over the internal distance.
C. The internal distance it sets is preferred over the external distance.
D. The local distance it sets may conflict with the EIGRP administrative distance.
E. The internal distance it sets may conflict with the EIGRP administrative distance.
F. The local distance it sets may conflict with the RIP administrative distance.

Correct Answer: CF
Section: (none)
Explanation

Explanation/Reference:

QUESTION 83
Refer to the exhibit.

```
vrf definition v1                          router ospfv3 1
   rd 1:1
address-family ipv4                        address-family ipv6 unicast vrf v2
   exit-address-family                         router-id 192.168.2.1
address-family ipv6                        exit-address-family
   exit-address-family
                                           address-family ipv4 unicast vrf v1
vrf definition v2                              router-id 192.168.1.4
   rd 2:2                                  exit-address-family
address-family ipv6
   exit-address-family                     address-family ipv6 unicast vrf v1
                                               router-id 192.168.1.1
interface FastEthernet0/0                  exit-address-family
   no ip address
interface FastEthernet0/0.100
   encapsulation dot1Q 100
   vrf forwarding v1
   ip address 192.168.1.1 255.255.255.0
   ipv6 enable
   ospfv3 1 ipv6 area 0
   ospfv3 1 ipv4 area 0
interface FastEthernet0/0.200
   encapsulation dot1Q 200
   vrf forwarding v2
   ipv6 enable
   ospfv3 1 ipv6 area 0
interface FastEthernet0/1
   vrf forwarding v1
   ip address 10.1.1.1 255.255.255.0
   ipv6 enable
   ospfv3 1 ipv6 area 1
   ospfv3 1 ipv4 area 0
   no keepalive
interface FastEthernet0/2
   vrf forwarding v2
   no ip address
   ipv6 address 2001:DB8:1::1
   ipv6 enable
   ospfv3 1 ipv6 area 1
```

Route exchange is failing on a PE edge device configured with this VRF-Lite. Which action can you take to correct the problem?

A. Configure the vrf-lite capability under the OSPF address families.
B. Correct the route descriptors.

C. Correct the OSPF router-ids.

D. Configure the control plane with a larger memory allocation to allow the device to appear in the routing table.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 84
Refer to the exhibit.

```
router ospf 1
network 192.168.10.0 0.0.0.255 area 0
network 172.22.19.0 0.0.0.255 area 15
area 15 range 192.168.0.0 255.255.0.0 not-advertise
!
```

Which option is the result of this configuration?

A. Devices in OSPF area 15 can reach the summary route 192.168.0.0/16 and its more specific subnets.

B. Devices in OSPF area 15 can reach only the more specific routes of 192.168.0.0/16.

C. Devices in OSPF area 0 can reach the summary route 192.168.0.0/16 and its more specific subnets.

D. Devices in OSPF area 0 can reach only the summary route of 192.168.0.0/16.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 85
Which two technologies are supported by EIGRP? (Choose two.)

A. clear-text authentication

B. MD5 authentication

C. Correct the OSPF router-ids.

D. Configure the control plane with a larger memory allocation to allow the device to appear in the routing table.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 84
Refer to the exhibit.

```
router ospf 1
network 192.168.10.0 0.0.0.255 area 0
network 172.22.19.0 0.0.0.255 area 15
area 15 range 192.168.0.0 255.255.0.0 not-advertise
!
```

Which option is the result of this configuration?

A. Devices in OSPF area 15 can reach the summary route 192.168.0.0/16 and its more specific subnets.

B. Devices in OSPF area 15 can reach only the more specific routes of 192.168.0.0/16.

C. Devices in OSPF area 0 can reach the summary route 192.168.0.0/16 and its more specific subnets.

D. Devices in OSPF area 0 can reach only the summary route of 192.168.0.0/16.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 85
Which two technologies are supported by EIGRP? (Choose two.)

A. clear-text authentication

B. MD5 authentication

C. stub routing

D. multiple areas

Correct Answer: BC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 86
How does having an EIGRP feasible successor speed up convergence?

A. EIGRP sends queries only if there is a feasible successor, which decreases the number of routers that are involved in convergence.

B. EIGRP sends queries only if there is not a feasible successor, which causes less control traffic to compete with data.

C. EIGRP immediately installs the loop-free alternative path in the RIB.

D. EIGRP preinstalls the feasible successor in the RIB in all cases, which causes traffic to switch more quickly.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 87
Which two options are ways in which an OSPFv3 router handles hello packets with a clear address-family bit? (Choose two.)

A. IPv4 unicast packets are discarded.

B. IPv6 unicast packets are discarded.

C. IPv4 unicast packets are forwarded.

D. IPv6 unicast packets are forwarded.

Correct Answer: AD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 88
Which two statements about OSPF route types are true? (Choose two.)

A. The cost of an external type 2 route is the sum of the external and internal costs.
B. The cost of an external type 2 route is the same as the external cost.
C. Intra-area routes originate outside of their area.
D. Inter-area routes originate inside their area.
E. The cost of an external type 1 route is the same as the internal cost.
F. For routes to the same destination, external type 1 routes are preferred over external type 2 routes.

Correct Answer: BF
Section: (none)
Explanation

Explanation/Reference:

QUESTION 89
A company is multihomed to several Internet providers using EBGP. Which two measures guarantee that the network of the company does not become a transit AS for Internet traffic? (Choose two.)

A. Prepend three times the AS number of the company to the AS path list.
B. Add the community NO_EXPORT when sending updates to EBGP neighbors.
C. Write AS-path access-list which permits one AS long paths only and use it to filter updates sent to EBGP neighbors.
D. Add the community NO_EXPORT when receiving updates from EBGP neighbors.

Correct Answer: CD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 90
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

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 91
Which problem can result when private AS numbers are included in advertisements that are sent to the global Internet BGP table?

A. The prefixes sent with private AS numbers are always discarded on the Internet.
B. The prefixes sent with private AS numbers are always tagged as invalid on the Internet.
C. The prefixes sent with private AS numbers lack uniqueness, which can lead to a loss of connectivity.
D. The prefixes sent with private AS numbers are sometimes tagged as invalid on the Internet.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 92
Which two statements about the BGP community attribute are true? (Choose two.)

A. Routers send the community attribute to all BGP neighbors automatically.
B. A router can change a received community attribute before advertising it to peers.
C. It is a well-known, discretionary BGP attribute.
D. It is an optional transitive BGP attribute.
E. A prefix can support only one community attribute.

Correct Answer: BD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 93
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

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 94
Which two features improve BGP convergence? (Choose two.)

A. next-hop address tracking
B. additional paths
C. advertise map
D. communities
E. soft reconfiguration

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 95
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.

Correct Answer: ACD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 96
Refer to the exhibit.

```
crypto isakmp policy 1
    authentication pre-share
crypto isakmp key dmvpn address 0.0.0.0 0.0.0.0
crypto ipsec transform-set vpntrans ah-sha-hmac esp-aes 256 esp-sha-hmac
crypto ipsec profile DMVPN-PROF
    set transform-set vpntrans

policy-map SHAPE
    class class-default
        shape average 200000

interface Loopback0
    ip address 10.1.1.1 255.255.255.0

interface Tunnel0
    ip address 192.168.1.1 255.255.255.0
    no ip next-hop-self eigrp 1
    ip nhrp authentication dmvpn
    ip nhrp map multicast dynamic
    ip nhrp network-id 99
    ip tcp adjust-mss 1360
    no ip split-horizon eigrp 1
    tunnel source Serial1/0
    tunnel mode gre multipoint
    tunnel protection ipsec profile DMVPN-PROF

interface Serial1/0
    ip address 172.16.1.1 255.255.255.248
    encapsulation frame-relay
frame-relay inverse-arp

router eigrp 1
    network 10.0.0.0
    network 192.168.1.0
```

The spokes of the DMVPN with the given configuration are having QoS issues.

Which two actions can you take to resolve the problem? (Choose two.)

A. Configure qos pre-classify on the tunnel interface.

B. Configure an NHRP group on the tunnel interface and associate it to a QoS policy.
C. Modify the configuration of the IPsec policy to accept QoS policies.
D. Manually configure a QoS policy on the serial interface.
E. Configure the bandwidth statement on the tunnel interface.
F. Configure the bandwidth statement on the serial interface.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 97
Which two statements about 6VPE are true? (Choose two.)

A. It allows a service provider to use an existing MPLS network to provide VPN services to IPv6 customers.
B. It uses MP-BGP as the carrier protocol to transport IPv6 connectivity.
C. It provides IPv6 connectivity to MPLS-VPN customers when IPv6 overlay tunneling is also configured.
D. It allows a service provider to use an existing MPLS network to provide global addressing to their IPv6 customers.
E. It requires the configuration of a GRE tunnel tagged with a VLAN ID.
F. It allows a service provider to use an existing L2TPv3 network to provide VPN services to IPv6 customers.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 98
Refer to the exhibit.

```
R1#show mpls l2transport vc 1611 detail

Local interface: Gi4/0/2 up, line protocol up, Eth VLAN 1611 up
    Destination address: 172.16.12.70, VC ID: 1611, VC status: down
        Output interface: none, imposed label stack {}
        Preferred path: not configured
        Default path: no route
        No adjacency
    Create time: 4w2d, last status change time: 4w2d
    Signaling protocol: LDP, peer 172.16.12.70:0 up
        Targeted Hello: 172.16.192.80(LDP Id) -> 172.16.12.70
        Status TLV support (local/remote)    : enabled/unknown (no remote binding)
            Label/status state machine        : local ready, LruRnd
            Last local dataplane    status rcvd: no fault
            Last local SSS circuit status rcvd: no fault
            Last local SSS circuit status sent: not sent
            Last local  LDP TLV     status sent: no fault
            Last remote LDP TLV     status rcvd: unknown (no remote binding)
        MPLS VC labels: local 4006, remote unassigned
        Group ID: local 0, remote unknown
        MTU: local 1500, remote unknown
        Remote interface description:
    Sequencing: receive disabled, send disabled
    VC statistics:
        packet totals: receive 0, send 0
        byte totals:   receive 0, send 0
        packet drops:  receive 0, seq error 0, send 0
```

Which three statements about the R1 configuration are true? (Choose three.)

A. The virtual circuit identifier is 1611 and the virtual circuit is down.
B. The local label for the circuit is 4006.
C. The targeted LDP session to the remote peer is up.
D. The local label for the circuit is 1611.
E. The virtual circuit identifier is 4006 and the virtual circuit is down.
F. The circuit is using MPLS VC type 4.

Correct Answer: ABC
Section: (none)

Explanation

Explanation/Reference:

QUESTION 99
Which statement about OTV is true?

A. The overlay interface becomes active only when configuration is complete and it is manually enabled.
B. OTV data groups can operate only in PIM sparse-mode.
C. The overlay interface becomes active immediately when it is configured.
D. The interface facing the OTV groups must be configured with the highest MTU possible.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 100
Refer to the exhibit.

```
username admin privilege 15 password SECUREPASSWORD
aaa new-model
aaa authentication login default group tacacs+ local-case
aaa authentication enable default group tacacs+ enable
aaa authorization console
aaa authorization exec default group tacacs+ if-authenticated
aaa authorization commands 1 default group tacacs+ local if-authenticated
aaa authorization commands 4 default group tacacs+ if-authenticated
aaa authorization commands 15 default group tacacs+ local if-authenticated
aaa accounting exec default start-stop group tacacs+
aaa accounting commands 1 default start-stop group tacacs+
aaa accounting commands 15 default start-stop group tacacs+
aaa session-id common
```

Which two configuration changes enable the user admin to log in to the device? (Choose two.)

A. Configure the login authentication to be case-insensitive.
B. Configure the user admin with a password and appropriate privileges.
C. Configure the login authentication to be case-sensitive.
D. Modify the configuration to use a named group.
E. Configure additional login authentication under the terminal lines.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 101
Which two advantages does CoPP have over receive path ACLs? (Choose two.)

A. Only CoPP applies to IP packets and non-IP packets.
B. Only CoPP applies to receive destination IP packets.
C. A single instance of CoPP can be applied to all packets to the router, while rACLs require multiple instances.
D. Only CoPP can rate-limit packets.

Correct Answer: AD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 102
Which command drops packets with unknown source addresses until you remove a sufficient number of secure MAC addresses to drop below the maximum value, and also causes the Security Violation counter to increment?

A. switchport port-security violation protect
B. switchport port-security violation drop
C. switchport port-security violation shutdown
D. switchport port-security violation restrict

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 103
Which two tasks are required for configuring SNMP to send traps on a Cisco IOS device? (Choose two.)

A. Create access controls for an SNMP community.
B. Configure SNMP notifications.
C. Configure the SNMP agent.
D. Configure SNMP status monitoring and troubleshooting.
E. Configure SNMP server group names.
F. Configure the SNMP server engine ID.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 104
Which two statements about SNMP traps are true? (Choose two.)

A. They are sent by an agent after a specified event.
B. They are sent when solicited after a specified event.
C. They are equivalent to a community string.
D. They provide solicited data to the manager.
E. They are sent by a management station to an agent.
F. Vendor-specific traps can be configured.

Correct Answer: AF
Section: (none)
Explanation

Explanation/Reference:

QUESTION 105
A configuration includes the line ip nbar port-map SSH tcp 22 23 443 8080. Which option describes the effect of this configuration line?

A. It configures NBAR to search for SSH using ports 22, 23, 443, and 8080.
B. It configures NBAR to allow SSH connections only on ports 22, 23, 443, and 8080.
C. It enables NBAR to inspect for SSH connections.
D. It creates a custom NBAR port-map named SSH and associates TCP ports 22, 23, 443, and 8080 to itself.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 106
Which configuration sets a minimum quality of service on a Layer 2 access switch?

A. mls qos cos override
   mls qos cos 2
B. mls qos cos 2
C. mls qos trust cos
   mls qos cos 2
D. mls qos trust cos
E. mls qos trust dscp

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 107
Which three statements about GLBP are true? (Choose three.)

A. It uses a virtual MAC address that starts with 0070.b4.
B. It elects a single active virtual gateway to appoint and manage multiple active virtual forwarders.
C. It allows the configured virtual IP address to be used on a physical interface as well.
D. It uses a virtual MAC address that starts with 0070.4b.
E. It elects multiple active virtual gateways to appoint and manage a single active virtual forwarder.

F. Preemption is enabled for the configured active virtual gateway by default.

Correct Answer: ABC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 108
Refer to the exhibit.

```
R2#show run | include ntp
ntp server 10.1.1.1 prefer
ntp server 10.3.3.3
ntp server 10.4.4.4
```

If the route to 10.1.1.1 is removed from the R2 routing table, which server becomes the master NTP server?

A. R2
B. the NTP server at 10.3.3.3
C. the NTP server at 10.4.4.4
D. the NTP server with the lowest stratum number

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 109
Refer to the exhibit.
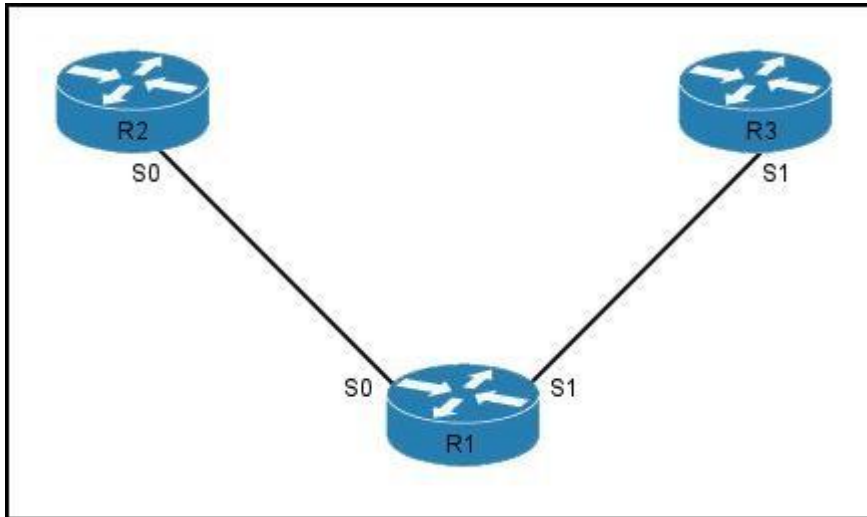
Which feature can R1 use to fail over from R2 to R3 if the address for R2 becomes unavailable?

A. object tracking
B. HSRP
C. GLBP
D. LACP

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 110
Refer to the exhibit.

```
Router1#show run
interface FastEthernet0/0
    ip address 10.20.10.1 255.255.255.0
    ip route-cache flow

ip flow-export version 5 origin-as
ip flow-export destination 209.165.200.227 49152
```

Which two options are effects of the given configuration? (Choose two.)

A. It sets the data export destination to 209.165.200.227 on UDP port 49152.
B. It enables Cisco Express Forwarding on interface FastEthernet0/0.
C. It configures the export process to include the BGP peer AS of the router gathering the data.
D. It enables NetFlow switching on interface FastEthernet0/0.
E. It sets the data export destination to 209.165.200.227 on TCP port 49152.

Correct Answer: AD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 111
Which three options are components of an EEM CLI policy? (Choose three.)

A. Safe-Tcl
B. applet name
C. Fast Tcl
D. event
E. action
F. Tcl bytecode

Correct Answer: BDE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 112
Which option is a core event publisher for EEM?

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

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 113
Refer to the exhibit.
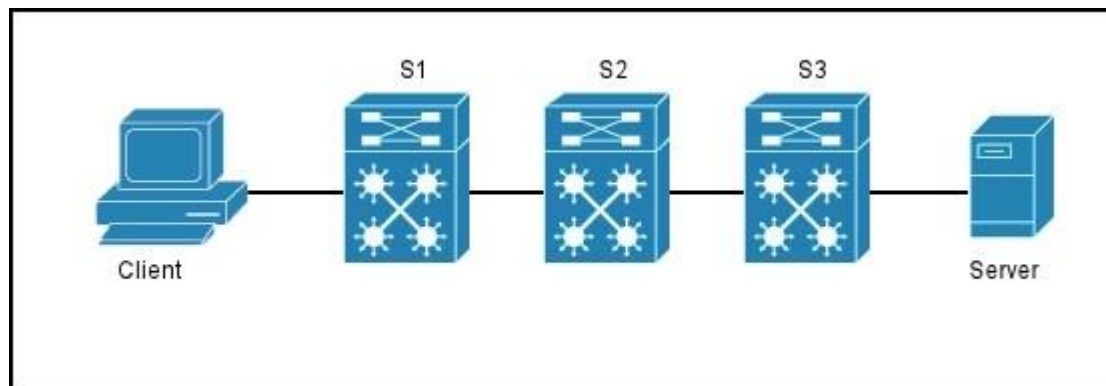
You are configuring the S1 switch for the switch port that connects to the client computer. Which configuration blocks users on the port from using more than 6 Mbps of traffic and marks the traffic for a class of service of 1?

A.

```
class-map match-all cos1
    match any
policy-map cos1
    class cos1
        set cos1
        police cir 6000000 bc 1125000 be 2250000 conform-action
                set-dscp-transmit cs1 exceed-action drop
                violate-action drop
```

B.

```
class-map match-any cos1
    match any
policy-map cos1
    class cos1
        police cir 6000000 bc 1125000 be 2250000 conform-action
            set-dscp-transmit cs1 exceed-action drop
            violate-action drop
```

C.

```
class-map match-all cos1
    match any
policy-map cos1
    class cos1
    set cos1
    policy cir 6000000 conform-action set-dscp-transmit cs1
            exceed-action permit violate-action permit
```

D.

```
class-map match-any cos1
    match any
policy-map cos1
    class cos1
    set cos1
    policy cir 6000000 conform-action transmit exceed-action
            permit violate-action drop
```

Correct Answer: A

Section: (none)
Explanation

Explanation/Reference:

QUESTION 114
Drag and drop the fragmentation characteristics on the left to the corresponding protocol on the right

Select and Place:

40 octets	IPv6 minimum MTU
fragments packets if DF bit=0	IPv4 minimum MTU
1280 octets	IPv6 routers
20 octets	IPv4 routers
packet fragmentation is not supported	IPv6 header length
576 octets	IPv4 header length

Correct Answer:

	1280 octets
	576 octets
	packet fragmentation is not supported
	fragments packets if DF bit=0
	40 octets
	20 octets

Section: (none)
Explanation

Explanation/Reference:

QUESTION 115
Drag and drop the IPv6 multicast feature on the left to its corresponding function on the right.

Select and Place:

PIMv2		communicates multicast group membership source awareness
MLDv1		uses only shared tree forwarding
MLDv2		communicates multicast group membership states from the
PIM-SSM		provides intradomain multicast forwarding for all underlying unicast routing protocols
PIM Bi-dir		aids IPv6 multicast deployment
IPv6 multicast over IPv4 tunnels		defined for interdomain use to support broadcast applications

Correct Answer:

		MLDv2
		PIM Bi-dir
		MLDv1
		PIMv2
		IPv6 multicast over IPv4 tunnels
		PIM-SSM

Section: (none)
Explanation

Explanation/Reference:

QUESTION 116
Drag and drop the EIGRP term on the left to the corresponding definition on the right.

Select and Place:

adjacency	the neighbor with the route that has the lowest metric
split horizon	a neighbor whose advertised distance is lower than the
successor	a feature that prevents routing loops
feasible successor	the logical association between two neighbors over which routing information is exchanged

Correct Answer:

	successor
	feasible successor
	split horizon
	adjacency

Section: (none)
Explanation

Explanation/Reference:

QUESTION 117

Drag and drop the EIGRP query condition on the left to the corresponding action taken by the router on the right.

Select and Place:

The EIGRP table is missing an entry for the route	A feasible successor is installed in the routing table, and a reply
The EIGRP table lists the querying router as the successor for	The router replies with the successor information
The querying router is the successor, and no feasible successor exists	The router replies to the query with an unreachable message
the EIGRP table has a successor	The router send a query on all interfaces except the interface that had the successor route

Correct Answer:

	The EIGRP table lists the querying router as the successor for
	the EIGRP table has a successor
	The EIGRP table is missing an entry for the route
	The querying router is the successor, and no feasible successor exists

Section: (none)
Explanation

Explanation/Reference:

QUESTION 118
Drag and drop the path-selection criteria on the left into the correct route-selection order on the right, that a router will use when having multiple routes toward the same destination.

Select and Place:

external Type 2 routes		first

| external Type 1 routes | | second |

| intra-area routes | | third |

| inter-area routes | | fourth |

Correct Answer:

intra-area routes
inter-area routes
external Type 1 routes
external Type 2 routes

Section: (none)
Explanation

Explanation/Reference:

QUESTION 119
Drag and drop the multiprotocol BGP feature on the left to the corresponding description on the right.

Select and Place:

Multiprotocol Reachable NLRI		an optional, nontransitive attribute used to withdraw a route
Multiprotocol Unreachable NLRI		a value that indicates whether multiprocol extensions are supported
AFI		an optional, nontransitive attribute used to advertise a
SAFI		a value that identifies a network protocol
Capability code		a value that identifies a subtype of network protocol

Correct Answer:

	Multiprotocol Unreachable NLRI
	Capability code
	Multiprotocol Reachable NLRI
	AFI
	SAFI
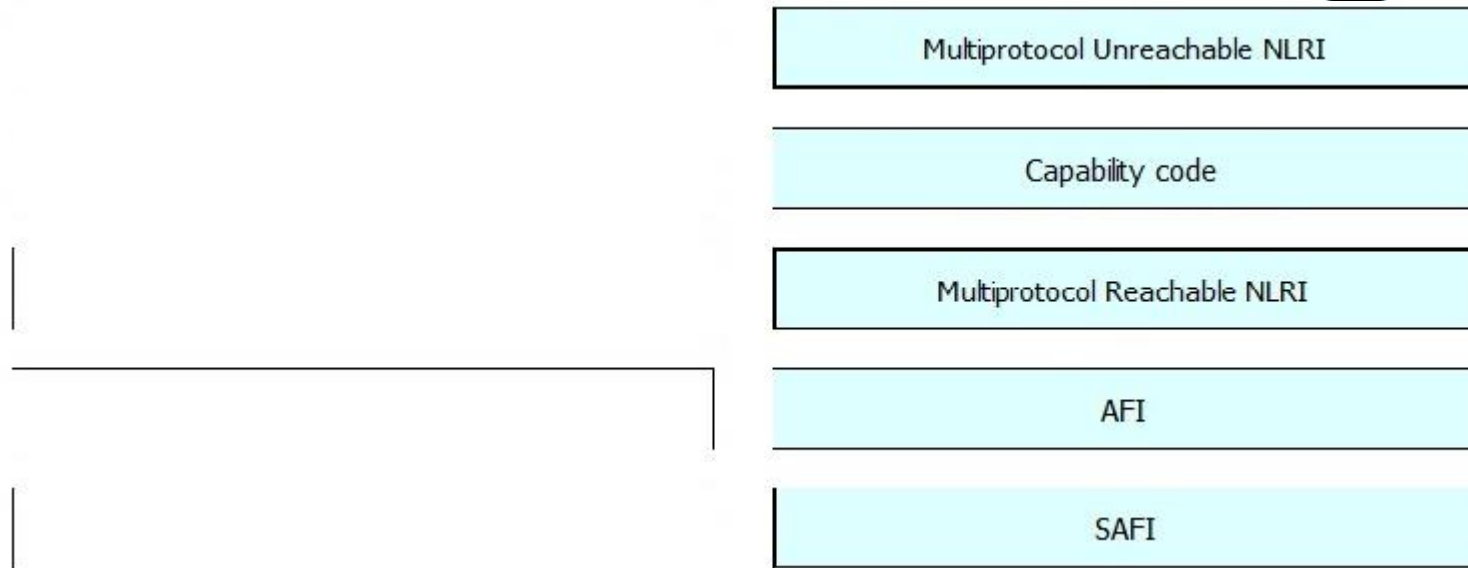
Section: (none)
Explanation

Explanation/Reference:

QUESTION 120
Drag and drop the MPLS term on the left to the function it performs on the right.

Select and Place:

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

Correct Answer:

	explicit-null
	FEC
	label
	implicit-null
	virtual circuit
	penultimate hop popping

Section: (none)
Explanation

Explanation/Reference:

QUESTION 121
Drag and drop the NHRP flag on the left to the corresponding meaning on the right.

Select and Place:

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.

Correct Answer:

	registered
	authoritative that maintains the NBMA-to-IP mapping
	implicit
	unique by a mapping address that has the same IP address and a different NBMA address.

Section: (none)
Explanation

Explanation/Reference:

QUESTION 122
In GLBP, which router will answer on client ARP requests?

A. all active AVF routers as the first response is used by the client
B. the AVG router, replying with a different AVF MAC address each time
C. a random AVF router, based on a GLBP seed hash key
D. only the AVG router that received the ARP request first

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Explanation:
LBP Active Virtual Gateway
Members of a GLBP group elect one gateway to be the active virtual gateway (AVG) for that group. Other group members provide backup for the AVG in the event that the AVG becomes unavailable. The AVG assigns a virtual MAC address to each member of the GLBP group. Each gateway assumes responsibility for forwarding packets sent to the virtual MAC address assigned to it by the AVG. These gateways are known as active virtual forwarders (AVFs) for their virtual MAC address. The AVG is responsible for answering Address Resolution Protocol (ARP) requests for the virtual IP address. Load sharing is achieved by the AVG replying to the ARP requests with different virtual MAC addresses.
http://www.cisco.com/en/US/docs/ios/12_2t/12_2t15/feature/guide/ft_glbp.html#wp1039649

QUESTION 123
What is also called Type 0 authentication in OSPF on Cisco Routers?

A. MD5
B. There is no Type 0 authentication
C. SHA1
D. Null

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

Explanation:
These are the three different types of authentication supported by OSPF. Null Authentication-- This is also called Type 0 and it means no authentication information is included in the packet header. It is the default.
Plain Text Authentication--This is also called Type 1 and it uses simple clear-text passwords. MD5 Authentication--This is also called Type 2 and it uses MD5 cryptographic passwords.

QUESTION 124
Refer to the exhibit. Which two statements are correct, when the QoS configuration is applied in an outbound direction on a 10-Mb/s interface? (Choose two.)

```
Class-map VIDEO
Match ip precedence 5
Class-map FTP
Match ip precedence 1

policy-map TEST
 class VIDEO
  priority 200
 class FTP
  bandwidth 1000
class class-default
 random-detect
```

A. When reaching 10 Mb/s of input rate, the video class will be policed to 200 kb/s.
B. The class FTP is allowed to reach more than 1 Mb/s in the event of congestion.
C. IP precedence 1 traffic is affected by a drop probability.
D. Video traffic above 200 kb/s is allowed to pass when the total interface output rate does not reach 10 Mb/s.
E. Video traffic above 200 kb/s is allowed to pass when congestion is present.

Correct Answer: BD
Section: (none)
Explanation

Explanation/Reference:
Explanation:
http://www.cisco.com/en/US/docs/security/asa/asa82/configuration/guide/intrface.html

QUESTION 125
Which two orders in the BGP Best Path Selection process are correct? (Choose two.)

A. Higher local preference, then lowest MED, then eBGP over iBGP paths
B. Higher local preference, then highest weight, then lowest router ID
C. Highest weight, then higher local preference, then shortest AS path
D. Lowest origin type, then higher local preference, then lowest router ID
E. Highest weight, then higher local preference, then highest MED

Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:
Explanation:
Weight is the first attribute BGP uses in the route selection process. Route with a higher weight is preferred when multiple routes exist to the same destination.

QUESTION 126
What is the first thing that happens when IPv6 is enabled on an interface on a host?

A. A router solicitation is sent on that interface.
B. There is a duplicate address detection on the host interface.
C. The link local address is assigned on the host interface.
D. A neighbor redirect message is sent on the host interface.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Explanation:
Duplicate address detection (DAD) is used to verify that an IPv6 home address is unique on the LAN before assigning the address to a physical interface (for example, QDIO). z/OS Communications Server responds to other nodes doing DAD for IP addresses assigned to the interface.

QUESTION 127
What is the flooding scope of an OSPFv3 LSA, if the value of the S2 bit is set to 1 and the S1 bit is set to 0?

A. link local

B. area wide

C. AS wide

D. reserved

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 128
Refer to the Exhibit. The displayed QoS configuration has been configured on a router. IPv6 is being implemented on the router, and it is required to convert the QoS policy to support both IPv4 and IPv6 on the same class.
Which alternative configuration would allow matching DSCP AF41 for both IPv4 and IPv6 on the same class map?

```
!
class-map match-all CLASS1
 match ip dscp af41
!
```

A. Class-map match-all CLASS1
   Match dscp af41

B. Class-map match-all CLASS1
   Match ip dscp af41
   Match ipv6 dscp af41

C. Class-map match-any CLASS1
   Match ip dscp af41
   Match ipv6 dscp af41

D. Class-map match-any CLASS1
   Match qos-group af41

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 129

Voice quality is bad due to high delay and jitter on a link. Which two actions will improve the quality of voice calls? (Choose two.)

A. Increase the queue size of the voice class.
B. Guarantee bandwidth during congestion to the voice class with a bandwidth command.
C. Increase the tx-ring of the egress interface.
D. Implement LLQ for the voice class.
E. Decrease the rx-ring of the egress interface.
F. Decrease the queue size of the voice class.

Correct Answer: DF
Section: (none)
Explanation

Explanation/Reference:

QUESTION 130
You are the network administrator of a medium-sized company, and users are complaining that they cannot send emails to some organizations. During your troubleshooting, you notice that your DNS MX record is blacklisted by several public blacklist filters. After clearing these listings for your IP address, and assuming that your email server has the right virus protection in place, what are two possible solutions to prevent this from happening in the future? (Choose two.)

A. Change your Internet provider.
B. Change your public IP address.
C. Allow the email server to send traffic only to TCP port 25.
D. Put your email server in a DMZ.
E. Use a separate public IP address for your email server only.

Correct Answer: CE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 131
Refer to the exhibit. What problem does the debug ip ospf event output from R3 indicate?

```
*Nov  2 00:47:06.246: OSPF: Rcv hello from 209.165.202.140 area 209.165.202.128 from FastEthernet0/0 209.165.202.140
*Nov  2 00:47:06.246: OSPF: Hello from 209.165.202.140 with mismatched Stub/Transit area option bit
```

A. 209.165.202.140 and R3 are not both configured as OSPF stubs.
B. 209.165.202.140 and R3 are not configured in the same OSPF area.
C. 209.165.202.140 is configured as a no-summary stub.
D. Transit area OSPF hello packets are not processed by design.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Explanation:
As you can see that the hello packets are mismatched. This means that 209.165.202.140 and R3 are not configured as OSPF stubs.

Exam E

QUESTION 1
Which EIGRP packet types are sent as unicast packets?

A. hello, update, query
B. query, SIA query, reply
C. SIA query, reply, ACK
D. query, SIA query, SIA reply

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 2
What is a reason for an EIGRP router to send an SIA reply to a peer?

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

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 3
Refer to the exhibit. Which prefixes will appear in the EIGRP topology table?

```
router eigrp 100
    network 10.0.0.0
    network 172.16.1.0 255.255.255.0
    network 192.168.0.0 255.255.0.0
    no auto-summary
```
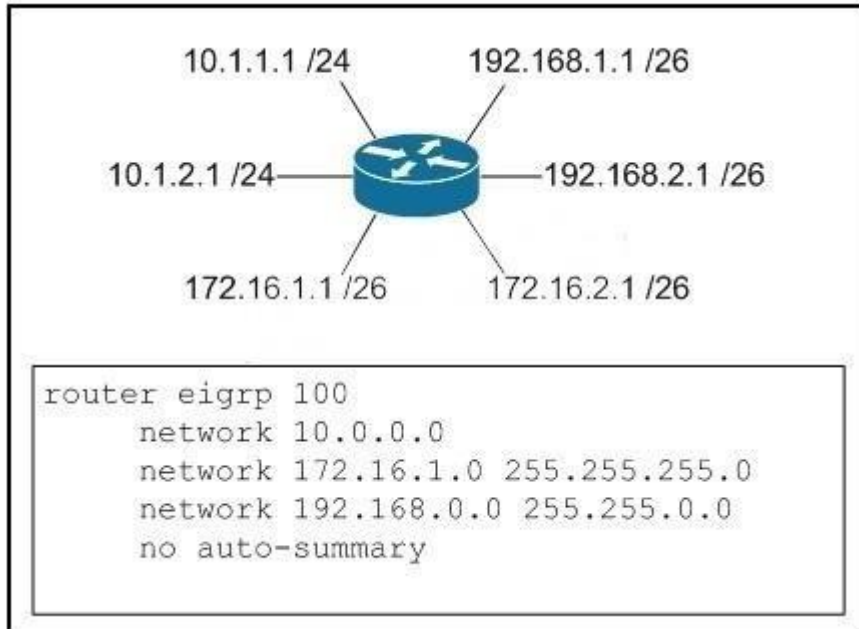
A. 10.0.0.0/8, 172.16.1.0/24, 192.168.0.0/16
B. 10.1.1.0/24, 10.1.2.0/24, 172.16.1.0/26, 192.168.1.0/26, 192.168.2.0/26
C. 10.1.1.0/24, 10.1.2.0/24, 172.16.1.0/26, 172.16.2.0/26, 192.168.1.0/26, 192.168.2.0/26
D. 10.1.1.1/24, 10.1.2.1/24, 172.16.1.1/26, 172, 192.168.1.1/26, 192.168.2.1/26

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 4
What is the most common use for route tagging in EIGRP?

A. to determine the route source for management purposes
B. to change the metric of a prefix
C. to filter routes in order to prevent routing loops
D. to modify path selection for certain classes of traffic

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 5
Refer to the exhibit. Which statement is true?

```
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
```

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.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 6
Which two statements about the max-age time in IS-IS are true? (Choose two.)

A. The IS-IS max-age time is 20 minutes by default.
B. The IS-IS max-age time is 60 minutes by default.
C. The IS-IS max-age time increments from zero to max-age.
D. The IS-IS max-age time decrements from max-age to zero.

Correct Answer: AD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 7
Which two statements about the default behavior of IS-IS are true? (Choose two.)

A. The default IS-IS router type is L1/L2.
B. The default IS-IS metric type is wide.
C. The default IS-IS interface circuit type is L1/L2.
D. By default, two IS-IS routers must use the same hello interval and hold timer in order to become neighbors.

Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 8
Which two statements about BPDU guard are true? (Choose two.)

A. The global configuration command spanning-tree portfast bpduguard default shuts down interfaces that are in the PortFast-operational state when a BPDU is received on that port.
B. The interface configuration command spanning-tree portfast bpduguard enable shuts down only interfaces with PortFast enabled when a BPDU is received.
C. BPDU guard can be used to prevent an access port from participating in the spanning tree in the service provider environment.
D. BPDU guard can be used to protect the root port.

E. BPDU guard can be used to prevent an invalid BPDU from propagating throughout the network.

Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 9
Which two 802.1D port states are expected in a stable Layer 2 network? (Choose two.)

A. forwarding
B. learning
C. listening
D. blocking
E. disabled

Correct Answer: AD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 10
Where must the spanning-tree timers be configured if they are not using the default timers?

A. They must be on the root bridge.
B. They must be on any non-root bridge.
C. Changing the default timers is not allowed.
D. Timers must be modified manually on each switch.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 11
Which three fields are part of a TCN BPDU? (Choose three.)

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

Correct Answer: ABC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 12
With AutoInstall, which mechanism allows for automatic addressing of the serial interface using HDLC?

A. ARP
B. BOOTP
C. DHCP
D. SLARP

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 13
Which two protocols does the Management Plane Protection feature support? (Choose two.)

A. ARP
B. HTTPS
C. TFTP
D. OSPF

Correct Answer: BC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 14
Refer to the exhibit. Which configuration reduces CPU utilization on R2 while still advertising the connected routes of R2 to R1?
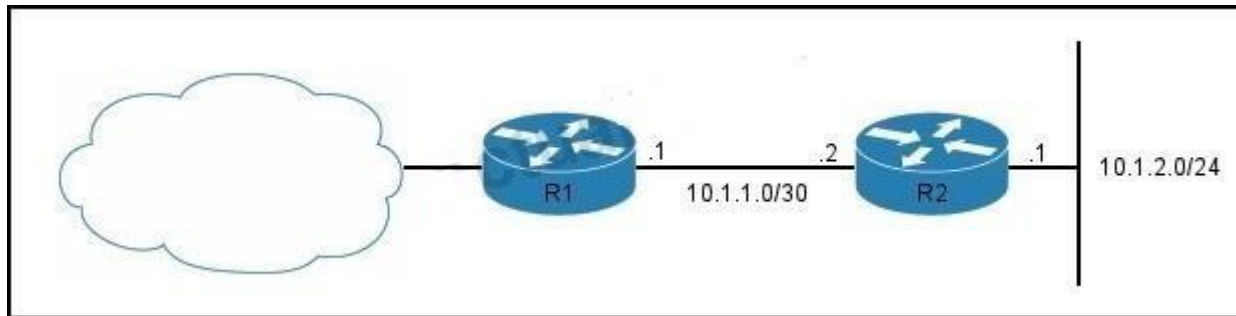
A. Configure eigrp stub connected on R2.
B. Configure eigrp stub receive-only on R1.
C. Configure eigrp stub static on R2.
D. Configure eigrp stub summary on R1.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 15
Which authentication types does OSPF support?

A. null and clear text
B. MD5 only
C. MD5 and clear text
D. null, clear text, and MD5

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 16
Which ICMP message type is used to assist path MTU discovery?

A. destination unreachable
B. redirect message
C. source quench
D. time exceeded

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 17
A configuration includes the line ip route 10.0.0.0 255.0.0.0 172.16.10.10 permanent. Which option is a benefit of configuring this static route as permanent?

A. It allows the route to be redistributed into the network even if the outgoing interface is down.
B. It allows the route to be saved in the running configuration of the device.
C. It places a hidden tag on the route that can be matched on other devices.
D. It allows the route to have a tracking status even if no tracking object is configured.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 18

Refer to the exhibit. Which two statements about the R1 configuration are true? (Choose two.)

```
R1#sh run | i mpls

mpls ldp session protection
mpls ldp discovery targeted-hello accept
no mpls ldp advertise-labels
mpls ldp advertise-labels for LOOPBACK-ONLY
no mpls ip propagate-ttl forwarded
mpls label protocol ldp
```

A. The IP TTL value is copied to the MPLS field during label imposition.
B. The structure of the MLPS network is hidden in a traceroute.
C. The LDP session interval and hold times are configured for directly connected neighbors.
D. R1 protects the session for 86400 seconds.
E. All locally assigned labels are discarded.

Correct Answer: BD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 19
Which two statements about IPsec VTI implementation are true? (Choose two.)

A. The IKE SA can be bound to the VTI and the crypto map.
B. The transform set can be configured only in tunnel mode.
C. SVTIs support only a single IPsec SA.
D. SVTIs support IPv4 packets that carry IPv6 packets.

Correct Answer: BC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 20
Which command sets the maximum segment size for a TCP packet initiated from a router?

A. ip mtu
B. ip tcp adjust-mss
C. ip tcp mss
D. ip tcp window-size

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 21
Which circumstance can cause TCP starvation and UDP dominance to occur?

A. Too few queues are available.
B. UDP is comprised of smaller packets than TCP.
C. Retransmitted TCP packets are on the network.
D. UDP and TCP data are assigned to the same service-provider class.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 22
Refer to the exhibit. Which statement about the topology is true?

EVC101

EVC102

EVC103
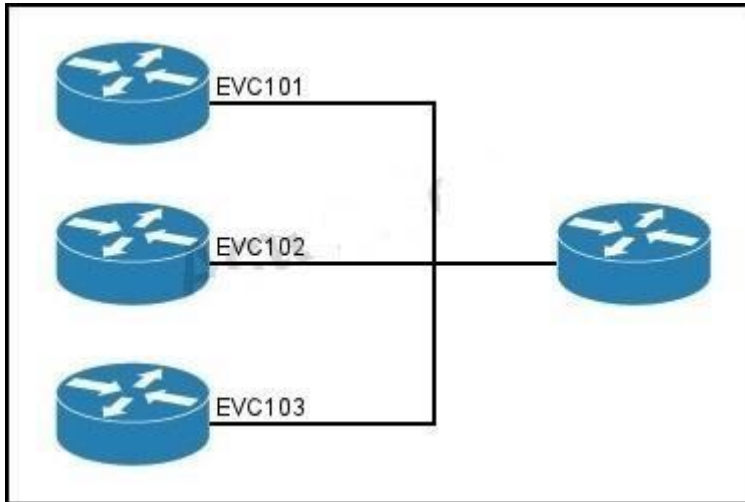
A. It provides a transparent LAN service.
B. It provides only point-to-multipoint connections between UNIs.
C. It uses port-based connections at the hub.
D. It provides point-to-point connections between UNIs.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 23
Which two statements about reverse ARP are true? (Choose two.)

A. Its servers require static mappings.
B. It works with AutoInstall to configure new devices.
C. It provides IP addresses for subnet masks.
D. It provides IP addresses for default gateways.
E. It requires less maintenance than DHCP.

Correct Answer: AB
Section: (none)

Explanation

Explanation/Reference:

QUESTION 24
Refer to the exhibit. This network is configured with PIM, and the RPF check has failed toward the multicast source. Which two configuration changes must you make to router R3 to enable the RPF check to pass? (Choose two.)
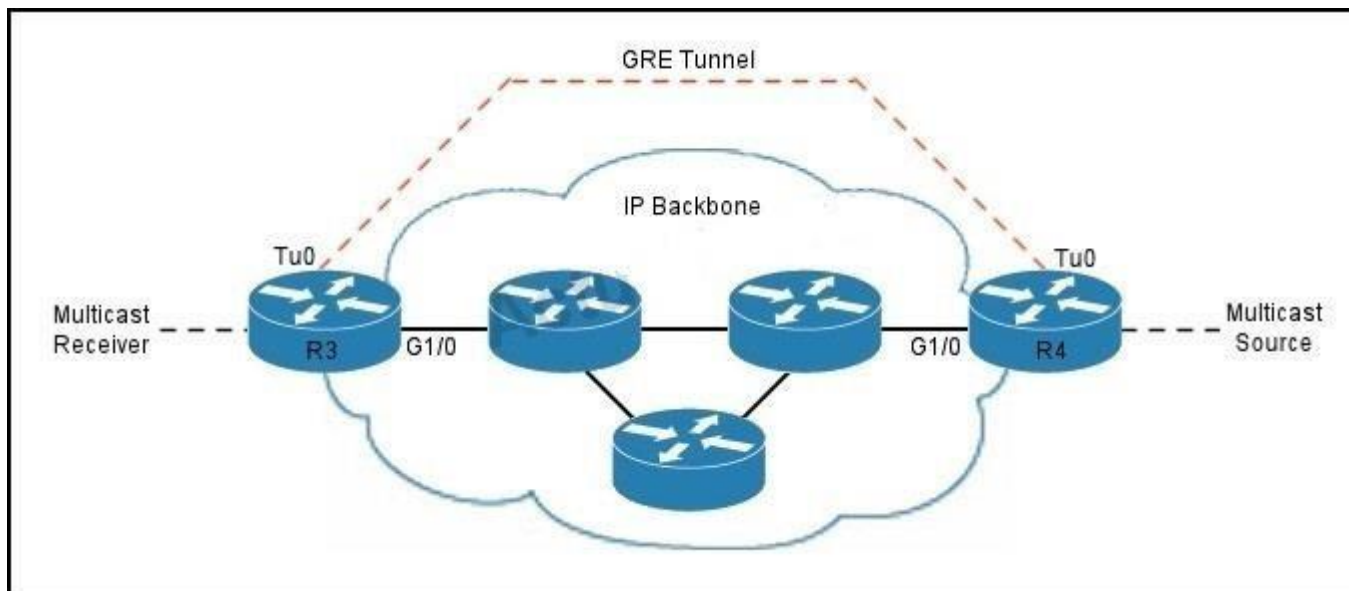
A. Configure a static multicast route to the multicast source through the tunnel interface.
B. Configure a static multicast route to the multicast source LAN through the tunnel interface.
C. Configure a static multicast route to the multicast source LAN through the Ethernet interface.
D. Remove the command ip prim bidir-enable from the R3 configuration.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 25
In which two situations is an EIGRP hello packet sent as unicast? (Choose two.)

A. during neighbor discovery
B. when link costs change
C. when the neighbor command is used
D. when an ACK is sent

Correct Answer: CD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 26
Which three options are results of the command no mpls ip propagate-ttl? (Choose three.)

A. It prevents the TTL from being copied from the IP header to the MPLS header.
B. It prevents the MPLS hops from being visible to a CE router when you perform a traceroute.
C. A fixed TTL value of 255 is used for the first label of the IP packet.
D. It prevents the TTL from being copied from the MPLS header back into the IP header.
E. MPLS hops remain visible on a CE router when you perform a traceroute.
F. A fixed TTL value of 1 is used for the first label of the IP packet.

Correct Answer: ABC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 27
Which statement about how a CE router is used in an MPLS VPN is true?

A. It is located on the customer premises, where it peers and exchanges routes with the provider edge router.
B. It is located on the provider premises, where it peers and exchanges routes with the customer edge router.
C. It is located on the customer premises, but it is fully controlled by the provider, which provides a full routing table to the customer.
D. It is located on the provider premises, and it routes only MPLS label traffic.

VCEPlus

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 28
Which three options are three benefits of an MPLS VPN? (Choose three.)

A. It allows IP address space overlap by maintaining customer routes in a private routing table.
B. It offers additional security by preventing intrusions directly into the customer routing table.
C. It offers a transparent virtual network in which all customer sites appear on one LAN.
D. It offers additional security by allowing only dynamic routing protocols between CE and PE routers.
E. It allows IP address space overlap by maintaining customer routes in the global routing table with unique BGP communities.
F. Providers can send only a default route for Internet access into the customer VPN.

Correct Answer: ABC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 29
Into which two pieces of information does the LISP protocol split the device identity? (Choose two.)

A. Routing Locator
B. Endpoint Identifier
C. Resource Location
D. Enterprise Identifier
E. LISP ID
F. Device ID

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 30
Which two protocols are used to establish IPv6 connectivity over an MPLS network? (Choose two.)

A. 6PE
B. 6VPE
C. RSVP
D. ISATAP
E. LDP
F. IPv6IP

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 31
Which three types of traffic are protected when you implement IPsec within an IPv6-in-IPv4 tunnel? (Choose three.)

A. IPv6 link-local traffic
B. IPv6 multicast traffic
C. IPv6 unicast traffic
D. IPv4 tunnel control traffic
E. IPv4 broadcast traffic
F. IPv6 broadcast traffic

Correct Answer: ABC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 32
Which three features does GETVPN support to improve deployment and scalability? (Choose three.)

A. configuration of multiple key servers to work cooperatively
B. allowing traffic to be discarded until a group member registers successfully

C. local exceptions in the traffic classification ACL

D. GDOI protocol configuration between group members and the key server

E. redundant IPsec tunnels between group members and the key server

F. redundant multicast replication streaming through the use of a bypass tunnel

Correct Answer: ABC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 33
Refer to the exhibit. Which two configuration changes enable you to log in to the router? (Choose two.)

```
aaa new-model
aaa authentication login default group tacacs+ local
aaa authentication enable default group tacacs+ enable
aaa authorization console
aaa authorization exec default group tacacs+ if-authenticated
aaa authorization commands 1 default group tacacs+ local if-authenticated
aaa authorization commands 4 default group tacacs+ if-authenticated
aaa authorization commands 15 default group tacacs+ local if-authenticated
aaa accounting exec default start-stop group tacacs+
aaa accounting commands 1 default start-stop group tacacs+
aaa accounting commands 15 default start-stop group tacacs+
aaa session-id common

line con 0
    exec-timeout 120 0
    logging synchronous
    transport input ssh telnet
    password cisco

line vty 0 4
    exec-timeout 120 0
    logging synchronous
    transport input ssh telnet
    password cisco
```

A. Configure a user name and password on the device.

B. Modify the default login authentication group to use the terminal line password.

C. Remove the terminal line password on the console line.

D. Modify the terminal lines to include transport input none.

E. Configure the terminal lines to use the local user database.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 34
Refer to the exhibit. Which log levels are enabled for the console?

```
R1#show logging
Syslog logging: enabled (0 messages dropped, 1 messages rate-limited, 0 flushes, 0 overruns, xml disabled, filtering disabled)

No Active Message Discriminator.

No Inactive Message Discriminator.

    Console logging: level informational, 47 messages logged, xml disabled, filtering disabled
    Monitor logging: level debugging, 0 messages logged, xml disabled, filtering disabled
    Buffer logging:  level debugging, 47 messages logged, xml disabled, filtering disabled
    Exception Logging: size (8192 bytes)
    Count and timestamp logging messages: disabled
    Persistent logging: disabled

No active filter modules.

    Trap logging: level informational, 51 message lines logged

Log Buffer (4096 bytes):
```

A. informational only

B. informational and debugging

C. informational, debugging, notifications, warnings, errors, critical, alerts, and emergencies

D. informational, notifications, warnings, errors, critical, alerts, and emergencies

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 35
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 ID on R2.
C. Reset the EIGRP neighbor relationship.
D. Clear the EIGRP process.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 36
Which two BGP path attributes are visible in Wireshark? (Choose two.)

A. weight
B. AS path
C. local preference
D. route maps

Correct Answer: BC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 37

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

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

A. Set mls 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.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 38
Which statement describes the effect of the configuration line redistribute maximum-prefix 1500 90 withdraw?

A. After the 1500th route is redistributed, a warning is posted in the log file and 90 more routes are redistributed before further routes are discarded.
B. After the 1350th route is redistributed, a warning is posted in the log file until the 1500th route is redistributed, and then further routes are discarded.
C. After the 1500th route is redistributed, further routes are discarded only if the CPU is above 90%.
D. The routing protocol receives 1500 routes. After the routing process has redistributed 90% of the routes, the process supernets routes and injects a NULL route to prevent black-hole routing.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 39
Which option is a correct match criteria for policy-based routing?

A. length
B. interface type

C. interface

D. cost

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 40
Which EIGRP configuration results in subsecond failover outside of the basic routing protocol convergence?

A. bfd all-interfaces

B. timers active-time disabled

C. timers active-time 1

D. timers nsf route-hold 20

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 41
Which two statements about BGP loop prevention are true? (Choose two.)

A. Advertisements from PE routers with per-neighbor SOO configured include a Site of Origin value that is equal to the configured value of the BGP peering.

B. If the configured Site of Origin value of a BGP peering is equal to the Site of Origin value on a route it receives, route advertisement is blocked to prevent a route loop.

C. AS-override aids BGP loop prevention, but alternate loop prevention mechanisms are also necessary.

D. Advertisements from the neighbors a BGP peering include a Site of Origin value that is separate from the configured value of the BGP peering.

E. If the configured Site of Origin value of a BGP peering is greater than the Site of Origin value on a route it receives, route advertisement is blocked to prevent a route loop.

F. If the configured Site of Origin value of a BGP peering is equal to the Site of Origin value on a route it receives, route advertisement is permitted.

Correct Answer: AB
Section: (none)

Explanation

Explanation/Reference:

QUESTION 42
Which option is the default point of insertion for the BGP cost community?

A. before best path calculation
B. after best path calculation
C. after the IGP metric comparison
D. after the router ID comparison

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 43
Refer to the exhibit. Which BGP feature allows R1 to send R2 a list of prefixes that R2 is prevented from advertising to R1?
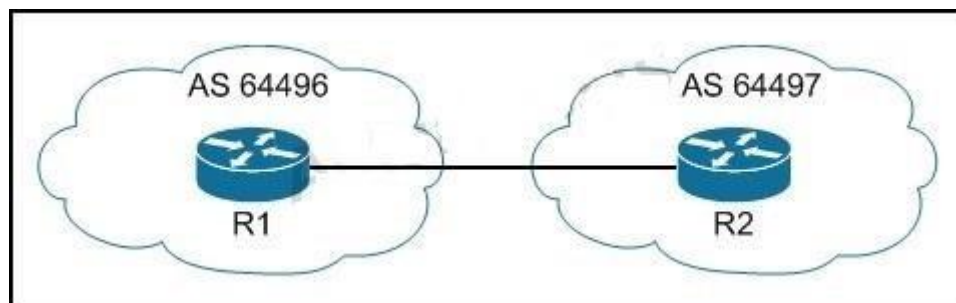
A. route refresh
B. Prefix-Based Outbound Route Filtering
C. distribute lists
D. prefix lists

Correct Answer: B
Section: (none)

Explanation

Explanation/Reference:

QUESTION 44
Refer to the exhibit. Which type of BGP peer is 192.168.1.1?

```
R1#show ip bgp neighbor 192.168.1.1

BGP neighbor is 192.168.1.1,  remote AS 64496, external link
    BGP version 4, remote router ID 192.168.1.1
    Neighbor under common administration
    BGP state = Established, up for 00:00:10
    Last read 00:00:10, last write 00:00:10, hold time is 180, keep alive interval is 60 seconds
    Neighbor capabilities:
        Route refresh: advertised and received(old & new)
        Address family IPv4 Unicast: advertised and received
    Message statistics:
        InQ depth is 0
        OutQ depth is 0
                                Sent        Rcvd
        Opens:                   1           1
        Notifications:           0           0
        Updates:                 0           0
        Keepalives:              1           1
        Route Refresh:           0           0
        Total:                   2           2
    Default minimum time between advertisement runs is 30 seconds
```

A. route reflector client
B. iBGP
C. confederation
D. VPNv4

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 45
Which option describes what the default RT filter indicates when you implement the BGP RT constrained route distribution feature?

A. A peer receives only a default route for each VRF.
B. A peer receives all routes, regardless of the RT value.
C. A peer receives routes only for RTs that are used on that router.
D. A peer receives no routes, regardless of the RT value.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 46
Refer to the exhibit. Which BGP feature is being used?

```
RT: del 10.2.2.2/32 via 192.168.1.2, ospf metric [110/2]
RT: delete subnet route to 10.2.2.2/32
RT: NET-RED 10.2.2.2/32
RT: Try lookup less specific 10.2.2.2/32, default 1
RT: Failed found subnet on less specific
RT: return NULL
%BGP-5-ADJCHANGE: neighbor 10.2.2.2 Down Route to peer lost
```

A. fast session deactivation
B. graceful restart
C. PIC
D. graceful shutdown

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 47
Refer to the exhibit. Which two issues can cause the interface VLAN10 to be down/down? (Choose two.)

```
SW1# show interface | include Vlan10 is
interface Vlan10 is down, line protocol is down
```

A. The VLAN is inactive or has been removed from the VLAN database.
B. STP is in a forwarding state on the port.
C. A Layer 2 access port is configured with VLAN10, but is in a down/down state.
D. The autostate exclude feature was used on interface VLAN10.

Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 48
Refer to the exhibit. Which two statements about this configuration are true? (Choose two.)

Fa0/21   Fa0/22
SW1   SW2
    Fa0/22   Fa0/21

SW1   SW2
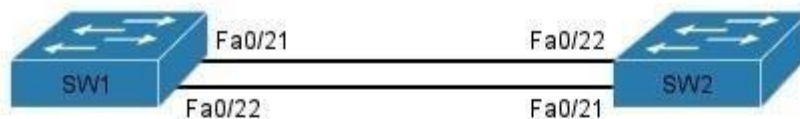
vlan 10   vlan 10
vlan 200   vlan 200

interface vlan 10   interface vlan 10
    ip address 172.29.1.1 255.255.255.0   ip address 172.29.1.2 255.255.255.0

interface fal/0/21   interface fal/0/21
    switchport trunk encapsulation dotlq   switchport trunk encapsulation dotlq
    switchport mode trunk   switchport mode trunk
    switchport trunk allowed vlan add 200   switchport trunk allowed vlan add 200, 10

interface fal/0/22   interface fal/0/22
    switchport trunk encapsulation dotlq   switchport trunk encapsulation dotlq
    switchport mode trunk   switchport mode trunk
    switchport trunk allowed vlan add 200   switchport trunk allowed vlan add 200, 10

A. Pings from SW2 to SW1 fail because SW1 is pruning VLAN 10.
B. VLANs 10 and 200 are added to the SW2 allowed list on interface fa0/22.
C. Pings from SW2 to SW1 are successful.
D. Only VLAN 200 is added to the SW1 allowed list on interface fa0/22.

Correct Answer: BC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 49

Refer to the exhibit. Which two conditions can cause this error message to be displayed on the console? (Choose two.)

```
%PM-4-ERR_DISABLE: channel-misconfig error detected on Po1, putting fa0/12 in err-disable state
```

A. The EtherChannel is configured as desirable on both ends.
B. The port-channel on the adjacent device is misconfigured.
C. There is a speed and duplex mismatch on interface fa0/12.
D. The EtherChannel is configured as auto on one of the interfaces.

Correct Answer: BC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 50
Which three statements about RIPng are true? (Choose three.)

A. It supports route tags.
B. It sends updates on FF02::9.
C. Its RTE last byte is 0XFF.
D. It supports authentication.
E. It sends updates on UDP port 520.
F. It can be used on networks of greater than 15 hops.

Correct Answer: ABC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 51
Which option is the result if two adjacent routers are configured for OSPF with different process IDs?

A. The routers are unable to establish an adjacency.
B. The routers establish an adjacency, but route exchange fails.

C. The routers establish an adjacency and exchange routes, but the routes are unreachable.

D. The routers establish an adjacency and exchange routes, and the routes are reachable.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 52
Which two commands enable OSPF graceful shutdown? (Choose two.)

A. nsf cisco
B. ip ospf shutdown
C. shutdown
D. nsf ietf helper disable

Correct Answer: BC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 53
Which object tracking function tracks the combined states of multiple objects?

A. application
B. interface
C. stub-object
D. list

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 54
Which two options are EEM policies? (Choose two.)

A. applets
B. event detectors
C. scripts
D. syslogs
E. actions

Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 55
Which two metrics are measured with active probes when PfR voice traffic optimization is in use? (Choose two.)

A. MOS
B. cost
C. jitter
D. bandwidth

Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 56
Which statement about NAT64 is true?

A. It uses one-to-one mapping between IPv6 addresses and IPv4 addresses.
B. It requires static address mapping between IPv6 addresses and IPv4 addresses.
C. It can be used to translate an IPv6 network to another IPv6 network.
D. It can be configured for stateless and stateful translation.

Correct Answer: D

Section: (none)
Explanation

Explanation/Reference:

QUESTION 57
Which three statements about the differences between Cisco IOS and IOS-XE functionality are true? (Choose three.)

A. Only IOS-XE Software can host applications outside of the IOS context.
B. Only the IOS-XE Services Plane has multiple cores.
C. Only the IOS-XE Data Plane has multiple cores.
D. Only the IOS-XE Control Plane has multiple cores.
E. Only IOS-XE module management integrates with packet processing.
F. Only IOS-XE configuration and control is integrated with the kernel.

Correct Answer: ABC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 58
While troubleshooting an issue for a remote user, you must capture the communication between the user's computer and a server at your location. The traffic passes through a Cisco IOS-XE capable switch. Which statement about obtaining the capture is true?

A. The Embedded Packet Capture application in the IOS-XE Software can capture the packets, but there is a performance impact.
B. The Embedded Packet Capture application in the IOS-XE Software can capture the packets without impacting performance.
C. The Mini Protocol Analyzer embedded in the IOS-XE Software can capture the packets without impacting performance.
D. The Mini Protocol Analyzer embedded in the IOS-XE Software can be used to capture the packets, but there is a performance impact.
E. Wireshark can capture packets through a SPAN port, but there is a performance impact.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 59
Which two actions can you take to recover an interface in a errdisable state? (Choose two.)

A. Enable UDLD on the switch.
B. Enable errdisable recovery on the switch.
C. Execute the shutdown command on the interface, followed by the no shutdown command.
D. Remove the related commands from the configuration and reenter them.
E. Enable loop guard on the switch.

Correct Answer: BC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 60
Which three protocols support SSM? (Choose three.)

A. IGMPv2
B. IGMPv3
C. IGMP v3lite
D. URD
E. CGMP
F. IGMPv1

Correct Answer: BCD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 61
Which additional feature must be enabled on a switch to allow PIM snooping to function correctly?

A. IGMP snooping
B. port security
C. storm control

D. dynamic ARP inspection

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 62
Which protocol uses a proprietary 2-byte Type field for multiple protocol support?

A. HDLC
B. PPP
C. CHAP
D. PAP

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 63
Refer to the exhibit. Which command can you enter to resolve this error message on a peer router?

```
CHAP: Unable to validate Response. Username <username> not found.
```

A. username <username> password <password>
B. ppp chap <hostname>
C. aaa authorization exec if-authenticated
D. aaa authorization network if-authenticated

Correct Answer: A
Section: (none)
Explanation

QUESTION 64
Refer to the exhibit. R2 is configured as the R1 neighbor in area 51, but R2 fails to receive the configured summary route. Which action can you take to correct the problem?

```
R1

interface Loopback0
    ip address 10.1.1.1 255.255.255.0
    ip ospf 1 area 0
    ip ospf network point-to-point
interface GigabitEthernet0/0
    ip address 192.168.252.1 255.255.255.252
    ip ospf 1 area 0
interface GigabitEthernet1/0
    ip address 172.16.252.1 255.255.255.252
    ip ospf 1 area 51
router ospf 1
    router-id 10.1.1.1
    summary-address 192.168.0.0 255.255.0.0
```

A. Replace the summary-address command with the area-range command.
B. Configure a summary address under R1interface GigabitEthernet0/0.
C. Configure a summary address under R1 interface GigabitEthernet1/0.
D. Configure the no discard-route command in the OSPF process of R1.
E. Configure ip ospf network broadcast under the Loopback0 interface of R1.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 65
Which two descriptions of the keying mechanisms that are used to distribute the session keys used in routing authentication are true? (Choose two.)

A. Peer keying creates a unique one-to-one relationship with another peer.

B. Group keying creates a single keying message to multiple peers.
C. Peer keying creates a single keying message to multiple peers.
D. Group keying creates a unique one-to-one relationship with another peer.
E. Group keying creates a full mesh of keying sessions to all devices.
F. Peer keying creates a full mesh of keying sessions to all devices.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 66
How many address families can a single OSPFv3 instance support?

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

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 67
Which two conditions must be met by default to implement the BGP multipath feature? (Choose two.)

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

Correct Answer: CE
Section: (none)

Explanation

Explanation/Reference:

QUESTION 68
Which two statements about LDP advertising when Explicit Null is in effect are true? (Choose two.)

A. Penultimate hop popping is disabled.
B. Penultimate hop popping is enabled.
C. It is the default behavior for LDP.
D. It is used for the advertisement of static routes.
E. It is used for the advertisement of connected routes.

Correct Answer: AE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 69
You are configuring a DMVPN hub to perform CBWFQ on a per-spoke basis. Which information is used to identify the spoke?

A. the NHRP network ID
B. the spoke tunnel source IP
C. the spoke tunnel interface IP address
D. the NHRP group

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 70
Which option is true about output policing for the control plane?

A. It improves router performance by limiting traffic sent to the control plane.

B. It improves router performance by limiting traffic sent from the control plane.
C. It improves router performance by limiting traffic sent to and from the control plane.
D. It controls traffic originated from the router.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 71
Which two types of traffic are blocked when the storm control threshold for multicast traffic is reached on a port? (Choose two.)

A. BPDU
B. OSPF
C. CDP
D. IS-IS
E. LLDP

Correct Answer: BD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 72
Which two options are contained in the MSG part of a syslog message? (Choose two.)

A. TAG field
B. CONTENT field
C. three-digit priority value
D. IP address of the sending device
E. TLS port number

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 73
Which two values are needed to configure NTP authentication? (Choose two.)

A. the encryption method
B. the key number
C. the burst mode
D. the key string
E. the Diffie-Hellman group

Correct Answer: BD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 74
You are configuring a DHCPv6 client for a DHCPv6 server with the prefix delegation feature. Which option is a result of the interface configuration when you enter the command ipv6 address autoconfig default?

A. a static IPv6 default route pointing to the upstream DHCP server
B. a static IPv6 default route pointing to the upstream DHCP relay
C. a static IPv6 default route pointing to the upstream router
D. a temporary stateless address, formed from the EUI-64 bit address and the prefix from the route advertisement of the upstream router

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 75
Refer to the exhibit. You are bringing a new MPLS router online and have configured only what is shown to bring LDP up. Assume that the peer has been configured in a similar manner. You verify the LDP peer state and see that there are no neighbors. What will the output of show mpls ldp discovery show?

```
!
interface Loopback25
 ip address 25.25.25.1 255.255.255.255
!
interface Ethernet0/0
 ip address 192.168.12.1 255.255.255.252
 mpls ip
!
```

A. Interfaces:
    Ethernet0/0 (ldp): xmit

B. Interfaces:
    Ethernet0/0 (ldp): xmit/recv
    LDP Id: 25.25.25.2:0; IP addr: 192.168.12.2

C. Interfaces:
    Ethernet0/0 (ldp): xmit/recv
    LDP Id: 192.168.12.2:0; no route

D. Interfaces:
    Ethernet0/0 (ldp): xmit/recv
    LDP Id: 25.25.25.2:0; no route

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 76
Which three features are common to OSPF and IS-IS? (Choose three.)

A. They both maintain a link-state database from which a Dijkstra-based SPF algorithm computes a shortest path tree.
B. They both use DR and BDR in the broadcast network.
C. They both use hello packets to form and maintain adjacencies.
D. They both use NSSA and stub type areas to scale the network design.
E. They both have areas to form a two-level hierarchical topology.

Correct Answer: ACE
Section: (none)

Explanation

Explanation/Reference:

QUESTION 77
Refer to the exhibit. Which two commands are required on R3 in order for MPLS to function? (Choose two.)
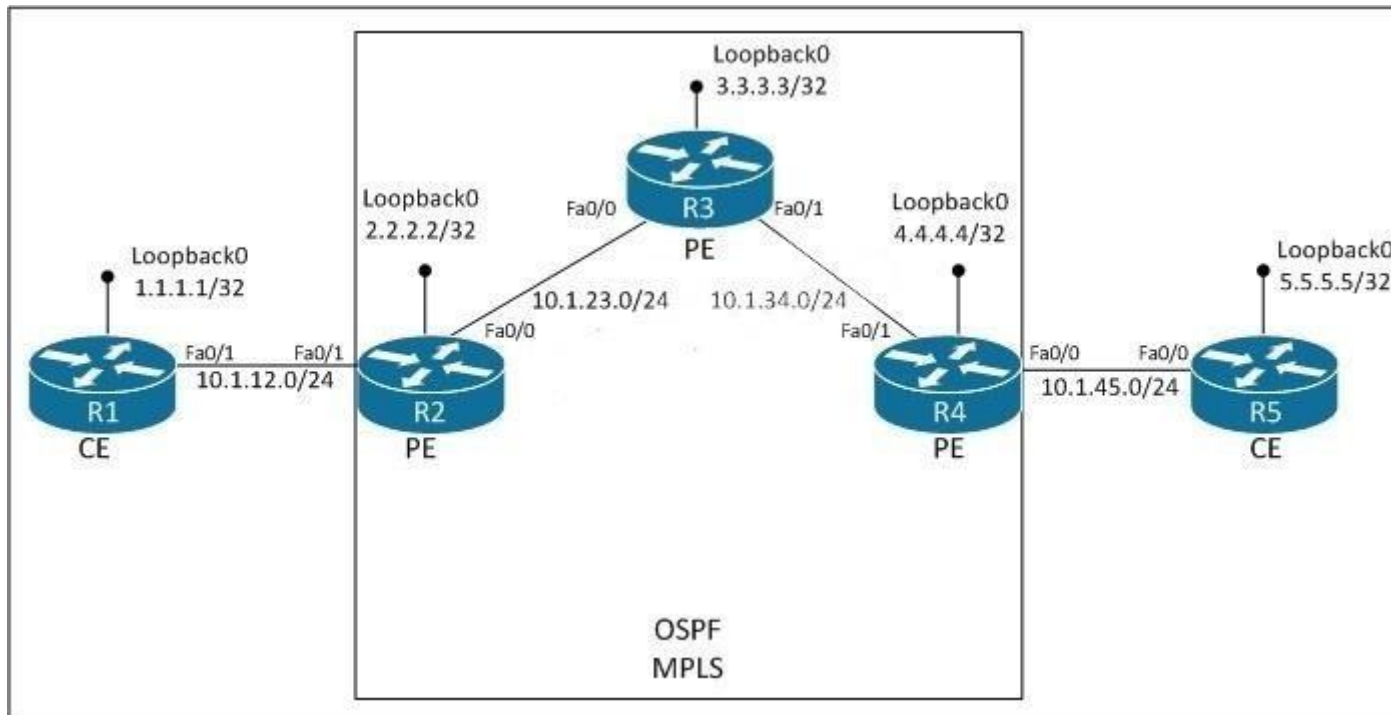
A. mpls ip
B. ip cef
C. mpls label protocol tdp
D. mpls ip propagate-ttl

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 78
Which two statements about the assert process in LAN-based PIM are true? (Choose two.)

A. If the metrics are the same, the router with the lowest advertised routing protocol metric for that route is elected.
B. If the metrics are the same, the router with the highest IP address on the LAN is elected.
C. If the metrics are the same, the router with the highest advertised routing protocol metric for that route is elected.
D. If the metrics are the same, the router with the lowest IP address on the LAN is elected.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 79
Which two options are the two underlying protocols on which a DMVPN relies? (Choose two.)

A. IPsec
B. NHRP
C. GDOI
D. ISAKMP
E. SSL
F. NLRI

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 80
Which three parameters must match to establish OSPF neighbor adjacency? (Choose three.)

A. the process ID
B. the hello interval

C. the subnet mask

D. authentication

E. the router ID

F. the OSPF interface priority

Correct Answer: BCD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 81
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

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 82
What are two reasons to use the ip ospf database filter all out command? (Choose two.)

A. to maintain a centralized OSPF database on a single master device

B. to avoid flooding LSAs on low-speed links

C. to ensure a consistent OSPF database across the network

D. to selectively filter OSPF routes without disrupting the SPF algorithm

E. to filter only type 7 LSAs from an OSPF area

F. to enable OSPF to send triggered updates

Correct Answer: AB
Section: (none)

Explanation

Explanation/Reference:

QUESTION 83
On a broadcast interface, which two OSPF states support BFD sessions? (Choose two.)

A. DR
B. BDR
C. DROTHER
D. 2WAY
E. FULL
F. ACTIVE

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 84
Which two statements about BGP best-path selection are true? (Choose two.)

A. The route with the highest local preference is preferred.
B. The weight attribute is advertised to peers.
C. The route with the lowest MED is preferred.
D. A route that originates from iBGP peers is preferred.
E. A route that originates from a router with a higher BGP router ID is preferred.
F. The lowest weight advertised is preferred.

Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 85

The no ip unreachables command is configured on interfaces to protect the control plane of a router.
Which mechanism is impacted by using this command?

A. ICMP redirects
B. path MTU discovery
C. source routing
D. ICMP router discovery protocol

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 86
Refer to the exhibit. The customer wants to use IP SLA to create a failover to ISP2 when both Ethernet connections to ISP1 are down. The customer also requires that both connections to ISP1 are utilized during normal operations.
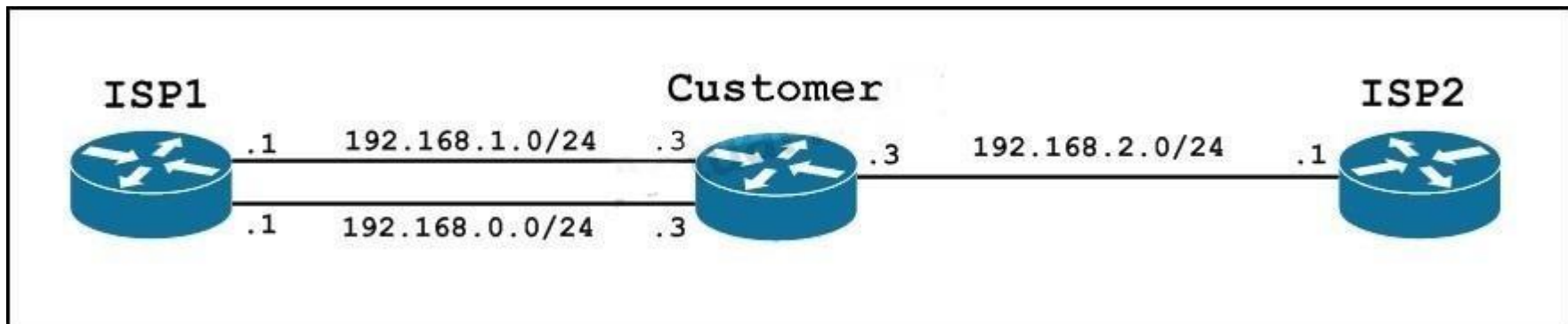
Which IP route configuration accomplishes these requirements for the customer?

A. ip route 0.0.0.0 0.0.0.0 192.168.0.1 track 1
   ip route 0.0.0.0 0.0.0.0 192.168.1.1 track 2
   ip route 0.0.0.0 0.0.0.0 192.168.2.1 track 3
B. ip route 0.0.0.0 0.0.0.0 192.168.0.1 track 1
   ip route 0.0.0.0 0.0.0.0 192.168.1.1 track 2
   ip route 0.0.0.0 0.0.0.0 192.168.2.1 track 4 100
C. ip route 0.0.0.0 0.0.0.0 192.168.0.1 track 1

ip route 0.0.0.0 0.0.0.0 192.168.1.1 track 2
ip route 0.0.0.0 0.0.0.0 192.168.2.1 track 3 100

D. ip route 0.0.0.0 0.0.0.0 192.168.0.1 track 1 1
ip route 0.0.0.0 0.0.0.0 192.168.1.1 track 2 2
ip route 0.0.0.0 0.0.0.0 192.168.2.1 track 3 3

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 87
Which statement describes what it means if a router has an OSPF priority set to 0?

A. A router with the OSPF priority set to 0 is one that can participate in the election of a DR. It has the highest priority.
B. A router with the OSPF priority set to 0 is one that cannot participate in the election of a DR, but it can become a BDR
C. A router with the OSPF priority set to 0 is one that cannot participate in the election of a DR. It can become neither a DR nor a BDR.
D. A router with the OSPF priority set to 0 is one that cannot participate in the election of a BDR, but it can become a DR

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 88
What is the maximum number of classes that MQC can support in a single policy map?

A. 512
B. 256
C. 128
D. 64

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 89
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

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 90
Drag and Drop Question
Drag each IPv6 extension header on the left to its corresponding description on the right.

AH	Specifies the path for a datagram.
Destination	Carries encrypted data.
ESP	Specifies the parameters used to split datagrams.
Fragment	Carries authentication information.
Hop-by-Hop	Specifies options to be examined only at the final device.
Routing	Specifies options to be examined by all devices.

A.

AH	Routing
Destination	ESP
ESP	Fragment
Fragment	AH
Hop-by-Hop	Destination
Routing	Hop-by-Hop

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 91
Drag and Drop Question
Drag each traceroute text character on the left to its meaning on the right.

*	The port is unreachable.
?	The probe timed out.
A	The protocol is unreachable.
P	Unknown packet type.
Q	The destination is too busy.
U	Prohibited.

A.

*	U
?	*
A	P
P	?
Q	Q
U	A

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 92
Drag and Drop Question
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

A.

neighbor redirect	neighbor advertisement
router solicitation	neighbor redirect
router advertisement	neighbor solicitation
neighbor advertisement	router advertisement
neighbor solicitation	router solicitation

Correct Answer: A

Section: (none)
Explanation

Explanation/Reference:

QUESTION 93
Drag and Drop Question
Drag and drop each BGP feature on the left to the corresponding function it performs on the right.

peer session templates	Applies configuration commands to a group of neighbors
peer policy templates	Separates updates from configurations, allowing groups to
peer groups	Supports the configuration of a group of neighbors by defining
BGP Dynamic Update Peer-Groups	Applies configuration commands to a group of neighbors
BGP dynamic neighbors	Creates a group of neighbors in the same address family that

A.

peer session templates	peer session templates
peer policy templates	BGP Dynamic Update Peer-Groups
peer groups	BGP dynamic neighbors
BGP Dynamic Update Peer-Groups	peer policy templates
BGP dynamic neighbors	peer groups

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 94
Drag and Drop Question
Drag and drop each DHCP term on the left to the corresponding definition on the right.

client identifier	The mapping of a MAC address and an IP address.
address binding	An address reserved for use by devices with static IP addresses.
excluded address	The value used to forward DHCP requests to remote servers.
DHCP pool	The hexadecimal value assigned to a host.
ip helper-address	A group of dynamic addresses.

A.

client identifier	address binding
address binding	excluded address
excluded address	ip helper-address
DHCP pool	client identifier
ip helper-address	DHCP pool

Correct Answer: A

Section: (none)
Explanation

Explanation/Reference:

QUESTION 95
Drag and Drop Question
Drag and drop each step of the Unicast RPF process on the left into the correct order on the right.

Unicast RPF performs a CEF table lookup for packet forwarding.	1
Unicast RPF performs a reverse lookup of the return path in	2
The packet is received on the interface.	3
The output ACL is checked on the forwarding interface.	4
The packet is forwarded.	5
The packet is checked against the inbound ACL.	6

A.

Unicast RPF performs a CEF table lookup for packet forwarding.	The packet is received on the interface.
Unicast RPF performs a reverse lookup of the return path in	The packet is checked against the inbound ACL.
The packet is received on the interface.	Unicast RPF performs a reverse lookup of the return path in
The output ACL is checked on the forwarding interface.	Unicast RPF performs a CEF table lookup for packet forwarding.
The packet is forwarded.	The output ACL is checked on the forwarding interface.
The packet is checked against the inbound ACL.	The packet is forwarded.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 96
Drag and Drop Question
Drag and drop the SNMP element on the left to the corresponding definition on the right.

Get	an inquiry for a MIB-leaf variable
GetNext	a reply to a request
GetBulk	a router request for a single variable's value
Response	a single inquiry for multiple, consecutive MIB variables

A.

Get	GetNext
GetNext	Response
GetBulk	Get
Response	GetBulk

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 97
Drag and Drop Question
Drag and drop each PHB on the left to the functionality it performs on the right.

Default		Provides low-latency, low-loss, low-jitter, and assured bandwidth service.
Expedited Forwarding		Provides backward compatibility with IP-precedence.
Assured Forwarding		Assigns best effort service to the packet.
Class Selector		Defines classes for traffic allocation

A.

Default		Expedited Forwarding
Expedited Forwarding		Class Selector
Assured Forwarding		Default
Class Selector		Assured Forwarding

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 98

Drag and Drop Question
Drag and drop each policy command on the left to the function it performs on the right.

bandwidth	Enables CBWFQ.
random-detect	Configures the queuing of excess traffic for later transmission.
service-policy	Configures the dropping of excess traffic when a maximum rate
police	Enables WFQ.
shape	Enables a traffic policy on an interface.
fair-queue	Enabled WRED or DWRED.

A.
B.
C.
D.

Correct Answer:
Section: (none)
Explanation

Explanation/Reference:

bandwidth	bandwidth
random-detect	shape
service-policy	police
police	fair-queue
shape	service-policy
fair-queue	random-detect

Exam F

QUESTION 1
Which two statements about VPLS are true? (Choose two.)

A. Split horizon is used on PE devices to prevent loops.
B. Spanning tree is extended from CE to CE.
C. IP is used to switch Ethernet frames between sites.
D. PE routers dynamically associate to peers.
E. VPLS extends a Layer 2 broadcast domain.

Correct Answer: AE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 2
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.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 3
Refer to the exhibit. The two standalone chassis are unable to convert into a VSS. What can you do to correct the problem?

```
S1                    S2

S1#                           S2#

redundancy                    redundancy
   mode sso                      mode sso

switch virtual domain 200     switch virtual domain 200
   switch 1                      switch 2

interface port-channel 200    interface port-channel 200
   switch virtual link 1         switch virtual link 2
   no shutdown                   no shutdown

interface range TenGigabitEthernet3/1-2   interface range TenGigabitEthernet3/1-2
   channel-group 200 mode on     channel-group 200 mode on
   no shutdown                   no shutdown
```

A. Set a different port channel number on each chassis.
B. Set a different virtual domain ID on each chassis.
C. Set the redundancy mode to rpr on both chassis.
D. Add two ports to the port channel group.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 4
Which three address family types does EIGRP support? (Choose three.)

A. IPv4 unicast

B. IPv4 multicast

C. IPv6 unicast

D. IPv6 multicast

E. IPv4 anycast

F. IPv6 anycast

Correct Answer: ABC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 5
Which two values must be identical to allow IS-IS devices to become neighbors? (Choose two.)

A. interface MTU

B. authentication key

C. IP MTU

D. CLNS address

E. NSEL

F. area ID

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 6
Which Layer 2 tunneling technique eliminates the need for pseudowires?

A. OTV

B. L2TPv3

C. AToM

D. VPLS

Correct Answer: A

Section: (none)
Explanation

Explanation/Reference:

QUESTION 7
Which two application protocols require application layer gateway support when using NAT on a Cisco router? (Choose two.)

A. SIP
B. HTTP
C. FTP
D. SMTP
E. POP3

Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 8
Which three options must be configured when deploying OSPFv3 for authentication? (Choose three.)

A. security parameter index
B. crypto map
C. authentication method
D. IPsec peer
E. encryption algorithm
F. encryption key
G. IPsec transform-set
H. authentication key

Correct Answer: ACH
Section: (none)
Explanation

Explanation/Reference:

QUESTION 9
Which two statements about IOS and IOS XE are true? (Choose two.)

A. IOS XE can upgrade and restart applications independently of IOS.
B. Only IOS uses the FFM to provide separation between the control plane and the data plane.
C. IOS XE provides improved functionality and an enhanced UI.
D. Only IOS runs as a single daemon within the Linux OS.
E. IOS XE provides additional system functions that run as multiple separate processes in the OS.

Correct Answer: AE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 10
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. Both ABRs forward Type-5 LSAs from the NSSA area to backbone area.
D. No LSA translation is needed.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 11
Which two options are requirements to implement 6VPE? (Choose two.)

A. MPLS between PEs
B. 6-in-4 tunnels between PEs
C. MP-BGP VPNv6 exchange
D. MP-BGP IPv6+label exchange
E. Any Transport over MPLS

F. IPv4/IPv6 dual-stack in core

Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 12
Refer to the exhibit. All routers are running EIGRP and the network has converged. R3 and R4 are configured as EIGRP Stub. if the link between R1 and R3 goes down, which statement is true?
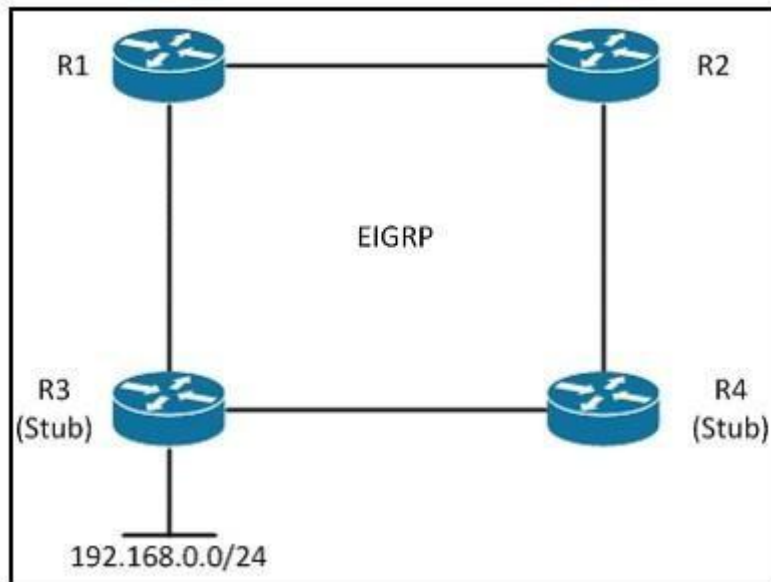
A. R1 sends traffic destined to 192.168.0.100 via R2.
B. R2 does not have a route to 192.168.0.0/24 in the routing table.
C. The prefix 192.168.0.0/24 becomes stuck-in-active on R4.
D. R3 does not advertise 192.168.0.0/24 to R4 anymore.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 13
Which three options are characteristics of a Type 10 LSA? (Choose three.)

A. It is an area-local, opaque LSA.
B. Data is flooded to all routers in the LSA scope.
C. It is used for traffic-engineering extensions to OSPF.
D. It is a link-local, opaque LSA.
E. Data is flooded only to the routers in the LSA scope that understand the data.
F. It is used for traffic-engineering extensions to LDP.

Correct Answer: ABC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 14
Refer to the exhibit. Which two statements about this capture are true? (Choose two.)

```
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
```

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 run 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.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 15
Which three types of address-family configurations are supported in EIGRP named mode? (Choose three.)

A. address-family ipv4 unicast

B. address-family vpnv4

C. address-family ipv6 unicast

D. address-family ipv6 multicast

E. address-family vpnv6

F. address-family ipv4 multicast

Correct Answer: ACF
Section: (none)
Explanation

Explanation/Reference:

QUESTION 16
Refer to the exhibit. Which three statements about the device with this configuration are true? (Choose three.)

```
%TCP-6-BADAUTH: Invalid MD5 digest from 172.16.129.4(179) to 172.16.129.7(43766) tableid - 0
BGP: tbl IPv4 Unicast:base Service reset requests
BGP: tbl IPv4 MDT:base Service reset requests
BGP: tbl VPNv4 Unicast:base Service reset requests
BGP: tbl IPv4 Multicast:base Service reset requests
```

A. Multiple AFIs are configured on the device.

B. The authentication on 172.16.129.7 is configured incorrectly.

C. The device is configured to support MPLS VPNs.

D. This device is configured with a single AFI.

E. The authentication on 172.16.129.4 is configured incorrectly.

F. The device is configured to support L2VPNs.

Correct Answer: ABC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 17
Refer to the exhibit. Which configuration must you apply to router R2 to enable BFD?


```
                                                    R1
.1 e0/0
        R1                                          interface loopback0
                        network                     10.255.255.1 255.255.255.255
10.1.1.0                                            interface ethernet 0/0
                                                    ip address 10.1.1.1 255.255.255.0
.2 e0/0                                             bfd interval 400 min_rx 400 multiplier 4
        R2                                          ip route static bfd ethernet 0/0 10.1.1.2
  lo0 10.255.255.2/32                               ip route 10.0.0.0 255.0.0.0 ethernet 0/0 10.1.1.2
```
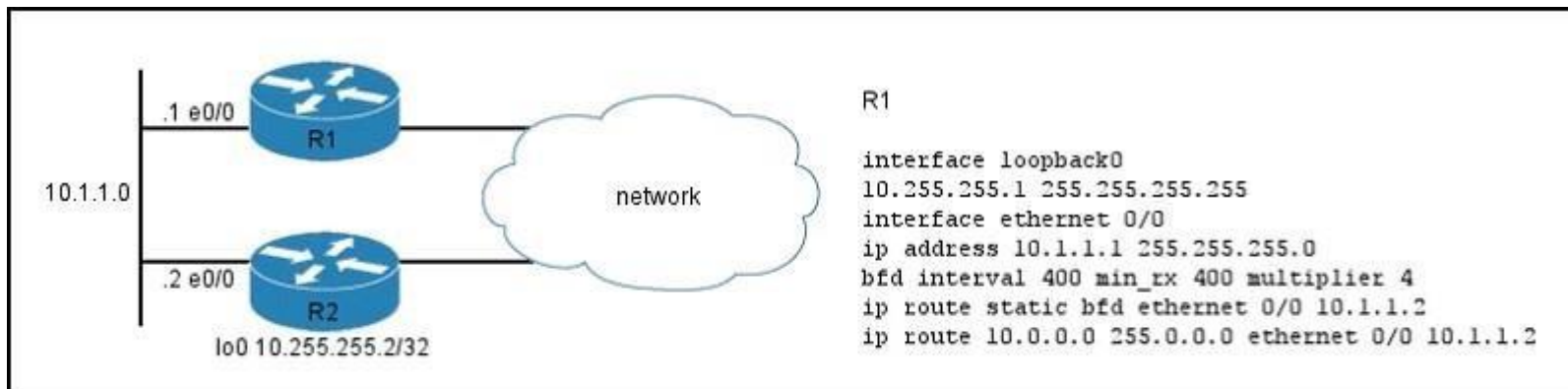
A.

```
interface Ethernet 0/0
ip address 10.1.1.2 255.255.255.0
bfd interval 400 min_rx 400 multiplier 4
ip route static bfd Ethernet 0/0 10.1.1.1
ip route 10.255.255.2 255.255.255.255 ethernet 0/0 10.1.1.1
```

B.

```
interface Ethernet 0/0
ip address 10.1.1.2 255.255.255.0
bfd interval 400 min_rx 400 multiplier 4
ip route static bfd Ethernet 0/0 10.1.1.2
ip route 10.255.255.2 255.255.255.255 ethernet 0/0 10.1.1.1
```

C.

```
interface Ethernet 0/0
ip address 10.1.1.2 255.255.255.0
bfd interval 400 min_rx 400 multiplier 4
ip route static bfd Ethernet 0/0 10.255.255.1
ip route 10.0.0.0 255.0.0.0 ethernet 0/0 10.1.1.1
```

D.

```
interface Ethernet 0/0
ip address 10.1.1.2 255.255.255.0
bfd interval 400 min_rx 400 multiplier 4
ip route static bfd Ethernet 0/0 10.1.1.1
ip route 10.255.255.1 255.255.255.255 ethernet 0/0 10.1.1.2
```

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 18
Which two options about PIM-DM are true? (Choose two.)

A. PIM-DM initally floods multicast traffic throughout the network.
B. In a PIM-DM network, routers that have no upstream neighbors prune back unwanted traffic.
C. PIM-DM supports only shared trees.
D. PIM-DM uses a pull model to deliver multicast traffic.
E. PIM-DM cannot be used to build a shared distribution tree.

Correct Answer: AE

Section: (none)
Explanation

Explanation/Reference:

QUESTION 19
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.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 20
What are three required commands when you enable source-specific multicast for addresses in the range 233.0.0.0/8? (Choose three.)

A. ip multicast-routing
B. ip igmp version 3
C. ip pim ssm-range 233.0.0.0/8
D. ip igmp version 2
E. ip pim ssm-range default
F. set routing-options multicast ssm-groups 233.0.0.0/8

Correct Answer: ABC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 21

Refer to the exhibit. Which statement about this GETVPN configuration is true?

```
crypto isakmp keepalive 15 periodic
crypto gdoi group testgroup
server local
address ipv4 10.1.1.1
redundancy
local priority 200
peer address ipv4 10.1.2.2
```

A. Co-operative key servers are configured.
B. Redundant peers are configured.
C. The key server uses multicast mode to propagate rekey messages.
D. PSK authentication is configured.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 22
Which option is the origin code when a route is redistributed into BGP?

A. IGP
B. EGP
C. external
D. incomplete
E. unknown

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 23
Which packet does a router receive if it receives an OSPF type 4 packet?

A. hello packet
B. database descriptor packet
C. link state update packet
D. link state request packet
E. link state acknowledge packet

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 24
Refer to the exhibit. Why is the host unable to obtain an IP address?

```
Switch1#

service dhcp
ip dhcp relay information option 43

vlan 15

interface Vlan15
    ip address 10.10.15.1 255.255.255.0
    ip helper-address 172.16.1.2

interface GigabitEthernet0/0
    switchport mode access
    switchport access vlan 15
    ip verify source
```
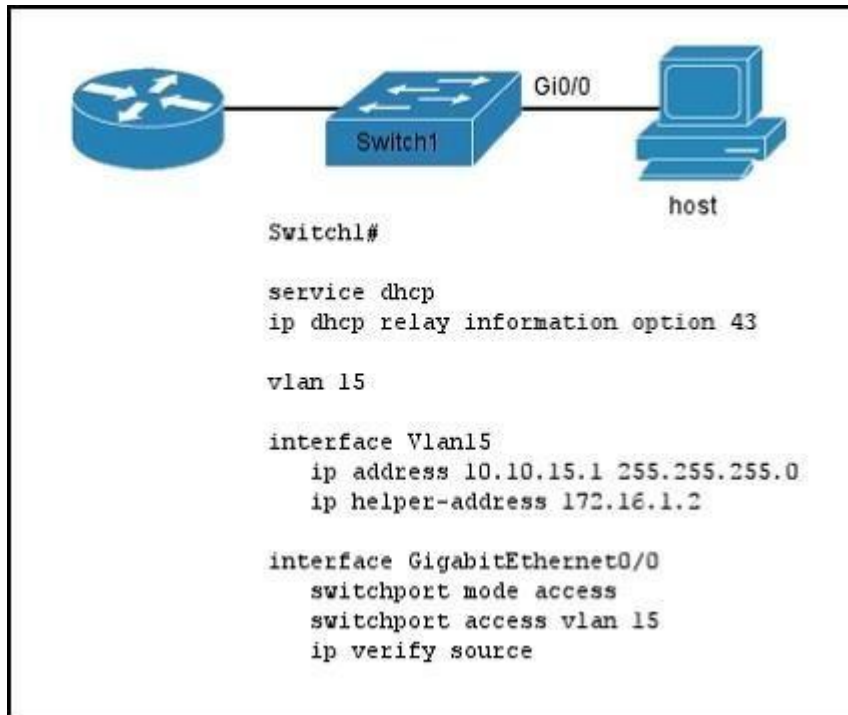
A. IP source guard is configured on the switch port.
B. The DHCP server pool addresses are configured incorrectly.
C. DHCP requests are being blocked.
D. DHCP option 150 is disabled.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 25
Which three statements about DMVPN are true? (Choose three.)

A. It facilitates zero-touch configuration for addition of new spokes.
B. It supports dynamically addressed spokes using DHCP.

C. It features automatic IPsec triggering for building an IPsec tunnel.
D. It requires uses of IPsec to build the DMVPN cloud.
E. Spokes can build tunnels to other spokes and exchange traffic directly.
F. It supports server load balancing on the spokes.

Correct Answer: ACE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 26
Which two options are disadvantages of a commingled dual-tier WAN rate-based Ethernet circuit? (Choose two.)

A. It requires the maintenance of separate chassis.
B. It has limited scalability.
C. It requires additional CPU resources at the subscriber end.
D. It is more difficult to secure.
E. It can increase the likelihood of packet drops.

Correct Answer: AE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 27
When the BGP additional-paths feature is used, what allows a BGP speaker to differentiate between the different available paths?

A. The remote BGP peer prepends its own next-hop address to the prefix.
B. A unique path identifier is encoded into a dedicated field to the NLRI.
C. A route distinguisher is appended to the prefix by the receiving BGP speaker.
D. The additional path information is encoded in an extended community.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 28
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.

Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 29
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 sends 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.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 30
When you enable the MPLS Multi-VRF feature, which two supported routing protocols can be used to exchange routing information between PE routers and CE routers? (Choose two.)

A. BGP
B. RIP
C. OSPF

D. EIGRP

E. IS-IS

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 31
Refer to the exhibit. Which two actions can you take to enable CE-1 at site A to access the Internet? (Choose two.)
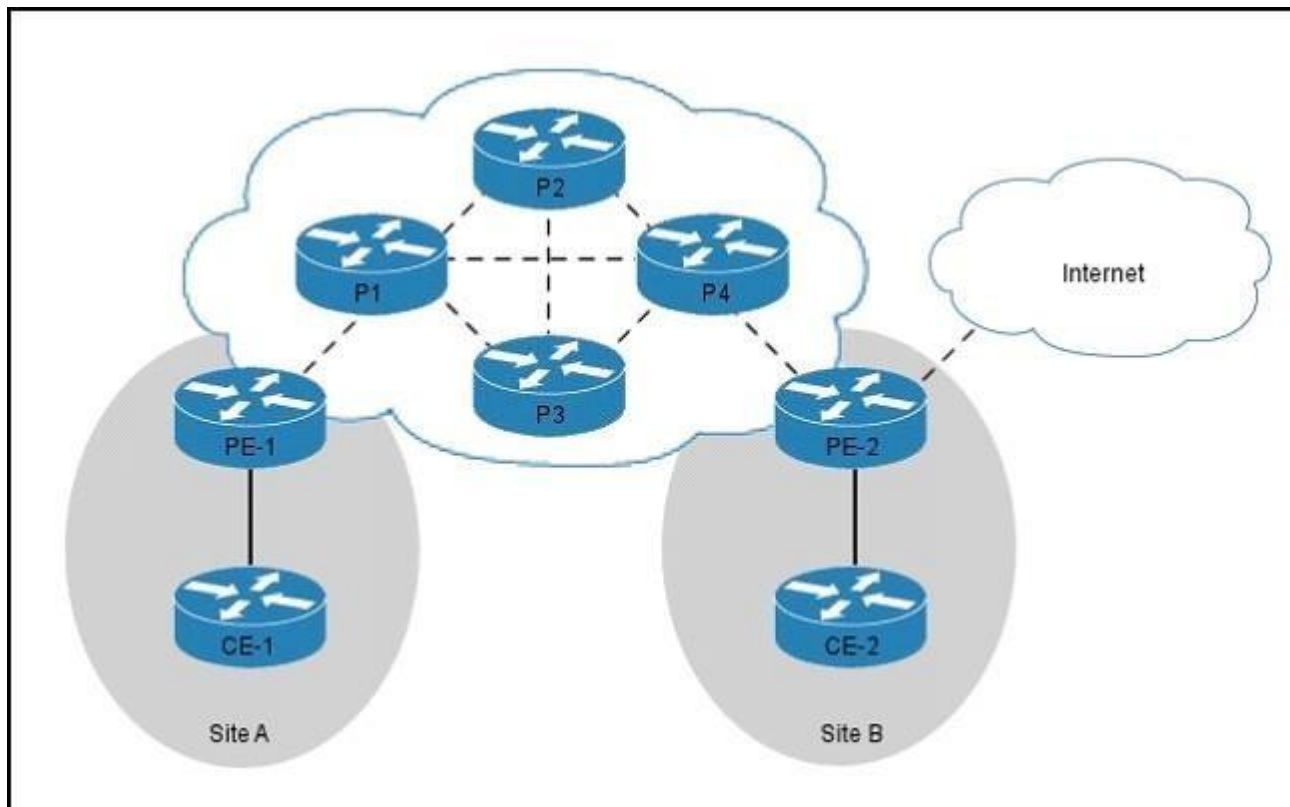
A. Create a default route for site A on PE-1 with the next hop set to the PE-2 interface to the Internet.

B. Originate a default route in site B with the next hop set to the PE-2 Internet interface, and import the default route into site A.

C. Create a default route on CE-1 with the next hop set to the PE-1 upstream interface.

D. Originate a default route in site A with the next hop set to the PE-2 interface to CE-1.

E. Create a static default route on CE-1 with the next hop set to the PE-2 interface to the Internet.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 32
Which statement about OSPF loop prevention is true?

A. The discard route is generated automatically on the ABR to prevent routing loops.

B. The ASBR uses type 3 LSAs from non-backbone areas to prevent control-plane routing loops.

C. The ABR can filter type 3 LSPs to prevent routing loops.

D. The DN bit ignores LSA types 2, 3, and 5 to prevent routing loops.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 33
Which map is locally defined?

A. DSCP-to-DSCP-mutation

B. CoS-to-DSCP

C. IP-precedence-to-DSCP

D. DSCP-to-CoS

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 34
What is the VLAN ID range of VLANs that are eligible for pruning?

A. 2 through 1001
B. 1 through 1005
C. 1 through 4096
D. 2 through 1005

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 35
Which two statements about IS-IS wide metrics are true? (Choose two.)

A. The wide metric is a 24-bit field.
B. The maximum link metric is 16777215.
C. R3 and R4 periodically advertise PNSP messages to synchronize the IS-IS database.
D. IS-IS devices that are enabled with wide metrics can become neighbors with a device that uses standard metrics.
E. The maximum link metric is 4261412864.
F. The maximum path metric is 16777215.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 36
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.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 37
RIPv2 is enabled on a router interface. The "neighbor" command is also configured with a specific IP address. Which statement describes the effect of this configuration?

A. RIP stops sending multicast packets on that interface.

B. RIP starts sending only unicast packets on that interface.

C. RIP starts ignoring multicast packets on that interface.

D. RIP starts sending unicast packets to the specified neighbor, in addition to multicast packets.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 38
When you implement CoPP on your network, what is its default action?

A. permit all traffic

B. rate-limit bidirectional traffic to the control plane

C. drop management ingress traffic to the control plane

D. monitor ingress and egress traffic to the control plane by using access groups that are applied to the interface

E. block all traffic

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 39
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 an optional checksum at the transport layer.
F. IPv6 uses a required checksum at the network layer.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 40
What are two benefits of NVI? (Choose two.)

A. It provides scalability by maintaining a NAT table on every interface.
B. It can dynamically create a static route to the NAT pool for translation.
C. It supports the use of route maps for policy-based NAT.
D. It supports the use of a single interface for translations.
E. It injects a route into the existing routing protocol that directs translation to the NAT pool.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 41
Which two BGP attributes are optional, non-transitive attributes? (Choose two.)

A. AS path

B. local preference
C. MED
D. weight
E. cluster list

Correct Answer: CE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 42
Which three statements about EIGRP wide metrics are true? (Choose three.)

A. The maximum metric is 65536.
B. The default delay is 1,000,000 picoseconds.
C. They allow up to 100 hops.
D. They allow up to 256 hops.
E. The default delay is 1,000,000 milliseconds.
F. The maximum metric is 51200.

Correct Answer: ABC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 43
Which component of the BGP ORF can you use to permit and deny routing updates?

A. match
B. action
C. AFI
D. SAFI
E. ORF type

Correct Answer: A

Section: (none)
Explanation

Explanation/Reference:

QUESTION 44
Which two issues is TCP Sequence Number Randomization designed to prevent? (Choose two.)

A. DDOS attacks
B. OS fingerprinting
C. man-in-the-middle attacks
D. ARP poisoning
E. Smurf attack

Correct Answer: BC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 45
Which two OSPF network types require the use of a DR and BDR? (Choose two.)

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

Correct Answer: AD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 46
Which attribute is transported over an MPLS VPN as a BGP extended community?

A. route target
B. route distinguisher
C. NLRI
D. origin
E. local preference

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 47
Which two statements about IP SLAs are true? (Choose two.)

A. They are Layer 2 transport independent.
B. Statistics are collected and stored in the RIB.
C. Data for the delay performance metric can be collected both one-way and round-trip.
D. Data can be collected with a physical probe.
E. They are used primarily in the distribution layer.

Correct Answer: AE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 48
Which three improvements does Cisco IOS XE Software offer over traditional IOS Software? (Choose three.)

A. It can run applications as separate processes on multicore CPUs.
B. It supports drivers for data plane ASICs outside of the operating system.
C. It allows platform-dependent code to be compiled into a single image.
D. It supports multiple IOS instances simultaneously, sharing resources and internal infrastructure for scalability.
E. It allows platform-independent code to be abstracted into a single microkernel for portability across platforms.
F. It uses a QNX Neutrino-based environment underneath the IOS Software.

Correct Answer: ABC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 49
Refer to the exhibit. R1 and R2 both advertise 10.50.1.0/24 to R3 and R4 as shown. R1 is the primary path. Which path does traffic take from the R4 data center to the file server?
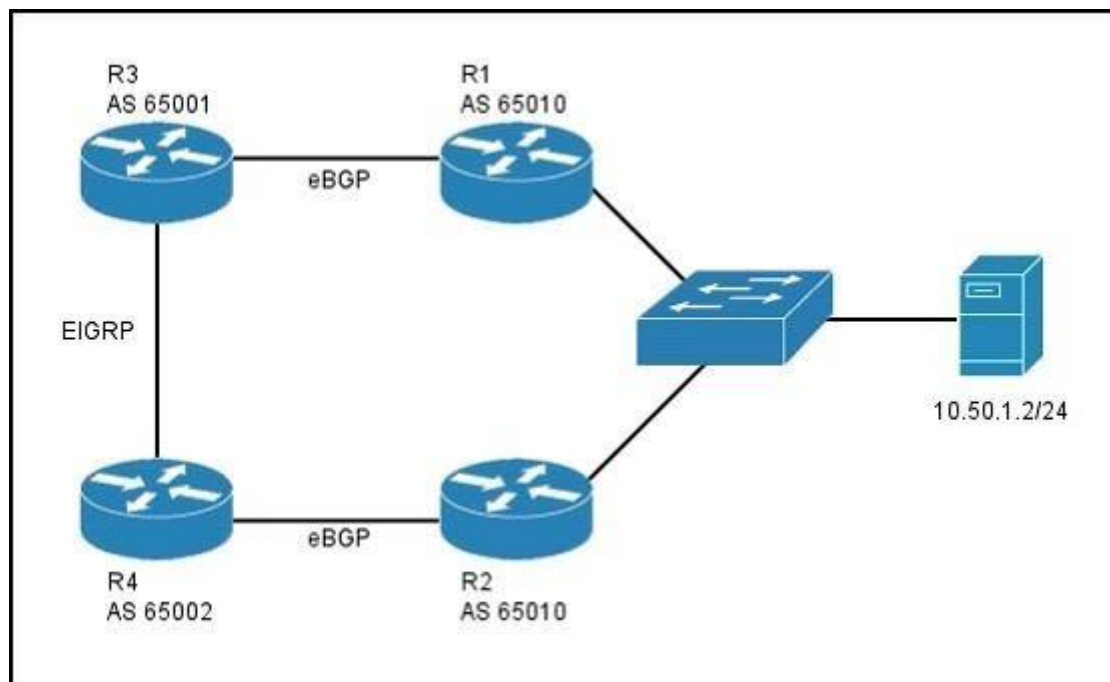
A. All traffic travels from R4 to R2 to the file server.
B. All traffic travels from R4 to R3 to R1 to the file server.
C. Traffic is load-balanced from R4 to R2 and R3. Traffic that is directed to R3 then continues to R1 to the file server. Traffic that is directed to R2 continues to the file server.
D. All traffic travels from R4 to R2 to R1 to the file server.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 50
Refer to the exhibit. If a console port is configured as shown, which response is displayed when you connect to the console port?

```
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
```

A. a blinking cursor
B. the message "Authorized users only"
C. the username prompt
D. three username name prompts followed by a timeout message
E. the message "Connection refused"

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 51
Refer to the exhibit. Your organization has two offices, Site 1 and Site 2, which are connected by a provider backbone, as shown. Where must you configure an attachment circuit to allow the two sites to connect over a Layer 2 network using L2TPv3?
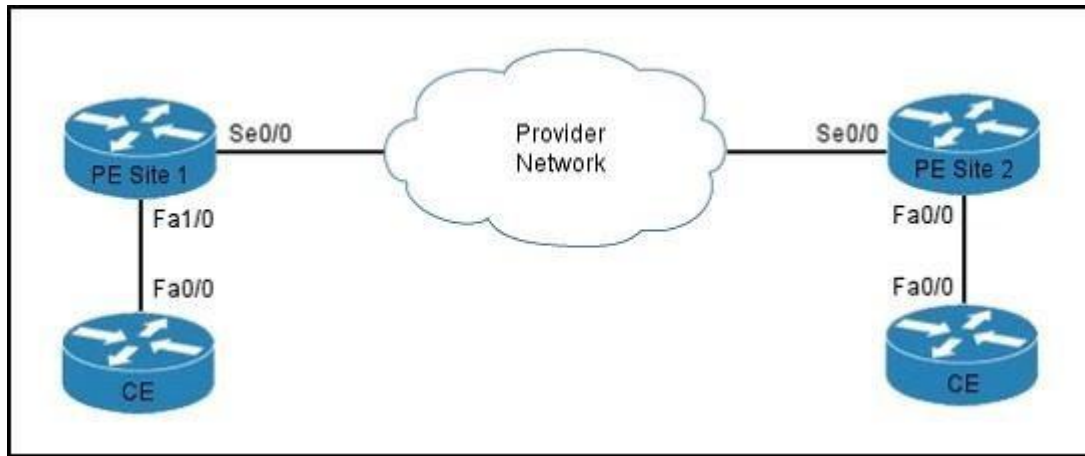
A. PE Site 1 Fa1/0 and PE Site 2 Fa0/0
B. CE Site 1 Fa0/0 and CE Site 2 Fa0/0
C. PE Site 1 Se0/0 and PE Site 2 Se0/0
D. CE Site 1 Fa0/0 and PE Site 2 Se0/0

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 52
What is the destination address of an IGMPv2 general membership query?

A. 224.0.0.1
B. 224.0.1.1
C. 224.0.0.2
D. the multicast group address

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 53
Which statement about SSHv2 is true?

A. Routers acting as SSH clients can operate without RSA keys.
B. SSHv2 supports port forwarding and compression.
C. The RSA key pair size must be at least 512.
D. You must configure a default gateway before you enable SSHv2.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 54
Refer to the exhibit. What kind of problem is detected?

```
Router#ping
Protocol [ip]:
Target IP address: 209.165.200.200
Repeat count [5]: 1
Datagram size [100]:
Timeout in seconds [2]:
Extended commands [n]: y
Source address or interface:
Type of service [0]:
Set DF bit in IP header? [no]: y
Validate reply data? [no]:
Data pattern [0xABCD]:
Loose, Strict, Record, Timestamp, Verbose[none]:
Sweep range of sizes [n]: y
Sweep min size [36]: 1460
Sweep max size [18024]: 1500
Sweep interval [1]:
Type escape sequence to abort.
Sending 41, [1460..1500]-byte ICMP Echos to 209.165.200.200,
timeout is 2 seconds:
Packet sent with the DF bit set
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!MMMMMMMM
Success rate is 80 percent (33/41), round-trip min/avg/max =
28/28/32 ms
Router#
```

A. The packet types that are being sent are unknown.
B. The maximum MTU size that can be used is 1492.
C. Waiting for a reply timed out.
D. Fragmentation starts to occur when the MTU of 1472 is reached.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 55
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 interfaces 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.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 56
Refer to the exhibit. Router R2 is learning the 192.168.1.0/24 network from R1 via EIGRP and eBGP. R2 then redistributes EIGRP into OSPF as metric-type 2 with default metrics. Which metric of the route in the R3 routing table?
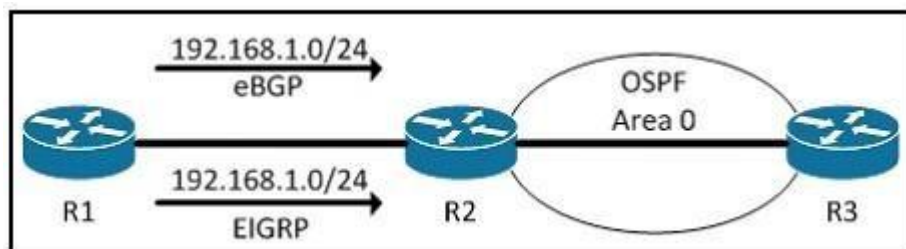
A. 20
B. 30
C. 110
D. The route is not present in the R3 routing table.

Correct Answer: D
Section: (none)

Explanation

Explanation/Reference:

QUESTION 57
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.

Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 58
Refer to the exhibit. The VLAN-to-MST mapping is shown. (Assume SW1 acts as root for all possible MST instances.)
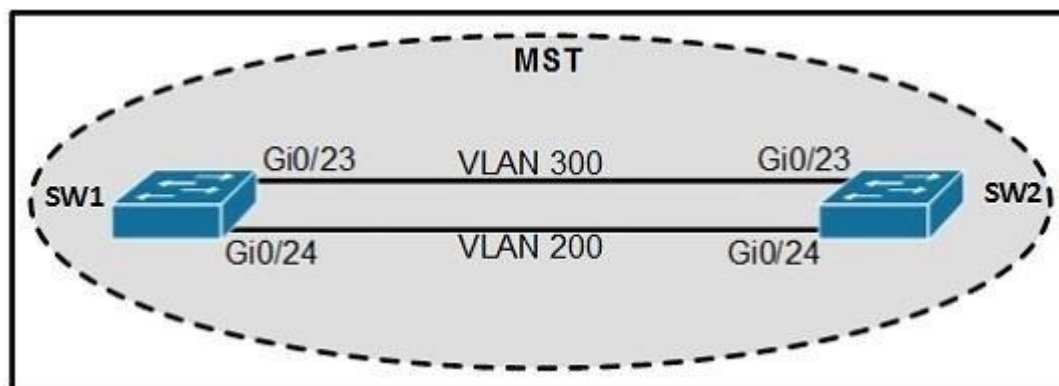

```
spanning-tree mst configuration name MST?
revision 2?
instance 0 vlan 1-200,301-4094 instance 1 vlan 201-300 !
```

If this topology is deployed, which action is required for traffic to flow on VLAN 200 and 300?

A. Map VLAN 300 to instance 0.
B. Map VLAN 200 to instance 2.
C. Move instance 0 root to SW2.
D. Move instance 1 root to SW2.
E. Map both VLANs to instance 2.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 59
Which two statements about VRRP are true? (Choose two.)

A. It is assigned multicast address 224.0.0.18.
B. The TTL for VRRP packets must be 255.
C. It is assigned multicast address 224.0.0.9.
D. Its IP protocol number is 115.
E. Three versions of the VRRP protocol have been defined.
F. It supports both MD5 and SHA1 authentication.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 60
Which two statements about IBGP multipath are true? (Choose two.)

A. The IGP metric of the BGP next hop can be different from the best-path IGP metric if you configure the router for unequal-cost IBGP multipath.
B. The IGP metric of the BGP next hop must be the same as the best-path IGP metric.
C. The equivalent next-hop-self is performed on the best path from among the IBGP multipaths before it is forwarded to external peers.

D. The path should be learned from an external neighbor.

E. The router BGP process must learn the path from a confederation-external or external neighbor.

F. The router BGP process must learn the path from an internal neighbor.

Correct Answer: AF
Section: (none)
Explanation

Explanation/Reference:

QUESTION 61
Which statement about a P router in a Layer 3 MPLS VPN is true?

A. It is unaware of VPN routes.

B. It connects to customer edge routers.

C. It participates in MPLS VPN routing.

D. It uses the running IGP to share VPN routes.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 62
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.

Correct Answer: AE
Section: (none)
Explanation

QUESTION 63
Which two statements about the MAC address table space are true? (Choose two.)

A. You can disable learning on a VLAN to reduce table-space requirements.
B. When you disable learning on a VLAN with an SVI, IP packet flooding in the Layer 2 domain is also disabled.
C. Unicast, multicast, and broadcast MAC address filtering is configured globally and disabled by default.
D. The default setting for static MAC addresses to age out of the MAC address table is 300 seconds.
E. Turning off MAC learning on VLANs 900 through 1005 disables learning on VLANs 900 through 1001.

Correct Answer: AE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 64
Which statement about LISP encapsulation in an EIGRP OTP implementation is true?

A. OTP uses LISP encapsulation for dynamic multipoint tunneling.
B. OTP maintains the LISP control plane.
C. OTP uses LISP encapsulation to obtain routes from neighbors.
D. LISP learns the next hop.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 65
Refer to the exhibit. Which two benefits result from using this command on a switch? (Choose two.)

```
Switch(config-if)#switchport block unicast
```

A. The port cannot forward unknown unicast packets.
B. Network security is increased on the configured port.
C. The port cannot forward unknown multicast packets.
D. The port cannot forward unknown broadcast packets.
E. Network security is increased on all ports of the switch.
F. Unknown packets of all types, except unicast, are blocked.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 66
Refer to the exhibit. IPv6 SLAAC clients that are connected to the router are unable to acquire IPv6 addresses.
What is the reason for this issue?

```
ROGW-1#show ipv6 interface g0/1
GigabitEthernet0/1 is up, line protocol is up
  IPv6 is enabled, link-local address is FE80::4000
  No Virtual link-local address(es):
  Global unicast address(es):
    2001:DB8:4000::4000, subnet is 2001:DB8:4000::/64
  Joined group address(es):
    FF02::1
    FF02::2
    FF02::1:2
    FF02::1:FF00:4000
  MTU is 1280 bytes
  ICMP error messages limited to one every 100 milliseconds
  ICMP redirects are enabled
  ICMP unreachables are sent
  ND DAD is disabled
  ND reachable time is 30000 milliseconds (using 30000)
  ND advertised reachable time is 0 (unspecified)
  ND advertised retransmit interval is 0 (unspecified)
  ND router advertisements are sent every 5 seconds
  ND router advertisements live for 1800 seconds
  ND advertised default router preference is Low
  ND RAs are suppressed (periodic)
  Hosts use stateless autoconfig for addresses.
  Hosts use DHCP to obtain other configuration.
```

A. Router advertisements are not sent by the router.
B. Duplicate address detection is disabled but is required on multiaccess networks.
C. The interface is configured to support DHCPv6 clients only.
D. The configured interface MTU is too low for IPv6 to be operational.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 67
Which three statements about the default behaviour of eBGP sessions are true? (Choose three.)

A. eBGP sessions between sub-ASs in different confederations transmit the next hop unchanged.
B. The next hop in an eBGP peering is the IP address of the neighbor that announced the route.
C. When a route reflector reflects a route to a client, it transmits the next hop unchanged.
D. The next hop in an eBGP peering is the loopback address of the interface that originated the route.
E. The next hop in an eBGP peering is the loopback address of the neighbor that announced the route.
F. When a route reflector reflects a route to a client, it changes the next hop to its own address.

Correct Answer: ABC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 68
Which two statements about path selection are true? (Choose two.)

A. If there are multiple equal matches between OSPF processes, the path with the lowest OSPF PID is chosen.
B. If the backdoor command is configured on a BGP network, the route is advertised with an AD of 20.
C. If an OSPF E2 route has an AS of 90, that path is preferred over an OSPF IA route with an AD of 110.
D. If there are multiple equal matches between the same protocols on an EIGRP network, the preferred path will be EIGRP with the highest AS.
E. If IS-IS has multiple routes with the same prefix-length, it will prefer Level 1 routes over Level 2 routes.

Correct Answer: AE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 69
Which two statements about MAC Authentication Bypass are true? (Choose two.)

A. Traffic from an endpoint is authorized to pass after MAB authenticates the MAC address of the endpoint.
B. During the learning stage, the switch examines multiple packets from the endpoint to determine the MAC address of the endpoint.
C. After the switch learns the MAC address of the endpoint, it uses TACACS+ to authenticate it.
D. After learning a source MAC address, it sends the host a RADIUS Account-Request message to validate the address.
E. The MAC address of a device serves as its user name and password to authenticate with a RADIUS server.

Correct Answer: AE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 70
An IP SLA fails to generate statistics. How can you fix the problem?

A. Add the verify-data command to the router configuration.
B. Reload the router configuration.
C. Remove the ip sla schedule statement from the router configuration and re-enter it.
D. Add the debug ip sla error command to the router configuration.
E. Add the debug ip sla trace command to the router configuration.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 71
Which statement about UDLD is true?

A. The udld reset command resets ports that have been error-disabled by both UDLD and Fast UDLD.
B. Fast UDLD is configured in aggressive mode.
C. Only bidirectional link failures can be detected in normal mode.
D. Each switch in a UDLD topology can send and receive packets to and from its neighbors.

Correct Answer: A
Section: (none)

Explanation

Explanation/Reference:

QUESTION 72
What are two benefits of Per-Tunnel QoS for DMVPN? (Choose two.)

A. The administrator can configure criteria that, when matched, can automatically set up QoS for each spoke as it comes online.
B. Traffic from each spoke to the hub can be regulated individually.
C. When traffic exceeds a configurable threshold, the spokes can automatically set up QoS with the hub.
D. The hub can send large packets to a spoke during allotted timeframes.
E. The hub can be regulated to prevent overloading small spokes.

Correct Answer: AE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 73
Refer to the exhibit. If a connection failure occurs between R1 and R2, which two actions can you take to allow CR-1 to reach the subnet 192.168.192.0/24 on R2? (Choose two.)
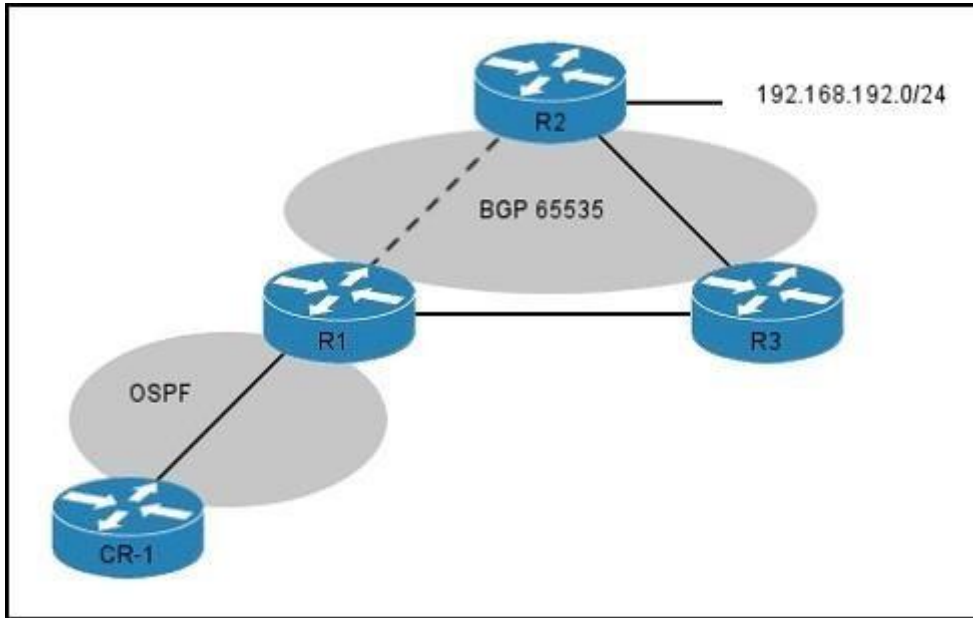
A. Create a static route on R1 for subnet 192.168.192.0/24 towards R3 and redistribute it into OSPF.
B. Turn up a BGP session between CR-1 and R1.
C. Create a static route on R1 for subnet 192.168.192.0/24 towards R3 and redistribute it into BGP.
D. Turn up an EIGRP session between R1 and R3 with AS 65535.
E. Create an OSPF virtual link between CR-1 and R2 to bypass R1.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 74
Which two statements about Cisco Performance Routing are true? (Choose two.)

A. It analyzes application performance to make routing decisions.
B. When determining the best path, it prefers the shortest path.
C. It can help the administrator determine the need for bandwidth upgrades.

D. It operates entirely in the data plane.
E. It can use EIGRP feasible successors to determine an alternate path.
F. It analyzes system hardware performance to make routing decisions.

Correct Answer: AE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 75
What is the function of an implicit-null label?

A. It notifies the upstream LSR to remove the top label in the label stack and forward the packet.
B. It notifies the upstream LSR to add a VPN label to the label stack.
C. It is used to statically assign a label to an IGP route.
D. It is used to identify the router ID.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 76
Refer to the exhibit. Which statement about this GET VPN configuration is true?

```
Router 1                                 Router 2

crypto isakmp keepalive 15 periodic      crypto isakmp keepalive 15 periodic
crypto gdoi group TESTGROUP              crypto gdoi group TESTGROUP
server local                             server local
address ipv4 10.1.1.1                    address ipv4 10.0.1.2
redundancy                               redundancy
local priority 250                       local priority 200
peer address ipv4 10.0.1.2               peer address ipv4 10.1.1.1
```

A. Router 1 acts as the primary key server because it has a higher priority.
B. An RSA key has been imported into the configuration.
C. The GDOI group configuration generated a key.
D. DPD is disabled.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 77
Which two statements about BGP prefix-based outbound filtering are true? (Choose two.)

A. It must be configured per address family.
B. It can use prefix lists and route maps for filtering.
C. It can be configured under the global BGP routing process.
D. It can be configured for external peering sessions only.
E. It can increase the processing load on the router.
F. It supports IP multicast routes.

Correct Answer: AD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 78
Which two statements about Layer 2 Frame Prioritization bits are true? (Choose two.)

A. 802.1Q frame headers carry the CoS value in the three most-significant bits of the 2- byte Tag Control Information field.
B. ISL frame headers carry an IEEE 802.1P CoS value in the three least-significant bits of the 2-byte User field.
C. ISL frame headers carry an IEEE 802.1P CoS value in the three most-significant bits of the 1-byte User field.
D. On 802.1Q trunks, traffic in the native VLAN is carried in 802.1Q frames.
E. Only 802.1Q and ISL frame types can carry CoS information.
F. On 802.1Q trunks, traffic in the native VLAN is carried in 802.1P frames.

Correct Answer: AE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 79
Refer to the exhibit. Which statement about authentication on Router A is true?

```
RouterA#show run
Building configuration...

aaa authentication login default group tacacs+ local

tacacs server host 10.1.1.2 single-connection
tacacs server directed-request
tacacs server key ciscotacacs

end
```

A. The router will attempt to authenticate users against TACACS+ only.
B. The router will attempt to authenticate users against the local database only.
C. The router will attempt to authenticate users against the local database first, and fall back to TACACS+ if the local database authentication fails.
D. The router will authenticate users against the default database only.
E. The router will attempt to authenticate users against TACACS+ first, and fall back to the local database if the TACACS+ authentication fails.

Correct Answer: E
Section: (none)
Explanation

Explanation/Reference:

QUESTION 80
When you implement PfR, which IP SLA probe is used to determine the MOS?

A. jitter

B. latency

C. packet loss

D. throughput

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 81
Refer to the exhibit. What password will be required to enter privileged EXEC mode on a device with the given configuration?

```
Router1#sh run
Building configuration...

Current configuration : 7418 bytes

enable password cisco

enable secret ciscotest

line con 0
    exec-timeout 0 0
    password ciscocert
    logging synchronous
line aux 0
    password ciscoccie
line vty 0 4
    password ciscors

end
```

A. ciscotest

B. ciscocert

C. cisco

D. ciscors

E. ciscoccie

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 82
Which two attributes were introduced with the Cisco IOS BGP 4-byte ASN feature? (Choose two.)

A. AS4_AGGREGATOR
B. AS4_PATH
C. AS4_PLAIN
D. AS4_DOT
E. AS4_TRANS

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 83
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.

Correct Answer: A
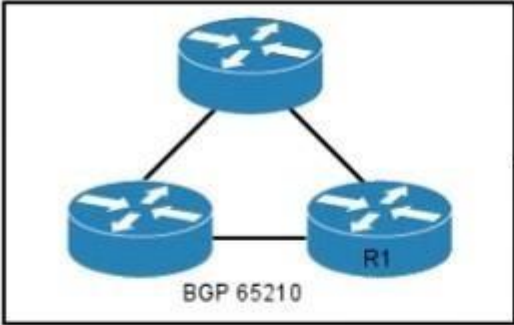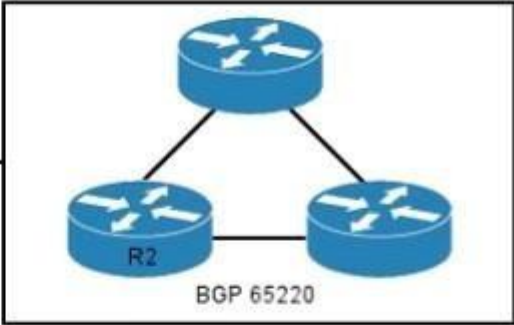**Section: (none)**
Explanation

Explanation/Reference:

QUESTION 84

Refer to the exhibit. Two multicast domains are configured as shown and connected with MSDP, but the two domains are unable to communicate. Which two actions can you take to correct the problem? (Choose two.)


```
R1#show run int lo0
Building configuration...

Current configuration : 116 bytes

interface Loopback0
   ip address 10.0.0.10 255.255.255.255
end

R1#show run int Gi0/0/0
Building configuration...

Current configuration : 233 bytes

interface GigabitEthernet0/0/0
   ip address 172.16.1.13 255.255.255.252
end

R1# show run | include msdp
Building configuration...

Current configuration : 120 bytes

ip msdp originator-id loopback 0
ip msdp peer 10.0.0.10 connect-source loopback 0 remote-as 65220
end
```

```
R2#show run int lo0
Building configuration...

Current configuration : 116 bytes

interface Loopback0
   ip address 10.0.0.20 255.255.255.255
end

R2#show run int Gi0/0/0
Building configuration...

Current configuration : 233 bytes

interface GigabitEthernet0/0/0
   ip address 172.16.1.14 255.255.255.252
end

R2# show run | include msdp
Building configuration...

Current configuration : 120 bytes

ip msdp originator-id loopback 0
ip msdp peer 10.0.0.10 connect-source loopback 0 remote-as 65210
end
```

A. Change the peering IP address in AS 65220 to 10.0.0.20.

B. Change the peering AS on R2 to 65210.
C. Verify that UDP port 639 is open.
D. Verify that TCP port 139 is open.
E. Change the MSDP originator-id to GigabitEthernet 0/0/0 on both routers.
F. Change the MSDP peering IP address on R2 to 172.16.1.13.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 85
Which two statements about 802.1Q tunneling are true? (Choose two.)

A. It requires a system MTU of at least 1504 bytes.
B. The default configuration sends Cisco Discovery Protocol, STP, and VTP information.
C. Traffic that traverses the tunnel is encrypted.
D. It is supported on private VLAN ports.
E. MAC-based QoS and UDLD are supported on tunnel ports.
F. Its maximum allowable system MTU is 1546 bytes.

Correct Answer: AE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 86
Which value is the maximum segment size if you start with an MTU of 1500 bytes and then remove the overhead of the Ethernet header, IP header, TCP header, and the MAC frame check sequence?

A. 1434 bytes
B. 1460 bytes
C. 1458 bytes
D. 1464 bytes

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 87
Which cache aggregation scheme is supported by NetFlow ToS-based router aggregation?

A. prefix-port
B. AS
C. protocol port
D. destination prefix

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference: