CCIE R&S_v2016.05.11_284q

Number: 400-101
Passing Score: 804
Time Limit: 120 min
File Version: 1.0

Exam A

QUESTION 1
DRAG DROP

Drag and drop the extended ping command field on the left to its usage on the right.

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

A.
B.
C.
D.

Correct Answer:
Section: (none)
Explanation

Explanation/Reference:

Drag and drop the extended ping command field on the left to its usage on the right

type of service	data pattern
sweep range of sizes	type of service
data pattern	loose, strict, record, timestamp, verbose
loose, strict, record, timestamp, verbose	sweep range of sizes

Explanation:

data pattern
type of service
loose, strict, record, timestamp, verbose
sweep range of sizes

QUESTION 2
DRAG DROP

Drag and drop the argument of the ip cef load-sharing algorithm command on the left to the function it performs on the right.

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 and destination IP address pairs
tunnel	sets the load-balancing algorithm to use Layer 4 information
incude-ports source destination	sets the load-balancing algorithm to use a source and destination hash

A.

B.

C.

D.

Correct Answer:
Section: (none)
Explanation

Explanation/Reference:

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	universal
universal	tunnel
tunnel	include-ports source destination
incude-ports source destination	original

Explanation:

universal
tunnel
include-ports source destination
original

QUESTION 3
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.
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Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:
Explanation:

Installing a switch with larger buffers and correctly configuring the buffers can solve output queue problems.

For each queue we need to configure the assigned buffers. The buffer is like the `storage' space for the interface and we have to divide it among the different queues. This is how to do it:

mls qos queue-set output <queue set> buffers Q1 Q2 Q3 Q4

In this example, there is nothing hitting queue 2 or queue 3 so they are not being utilized.

QUESTION 4
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:
Explanation:

Ethernet private line (EPL) and Ethernet virtual private line (EVPL) are carrier Ethernet data services defined by the Metro Ethernet Forum. EPL provides a point-to-point Ethernet virtual connection (EVC) between a pair of dedicated user衾etwork interfaces (UNIs), with a high degree of transparency. EVPL provides a point-to-point or point-to-multipoint connection between a pair of UNIs.

The services are categorized as an E-Line service type, with an expectation of low frame delay, frame delay variation and frame loss ratio. EPL is implemented using a point-to-point (EVC) with no Service Multiplexing at each UNI (physical interface), i.e., all service frames at the UNI are mapped to a single EVC (a.k.a. all-to-one bundling).

Reference: http://en.wikipedia.org/wiki/Ethernet_Private_Line

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QUESTION 5
Refer to the exhibit.

```
Switch# show spanning-tree vlan 1 detail

VLAN0001 is executing the ieee compatible Spanning Tree protocol
  Bridge Identifier has priority 32768, sysid 1, address 0007.0e8f.04c0
  Configured hello time 2, max age 20, forward delay 15
  Current root has priority 8192, address 0007.4f1c.e847
  Root port is 65 (GigabitEthernet2/1), cost of root path is 119
  Topology change flag not set, detected flag not set
  Number of topology changes 1 last change occurred 00:00:35 ago
          from GigabitEthernet1/1
  Times:  hold 1, topology change 35, notification 2
          hello 2, max age 20, forward delay 15
  Timers: hello 0, topology change 0, notification 0, aging 300
```

Which two statements about the output are true? (Choose two.)

A. 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:
Explanation:

802.1D is the standard for Spanning tree, which is being used here. For priority, The priority order starts from 0 (yes, 0 is valid) and then increases in 4096.

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0, 4096, 8192, 12288, ... Etc.

The lower the number is, the higher is the priority. Here we see that the current root has a priority of 8192, so configuring this with a priority of 0 will make it the new root.

QUESTION 6
Which statement is true about LLDP?

A. LLDP provides VTP support.
B. "Pass Any Exam. Any Time." - www.actualtests.com 87
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   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:
Explanation:

Cisco Discovery Protocol Versus LLDP-MED TLV Comparison

TLV Function

LLDP TLV

Cisco Discovery Protocol TLV

Native VLAN support-Indicates the native VLAN

No

Native VLAN TLV

Reference:
http://www.cisco.com/en/US/technologies/tk652/tk701/technologies_white_paper0900aecd804cd4 6d.html

QUESTION 7
Refer to the exhibit.

```
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
```

With these configurations for R1 and R2, which statement about PPP authentication is true?

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)
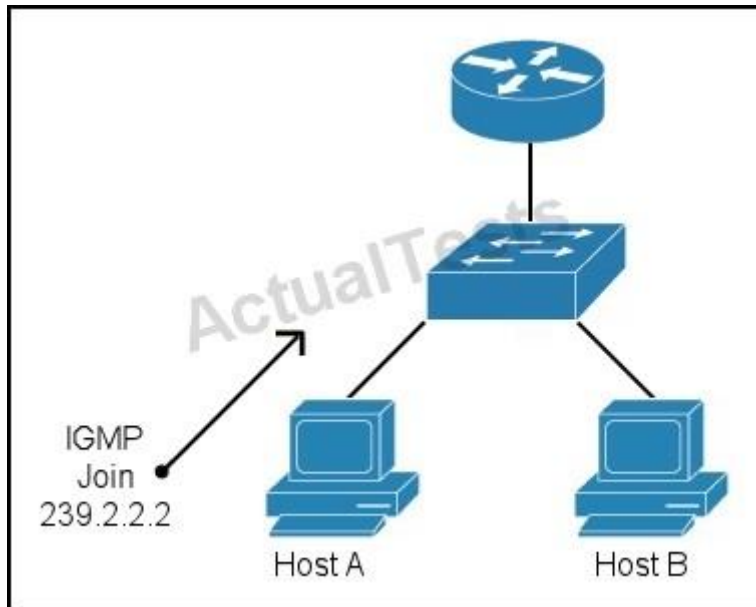**Explanation**

Explanation/Reference:
Explanation:

Only R2 is configured with the "PPP authentication PAP" command so it requires authentication from R1, but R1 does not require authentication from R2.

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QUESTION 8
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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:
Explanation:

IGMP snooping is the process of listening to Internet Group Management Protocol (IGMP) network traffic. The feature allows a network switch to listen in on the IGMP conversation between hosts and routers. By listening to these conversations the switch maintains a map of which links need which IP multicast streams. Multicasts may be filtered from the links which do not need them and thus controls which ports receive specific multicast traffic.

QUESTION 9
Which statement about Cisco Discovery Protocol is true?

A. The multicast address 0100.0cdd.dddd is used as the destination address for periodic advertisements.
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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:
Explanation:

All CDP packets include a VLAN ID. If you configure CDP on a Layer 2 access port, the CDP packets sent from that access port include the access port VLAN ID. If you configure CDP on a Layer 2 trunk port, the CDP packets sent from that trunk port include the lowest configured VLAN ID allowed on that trunk port.

CDP messages on the active physical interfaces (Ethernet NIC) to a well-known multicast address (0100.0CCC.CCCC.

QUESTION 10
Which statement about WAN Ethernet Services is true?

A. Rate-limiting can be configured per EVC.
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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:
Explanation:

The MEF has defined a set of bandwidth profiles that can be applied at the UNI or to an EVC. A bandwidth profile is a limit on the rate at which Ethernet

frames can traverse the UNI or the EVC.

Reference: http://www.ciscopress.com/articles/article.asp?p=101367&seqNum=2

QUESTION 11
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:
Explanation:

A switch running both MSTP and RSTP supports a built-in protocol migration mechanism that enables it to interoperate with legacy 802.1D switches. If this switch receives a legacy 802.1D configuration BPDU (a BPDU with the protocol version set to 0), it sends only 802.1D BPDUs on "Pass Any Exam. Any Time." - www.actualtests.com 129
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that port. An MST switch can also detect that a port is at the boundary of a region when it receives a legacy BPDU, an MST BPDU (version 3) associated with a different region, or an RST BPDU (version 2).

Reference: http://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst2950/software/release/12- 1_9_ea1/configuration/guide/scg/swmstp.html

QUESTION 12
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:

Explanation:

The advertised metric from an EIGRP neighbor (peer) to the local router is called Advertised Distance (or reported distance) while the metric from the local router to that network is called Feasible Distance. For example, R1 advertises network 10.10.10.0/24 with a metric of 20 to R2. For R2, this is the advertised distance. R2 calculates the feasible distance by adding the metric from the advertised router (R1) to itself. So in this case the feasible distance to network 10.10.10.0/24 is 20 + 50 = 70.
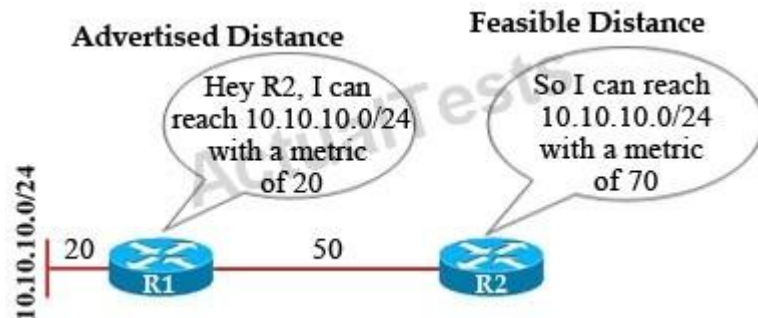
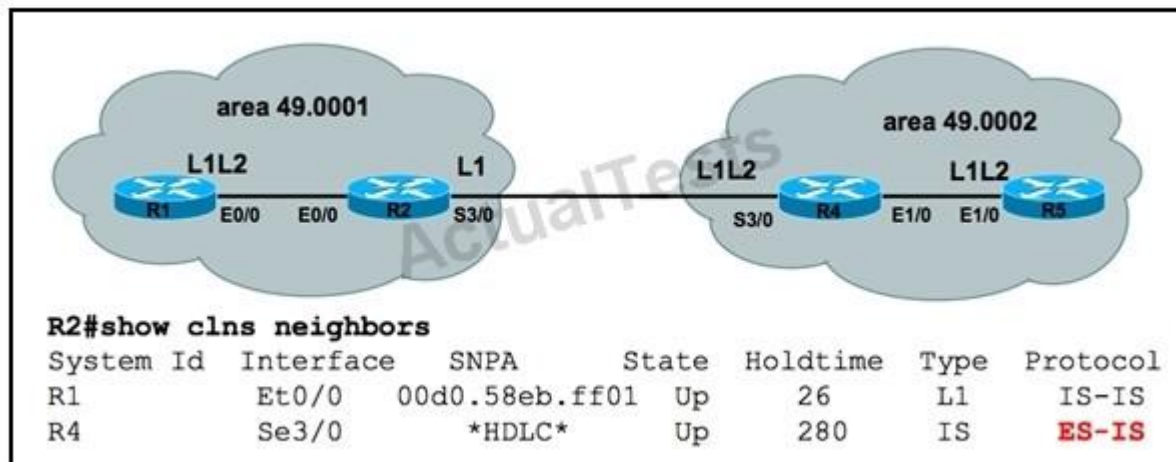Before a router can be considered a feasible successor, it must pass the feasibility condition rule.

In short, the feasibility condition says that if we learn about a prefix from a neighbor, the advertised distance from that neighbor to the destination must be lower than our feasible distance to that same destination.

Therefore we see the Advertised Distance always smaller than the Feasible Distance to satisfy the feasibility condition.

QUESTION 13
Refer to the exhibit.

```
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
```

Why is the neighbor relationship between R2 and R4 shown as 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:
Explanation:

With IS-IS we will see ES-IS when one of the following is true:

So in this question because we do not know about the other side's "show CLNS neighbor" A must be the better choose.

QUESTION 14
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.

F. IS-IS is a Cisco proprietary routing protocol.

Correct Answer: BCE
Section: (none)
Explanation

Explanation/Reference:
Explanation:

Intermediate System to Intermediate System (IS-IS) was designed as the routing protocol for ISO's CLNP described in IS0 10589. IS-IS is a Link State routing protocol akin to OSPF and was developed by DEC for use with DECnet Phase V. It was originally thought that TCP/IP would gradually make way for the seven layer OSI architecture so an enhancement to IS-IS was developed called Integrated IS-IS also known as Dual IS-IS that could route both Connectionless- Mode Network Service (CLNS) as well as IP.

Cisco IOS supports IS-IS authentication on 3 different levels; between neighbors, area-wide, and domain-wide, where each can be used by themselves or together.

summary-address address mask {level-1 | level-1-2 | level-2} is used to configure IP address summarization.
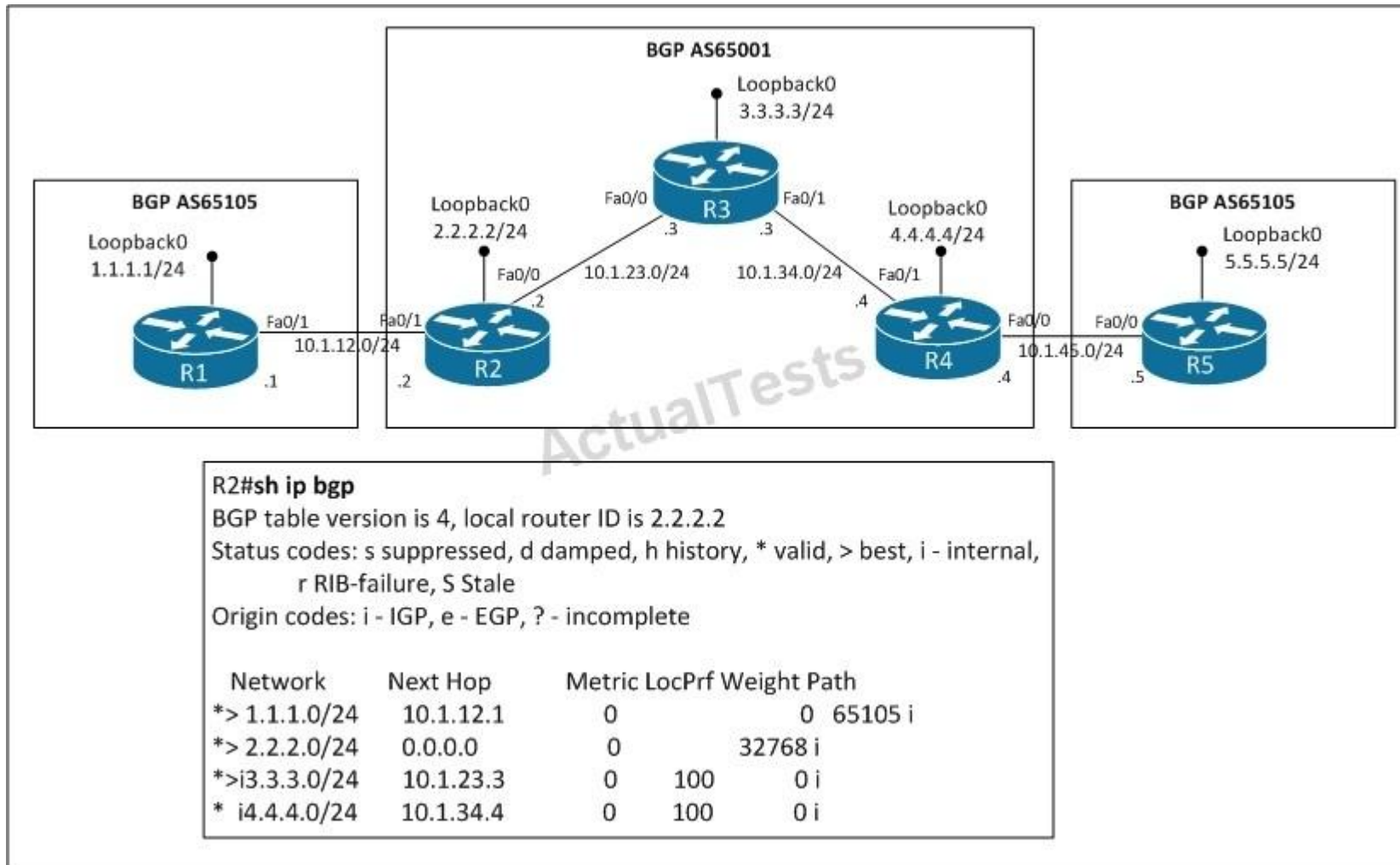
References:

http://www.rhyshaden.com/isis.htm

http://mynetworkingwiki.com/index.php/Configuring_IS-IS

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QUESTION 15
Refer to the exhibit.

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BGP AS65001

Loopback0
3.3.3.3/24

R3

BGP AS65105

Loopback0
1.1.1.1/24

Loopback0
2.2.2.2/24

Fa0/0   Fa0/1
.3   .3

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

Fa0/1
10.1.12.0/24

Fa0/1

R2

R1
.1   .2

ActualTests

R4
.4

Fa0/0   Fa0/0
10.1.45.0/24
R5
.5

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
```

Why is R2 unable to ping the loopback interface of R4?

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:
Explanation:

Before a BGP speaker installs a route to a network in the main IP routing table, the router must know how to reach the next hop that is used to get to that network. Route reachability is verified by searching for a route to the next hop in the main IP routing table. Unlike IGP routing protocols, such as EIGRP and OSPF, which assume that a route is reachable if they learned it through a valid adjacency, BGP does not install routes that it cannot verify as reachable. If a route to the next hop for a BGP network is found in the main IP routing table, BGP assumes that the network is reachable, and that the particular BGP route might be stored in the main IP routing table. If the router receives a route to a network that is not reachable, that route continues to be stored in the incoming BGP table, adj-RIB-In, and might be seen using the show ip bgp command, but is not placed in the main IP routing table.

Reference:
https://www.informit.com/library/content.aspx?b=CCIE_Practical_Studies_II&seqNum=75

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QUESTION 16
Refer to the exhibit.

```
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
```

Which two statements about the device that generated the output are true? (Choose two.)

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.
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Correct Answer: AD
Section: (none)
Explanation

Explanation/Reference:
Explanation:

In this example we can see that the s, T, and I flags are set. Here is a list of the flags and their meanings:

show ip mroute Field Descriptions

Field

Description

Flags:

Provides information about the entry.

D - Dense

Entry is operating in dense mode.

S - Sparse

Entry is operating in sparse mode.

B - Bidir Group

Indicates that a multicast group is operating in bidirectional mode.

s - SSM Group

Indicates that a multicast group is within the SSM range of IP addresses. This flag is reset if the SSM range changes.

C - Connected

A member of the multicast group is present on the directly connected interface.

L - Local

The router itself is a member of the multicast group.

P - Pruned

Route has been pruned. The Cisco IOS software keeps this information so that a downstream member can join the source.

R - RP-bit set

Indicates that the (S, G) entry is pointing toward the RP. This is typically prune state along the shared tree for a particular source.

F - Register flag

Indicates that the software is registering for a multicast source.

T - SPT-bit set

Indicates that packets have been received on the shortest path source tree.

J - Join SPT

For (*, G) entries, indicates that the rate of traffic flowing down the shared tree is exceeding the SPT-Threshold set for the group. (The default SPT-Threshold setting is 0 kbps.) When the J- Join shortest path tree (SPT) flag is set, the next (S, G) packet received down the shared tree triggers an (S, G) join in the direction of the source, thereby causing the router to join the source tree.

For (S, G) entries, indicates that the entry was created because the SPT-Threshold for the group was exceeded. When the J- Join SPT flag is set for (S, G) entries, the router monitors the traffic rate on the source tree and attempts to switch back to the shared tree for this source if the traffic rate on the source tree falls below the SPT-Threshold of the group for more than 1 minute.

M - MSDP created entry

Indicates that a (*, G) entry was learned through a Multicast Source Discovery Protocol (MSDP) peer. This flag is only applicable for a rendezvous point (RP) running MSDP.

X - Proxy Join Timer Running

Indicates that the proxy join timer is running. This flag is only set for (S, G) entries of an RP or "turnaround" router. A "turnaround" router is located at the intersection of a shared path (*, G) tree and the shortest path from the source to the RP.

A - Advertised via MSDP

Indicates that an (S, G) entry was advertised through an MSDP peer. This flag is only applicable for an RP running MSDP.

U - URD

Indicates that a URD channel subscription report was received for the (S, G) entry.

I - Received Source Specific Host Report

Indicates that an (S, G) entry was created by an (S, G) report. This (S, G) report could have been created by IGMPv3, URD, or IGMP v3lite. This flag is only set on the designated router (DR).

Reference: http://www.cisco.com/c/en/us/td/docs/ios/12_0s/feature/guide/12s_ssm.html

QUESTION 17
DRAG DROP

Drag and drop the router preference on the left to the correct routing sequence (from most preferred to least preferred) on the right.

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

A.
B.
C.
D.

Correct Answer:

Section: (none)
Explanation

Explanation/Reference:

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	Most specific prefix
Static route	Directly connected route
Most specific prefix	Static route
Directly connected route	EBGP route

Explanation:

| Most specific prefix |
| Directly connected route |
| Static route |
| EBGP route |

QUESTION 18
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:
Explanation:

IS-IS runs directly over the data link alongside IP. On Ethernet, IS-IS packets are always 802.3 frames, with LSAPs 0xFEFE while IP packets are either Ethernet II frames or SNAP frames identified with the protocol number 0x800. OSPF runs over IP as protocol number 89.

IS-IS runs directly over layer 2 and hence:

- cannot support virtual links unless some explicit tunneling is implemented

- packets are kept small so that they don't require hop-by-hop fragmentation

- uses ATM/SNAP encapsulation on ATM but there are hacks to make it use VcMux encapsulation

- some operating systems that support IP networking have been implemented to differentiate Layer 3 packets in kernel. Such Oss require a lot of kernel modifications to support IS-IS for IP routing.

- can never be routed beyond the immediate next hop and hence shielded from IP spoofing and similar Denial of Service attacks.

Reference: https://tools.ietf.org/html/draft-bhatia-manral-diff-isis-ospf-00

QUESTION 19
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:
Explanation:

In PIM ASM and SSM modes, the software chooses a designated router (DR) from the routers on each network segment. The DR is responsible for forwarding multicast data for specified groups and sources on that segment.

In ASM mode, the DR is responsible for unicasting PIM register packets to the RP. When a DR receives an IGMP membership report from a directly connected receiver, the shortest path is formed to the RP, which may or may not go through the DR. The result is a shared tree that connects all sources transmitting on the same multicast group to all receivers of that group.

In SSM mode, the DR triggers (*, G) or (S, G) PIM join messages toward the RP or the source.

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The path from the receiver to the source is determined hop by hop. The source must be known to the receiver or the DR.

Reference: http://www.cisco.com/c/en/us/td/docs/switches/datacenter/sw/5_x/nx- os/multicast/configuration/guide/n7k_multic_cli_5x/
pim.html#wp1054047

QUESTION 20
Which neighbor-discovery message type is used to verify connectivity to a neighbor when the link-

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layer address of the neighbor is known?

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

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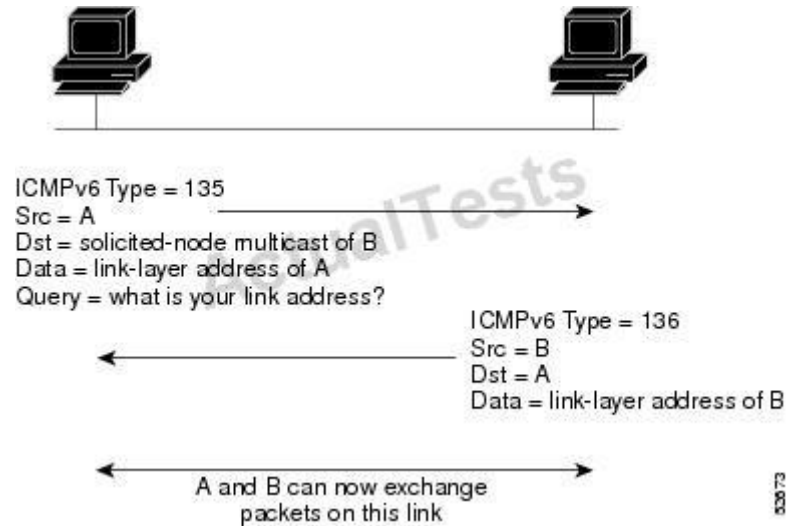**Section: (none)**
Explanation

Explanation/Reference:
Explanation:

IPv6 Neighbor Solicitation Message

A value of 135 in the Type field of the ICMP packet header identifies a neighbor solicitation message. Neighbor solicitation messages are sent on the local link when a node wants to determine the link-layer address of another node on the same local link (see the figure below). When a node wants to determine the link-layer address of another node, the source address in a neighbor solicitation message is the IPv6 address of the node sending the neighbor solicitation message. The destination address in the neighbor solicitation message is the solicited-node multicast address that corresponds to the IPv6 address of the destination node. The neighbor solicitation message also includes the link-layer address of the source node.

Figure 1. IPv6 Neighbor Discovery: Neighbor Solicitation Message

ICMPv6 Type = 135
Src = A
Dst = solicited-node multicast of B
Data = link-layer address of A
Query = what is your link address?

ICMPv6 Type = 136
Src = B
Dst = A
Data = link-layer address of B

A and B can now exchange
packets on this link

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Reference: http://www.cisco.com/c/en/us/td/docs/ios-xml/ios/ipv6_basic/configuration/xe-3s/ip6b- xe-3s-book/ip6-neighb-disc-xe.html

QUESTION 21
Refer to the exhibit.

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```
!
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
!
```

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?

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:
Explanation:

Configuring EIGRP for IPv6 has some restrictions; they are listed below:

Reference: http://www.cisco.com/c/en/us/support/docs/ip/enhanced-interior-gateway-routing- protocol-eigrp/113267-eigrp-ipv6-00.html

QUESTION 22
Refer to the exhibit.

```
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
```

Which two statements about this route table are true? (Choose two.)

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.
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Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:
Explanation:

IBGP routes have an Administrative distance of 200, while EBGP have an AD of 20. Here we see that the BGP routes have an AD value of 200.

With OSPF, external routes fall under two categories, external type 1 and external type 2. The difference between the two is in the way the cost (metric) of the route is being calculated. The cost of a type 2 route is always the external cost, irrespective of the interior cost to reach that route. A type 1 cost is the addition of the external cost and the internal cost used to reach that route. The metric for E2 routes do not change when advertising to other routers.

QUESTION 23

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:
Explanation:

The IP prefix is a member of the IPv4 address family. After the PE device learns the IP prefix, the PE converts it into a VPN-IPv4 prefix by combining it with an 8-byte route distinguisher (RD). The generated prefix is a member of the VPN-IPv4 address family. It uniquely identifies the customer address, even if the customer site is using globally nonunique (unregistered private) IP addresses. The route distinguisher used to generate the VPN-IPv4 prefix is specified by a configuration command associated with the virtual routing and forwarding (VRF) instance on the PE device.
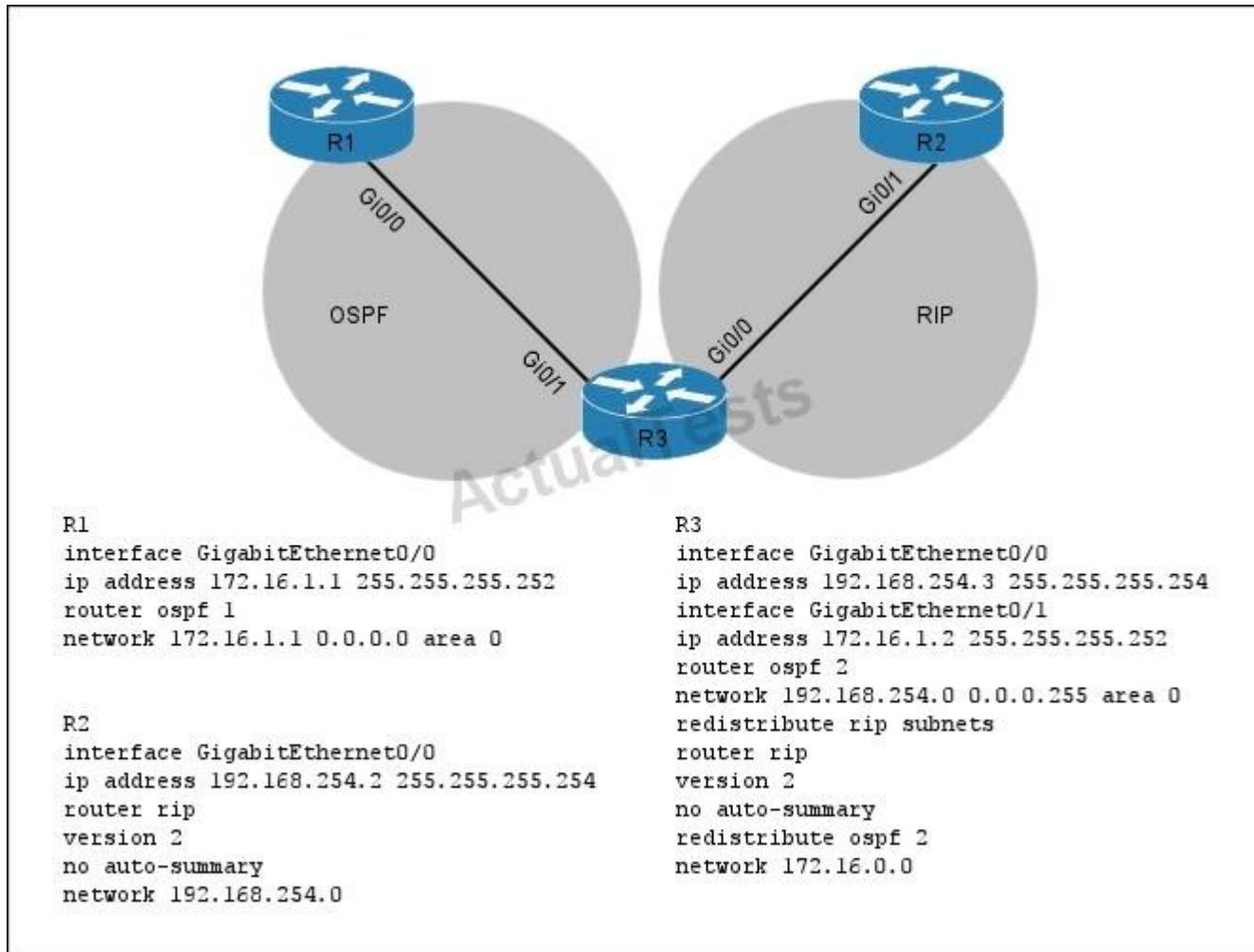
Reference: http://www.cisco.com/c/en/us/td/docs/ios-xml/ios/mp_l3_vpns/configuration/15-mt/mp- l3-vpns-15-mt-book/mp-bgp-mpls-vpn.html
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QUESTION 24
Refer to the exhibit.

```
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
```

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?

A. The seed metric for redistributing into RIP on R3 is missing.
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   Cisco 400-101 Exam
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:
Explanation:

The problem is that RIP requires a seed metric to be specified when redistributing routes into that protocol. A seed metric is a "starter metric" that gives the RIP process a metric it can work with. The OSPF metric of cost is incomprehensible to RIP, since RIP's sole metric is hop count.

Reference:
http://www.thebryantadvantage.com/CCNP%20Certification%20BSCI%20Exam%20Tutorial%20R oute%20Redistribution%20Seed%20Metric.htm

QUESTION 25
Which multicast protocol uses source trees and RPF?

A. DVMRP
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B. PIM sparse mode
C. CBT
D. mOSPF

Correct Answer: A
Section: (none)
Explanation

**Explanation/Reference:**
Explanation:

DVMRP builds a parent-child database using a constrained multicast model to build a forwarding tree rooted at the source of the multicast packets. Multicast packets are initially flooded down this source tree. If redundant paths are on the source tree, packets are not forwarded along those paths. Forwarding occurs until prune messages are received on those parent-child links, which further constrains the broadcast of multicast packets.

Reference: DVMRP and dense-mode PIM use only source trees and use RPF as previously described.

Reference: http://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst3550/software/release/12- 1_19_ea1/configuration/guide/3550scg/swmcast.html

QUESTION 26
Refer to the exhibit.
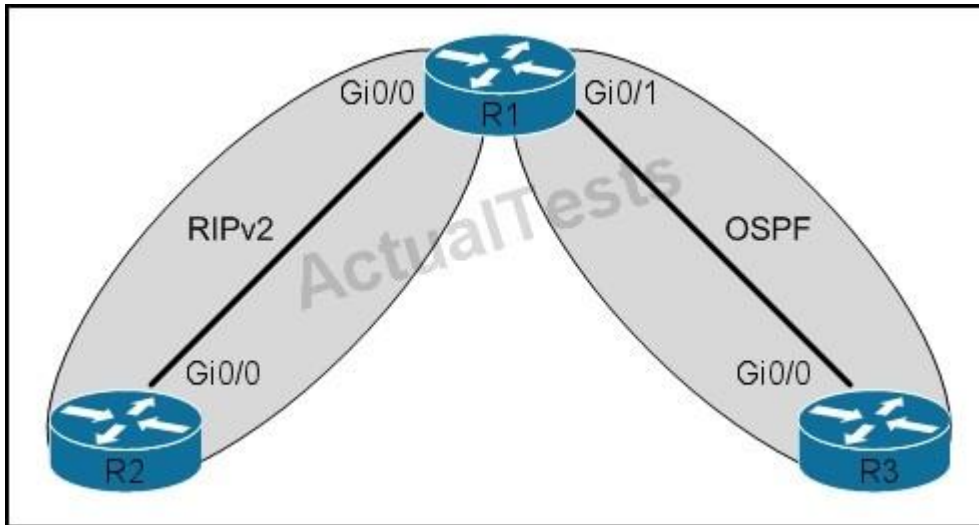
R1 is performing mutual redistribution, but OSPF routes from R3 are unable to reach R2. Which three options are possible reasons for this behavior? (Choose three.)

A. R1 requires a seed metric to redistribute RIP.
B. The RIP version supports only classful subnet masks.
C. R1 is filtering OSPF routes when redistributing into RIP.
D. R3 and R1 have the same router ID.
E. R1 and R3 have an MTU mismatch.
F. R2 is configured to offset OSPF routes with a metric of 16.

Correct Answer: ACF
Section: (none)
Explanation

Explanation/Reference:
Explanation:

A. RIP requires a seed metric to be specified when redistributing routes into that protocol. A seed metric is a "starter metric" that gives the RIP process a metric it can work with. The OSPF metric of cost is incomprehensible to RIP, since RIP's sole metric is hop count. We've got to give RIP a metric it understands when redistributing routes into that protocol, so let's go back to R1 and do so.

C. Filtering routes is another explanation, if the routes to R2 are boing filtered from being advertised to R1.

F. If the metric is offset to 16, then the routes will have reached the maximum hop count when redistributed to RIP. The max hop count for RIP is 16.

QUESTION 27
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:
Explanation:

The RTO is typically six times the SRTT, the value may vary from a minimum of 200 microseconds (ms) to a maximum of 5 seconds (s).

Reference: EIGRP for IP: Basic Operation and Configuration, Alvaro Retana, Russ White, Don Slice - 2000

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QUESTION 28
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:

Explanation:

The BGP Cost Community feature introduces the cost extended community attribute. The cost community is a non-transitive extended community attribute that is passed to internal BGP (iBGP) and confederation peers but not to external BGP (eBGP) peers. The cost community feature allows you to customize the local route preference and influence the best path selection process by assigning cost values to specific routes.

Reference: http://www.cisco.com/c/en/us/td/docs/ios/12_0s/feature/guide/s_bgpcc.html

QUESTION 29
Which statement is true about conditional advertisements? "Pass Any Exam. Any Time." - www.actualtests.com 324
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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:
Explanation:

The Border Gateway Protocol (BGP) conditional advertisement feature provides additional control of route advertisement, depending on the existence of other prefixes in the BGP table.

Normally, routes are propagated regardless of the existence of a different path. The BGP conditional advertisement feature uses the non-exist-map and the advertise-map keywords of the neighbor advertise-map command in order to track routes by the route prefix. If a route prefix is not present in output of the non-exist-map command, then the route specified by the advertise- map command is announced. This feature is useful for multihomed networks, in which some prefixes are advertised to one of the providers only if information from the other provider is not present (this indicates a failure in the peering session or partial reachability).

Reference: http://www.cisco.com/c/en/us/support/docs/ip/border-gateway-protocol-bgp/16137- cond-adv.html

QUESTION 30
DRAG DROP

Drag and drop the OSPFv3 LSA type on the left to the functionality it provides on the right.

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

A.

B.

C.

D.

Correct Answer:
Section: (none)
Explanation

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

Explanation:

Interarea-prefix LSA for ABRs (Type 3)

Intra-Area-Prefix LSAs (Type 9)

Router LSA (Type 1)

Network LSA (Type 2)

Link LSA (Type 8)

Autonomous system external LSA (Type 5)

Interarea-router LSA for ASBRs (Type 4)

QUESTION 31
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:
Explanation:

A session may operate in one of two modes: asynchronous mode and demand mode. In asynchronous mode, both endpoints periodically send Hello packets to each other. If a number of those packets are not received, the session is considered down.

In demand mode, no Hello packets are exchanged after the session is established; it is assumed that the endpoints have another way to verify connectivity to each other, perhaps on the underlying physical layer. However, either host may still send Hello packets if needed.

Reference: http://en.wikipedia.org/wiki/Bidirectional_Forwarding_Detection

QUESTION 32
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:
Explanation:

To allow the use of external, internal, and local administrative distances that could be a better route than other external, internal, or local routes to a node, use the distance bgp command in address family or router configuration mode. To return to the default values, use the no form of this command.

distance bgp external-distance internal-distance local-distance

no distance bgp

external-distance

Administrative distance for BGP external routes. External routes are routes for which the best path is learned from a neighbor external to the autonomous system. Accept table values are from 1 to 255. The default is 20. Routes with a distance of 255 are not installed in the routing table.

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internal-distance

Administrative distance for BGP internal routes. Internal routes are those routes that are learned from another BGP entity within the same autonomous system. Accept table values are from 1 to 255. The default is 200. Routes with a distance of 255 are not installed in the routing table.

local-distance

Administrative distance for BGP local routes. Local routes are those networks listed with a network router configuration command, often as back doors, for that router or for networks that are being redistributed from another process. Accept table values are from 1 to 255. The default is 200. Routes with a distance of 255 are not installed in the routing table.

Defaults

external-distance: 20

internal-distance: 200

local-distance: 200

In this case, the internal distance is 60 and the external is 90, and the local distance is 120 (same as RIP).

Reference:
http://www.cisco.com/c/en/us/td/docs/ios/12_2/iproute/command/reference/fiprrp_r/1rfbgp1.html#w p1113874

QUESTION 33
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.
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Correct Answer: ACD
Section: (none)
Explanation

Explanation/Reference:

Explanation:

Given multiple possible routes to a particular destination, an L1 path is preferred over an L2 path. Within each level, a path that supports the optional metrics is preferred over a path that supports only the default metric. (Again, Cisco supports only the default metric, so the second order of preference is not relevant to Cisco routers.) Within each level of metric support, the path with the lowest metric is preferred. If multiple equal-cost, equal-level paths are found by the Decision process, they are all entered into the route table. The Cisco IS-IS implementation usually performs equal-cost load balancing on up to six paths.

Reference: http://www.realccielab.org/operation-of-integrated-is-is.html

QUESTION 34
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. "Pass Any Exam. Any Time." - www.actualtests.com 370
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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:
Explanation:

VPLS relies on flooding to propagate MAC address reachability information. Therefore, flooding cannot be prevented.

VPLS can carry a single VLAN per VPLS instance. To multiplex multiple VLANs on a single instance, VPLS uses IEEE QinQ.

Reference: http://www.cisco.com/c/en/us/products/collateral/switches/nexus-7000-series- switches/white_paper_c11-574984.html

QUESTION 35
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:
Explanation:

The %TUN-5-RECURDOWN: Tunnel0 temporarily disabled due to recursive routing error message means that the generic routing encapsulation (GRE) tunnel router has discovered a recursive routing problem. This condition is usually due to one of these causes:

Reference: http://www.cisco.com/c/en/us/support/docs/ip/enhanced-interior-gateway-routing-

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protocol-eigrp/22327-gre-flap.html

QUESTION 36
Refer to the exhibit.

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```
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
```

Which statement is true?

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:
Explanation:

Verifying the Configuration: Example

In the following example, the show mpls l2transport vc command shows the following information (in bold) about the VCs:

텍C 101 has been assigned a preferred path called Tunnel1. The default path is disabled because the preferred path specified that the default path

should not be used if the preferred path fails.

텍C 150 has been assigned an IP address of a loopback address on PE2. The default path can be used if the preferred path fails.

Router# show mpls l2transport vc detail

Local interface. Gi0/0/0.1 up, line protocol up, Eth VLAN 222 up

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Destination address: 10.16.16.16, VC ID. 101, VC status: up

Preferred path: Tunnel1, active

Default path: disabled

Tunnel label: 3, next hop point2point

Output interfacE. Tu1, imposed label stack {17 16}

Create timE. 00:27:31, last status change timE. 00:27:31

Signaling protocol: LDP, peer 10.16.16.16:0 up

MPLS VC labels: local 25, remote 16

Group ID. local 0, remote 6

MTU: local 1500, remote 1500

Remote interface description:

Sequencing: receive disabled, send disabled

VC statistics:

packet totals: receive 10, send 10

byte totals: receive 1260, send 1300

packet drops: receive 0, send 0

Reference:
http://www.cisco.com/c/en/us/td/docs/ios/12_2sr/12_2sra/feature/guide/srtunsel.html#wp1057815

QUESTION 37
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. "Pass Any Exam. Any Time." - www.actualtests.com 386
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    inter-AS MPLS VPN option D

D. inter-AS MPLS VPN option C

E. Unified MPLS

Correct Answer: E
Section: (none)
Explanation

Explanation/Reference:
Explanation:

Since the core and aggregation parts of the network are integrated and end-to-end LSPs are provided, the Unified MPLS solution is also referred to as "Seamless MPLS."

New technologies or protocols are not used here, only MPLS, Label Distribution Protocol (LDP), IGP, and BGP. Since you do not want to distribute the loopback prefixes of the PE routers from one part of the network into another part, you need to carry the prefixes in BGP. The Internal Border Gateway Protocol (iBGP) is used in one network, so the next hop address of the prefixes is the loopback prefixes of the PE routers, which is not known by the IGP in the other parts of the network. This means that the next hop address cannot be used to recurse to an IGP prefix. The trick is to make the ABR routers Route Reflectors (RR) and set the next hop to self, even for the reflected iBGP prefixes. In order for this to work, a new knob is needed.

Only the RRs need newer software to support this architecture. Since the RRs advertise the BGP prefixes with the next hop set to themselves, they assign a local MPLS label to the BGP prefixes. This means that in the data plane, the packets forwarded on these end-to-end LSPs have an extra MPLS label in the label stack. The RRs are in the forwarding path.

There are two possible scenarios:

In both scenarios, the ABR sets the next hop to self for the prefixes advertised (reflected by BGP) by the ABR from the aggregation part of the network into the core part. If this is not done, the ABR needs to redistribute the loopback prefixes of the PEs from the aggregation IGP into the core IGP.
If this is done, there is no scalability.

In order to set the next hop to self for reflected iBGP routes, you must configure the neighbor x.x.x.x next-hop-self all command.

Reference: http://www.cisco.com/c/en/us/support/docs/multiprotocol-label-switching- mpls/mpls/116127-configure-technology-00.html

QUESTION 38
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:
Explanation:

A CoPP policy can limit a number of different packet types that are forwarded to the control plane.
Traffic destined for the switch CPU includes:

?Address Resolution Protocol (ARP)

?First-hop redundancy protocol packets

?Layer 2 control packets

?Management packets (telnet, Secure Shell [SSH] Protocol, Simple Network Management Protocol [SNMP]) <--- C and D are not correct.

?Multicast control packets

?Routing protocol packets

?Packets with IP options

?Packets with time to live (TTL) set to 1
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?Packets that require ACL logging

?Packets that require an initial lookup (first packet in a flow: FIB miss)

?Packets that have don't support hardware switching/routing

Reference: http://www.cisco.com/c/en/us/products/collateral/switches/catalyst-6500-series- switches/white_paper_c11_553261.html

QUESTION 39
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.
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Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Explanation:

SRR is scheduling service for specifying the rate at which packets are dequeued. With SRR there are two modes, shaped and shared. Shaped mode is only available on the egress queues

SRR differs from typical WRR. With WRR queues are serviced based on the weight. Q1 is serviced for weight 1 period of time, Q2 is served for weight 2 period of time, and so forth. The servicing mechanism works by moving from queue to queue and services them for the weighted amount of time. With SRR weights are still followed; however, SRR services Q1, moves to Q2, then Q3 and Q4 in a different way. It does not wait at and service each queue for a weighted amount of time before moving on to the next queue. Instead, SRR makes several rapid passes at the queues; in each pass, each queue might or might not be serviced. For each given pass, the more highly weighted queues are more likely to be serviced than the lower priority queues.

Reference: http://www.cisco.com/c/en/us/products/collateral/switches/catalyst-3560-e-series- switches/prod_qas0900aecd805bacc7.html

QUESTION 40
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.
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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:
Explanation:

Embedded Packet Capture (EPC) provides an embedded systems management facility that helps in tracing and troubleshooting packets. This feature allows network administrators to capture data packets flowing through, to, and from a Cisco device. The network administrator may define the capture buffer size and type (circular, or linear) and the maximum number of bytes of each packet to capture. The packet capture rate can be throttled using further administrative controls. For example, options allow for filtering the packets to be captured using an Access Control List and, optionally, further defined by specifying a maximum packet capture rate or by specifying a sampling interval.

Reference: http://www.cisco.com/c/en/us/td/docs/ios-xml/ios/epc/configuration/xe-3s/asr1000/epc- xe-3s-asr1000-book/nm-packet-capture-xe.html

QUESTION 41
Refer to the exhibit.

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```
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:
Explanation:

The timeout for outgoing SSH connection is defined by the "ip sshh time-out" command (in seconds), which is configured here as 30.

QUESTION 42
What is the most common use for route tagging in EIGRP?

A. to determine the route source for management purposes
B. "Pass Any Exam. Any Time." - www.actualtests.com 566
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   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:
Explanation:

QUESTION 43
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:
Explanation:

QUESTION 44
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:
Explanation:

QUESTION 45
Which two commands enable OSPF graceful shutdown? (Choose two.)

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A. nsf cisco
B. ip ospf shutdown
C. shutdown
D. nsf ietf helper disable

Correct Answer: BC
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 46
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:
Explanation:

QUESTION 47
Which statement about NAT64 is true?

A. It uses one-to-one mapping between IPv6 addresses and IPv4 addresses.
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   Cisco 400-101 Exam
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:
Explanation:

QUESTION 48
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:
Explanation:

QUESTION 49
DRAG DROP

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.

B.

C.

D.

Correct Answer:
Section: (none)
Explanation

Explanation/Reference:

AH	Routing
Destination	ESP
ESP	Fragment
Fragment	AH
Hop-by-Hop	Destination
Routing	Hop-by-Hop

Explanation:

Routing

ESP

Fragment

AH

Destination

Hop-by-Hop

QUESTION 50
DRAG DROP

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.

B.

C.

D.

Correct Answer:
Section: (none)
Explanation

Explanation/Reference:

*		U	
?		*	
A		P	
P		?	
Q		Q	
U		A	

Explanation:

```
U

*

P

?

Q

A
```

QUESTION 51
DRAG DROP

Cisco 400-101 Exam
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.

B.

C.

D.

Correct Answer:
Section: (none)
Explanation

Explanation/Reference:

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

Explanation:

peer session templates
BGP Dynamic Update Peer-Groups
BGP dynamic neighbors
peer policy templates
peer groups

QUESTION 52
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:
Explanation:

QUESTION 53
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:
Explanation:

QUESTION 54
Which three address family types does EIGRP support? (Choose three.)

A. IPv4 unicast
B. "Pass Any Exam. Any Time." - www.actualtests.com 659
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   IPv4 multicast
C. IPv6 unicast
D. IPv6 multicast
E. IPv4 anycast
F. IPv6 anycast

Correct Answer: ABC
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 55
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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:
Explanation:

QUESTION 56
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:
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Explanation:

QUESTION 57
Which statement about LISP encapsulation in an EIGRP OTP implementation is true?

A. OTP uses LISP encapsulation for dynamic multipoint tunneling.

B. "Pass Any Exam. Any Time." - www.actualtests.com 676
Cisco 400-101 Exam
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:
Explanation:

QUESTION 58
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:
Explanation:

QUESTION 59
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:
Explanation:

QUESTION 60
Which statement about NAT64 is true?

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

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 61
Which statement about the spanning-tree portfast feature on the switch is true?

A. If an interface is enabled for portfast receives BDPU, the port goes through the spanning-tree listening, learning, and forwarding states.
B. If an interface is enabled for portfast receives BDPU, the port does not go through the spanning- tree listening, learning, and forwarding states.
C. If an interface is enabled for portfast receives BDPU, the port is shut down immediately.
D. If an interface is enabled for portfast receives BDPU, the port goes into the spanning-tree inconsistent state.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 62
Which three statements about OSPFv3 address families are true? (Choose three.)

A. Each address family requires the same instance ID.
B. Address families can perform route redistribution into any IPv4 routing protocol.
C. An address family can have two device processes on each interface.
D. IPv4 address family require an IPv4 address to be configured on the interface.
E. Each address family uses a different shortest path tree.
F. Different address families can share the same link state database.

Correct Answer: BDE
Section: (none)
Explanation

Explanation/Reference:
Explanation:

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Cisco 400-101 Exam

QUESTION 63
Which two operating modes does VPLS support? (Choose two.)

A. transport mode
B. strict mode
C. port mode
D. loose mode

E. VLAN mode

F. dynamic mode

Correct Answer: CE
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 64
In which order of magnitude (time) is delay/latency measured when you use wide metrics in EIGRP?

A. tens of microseconds

B. picoseconds

C. mamoseconds

D. microseconds
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Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 65
Which tunnel type can be used with encryption to provide security for IPv6 over IPv4?

A. 6RD

B. 6to4

C. ISATAP

D. IPv4-compatible
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E. GRE

Correct Answer: E
Section: (none)

Explanation

Explanation/Reference:
Explanation:

QUESTION 66
Which QoS mechanism is used to implement CoPP?

A. RSVP
B. rate limiting
C. FIFO
D. MQC

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 67
Which statement about the EIGRP SRTT is true?

A. It is the average time that it takes for a reliable packet to be acknowledged.
B. It is six time the RTO.
C. It is the time that it takes for an update to be received by a peer.
D. It is the time it takes to receive a reply to a query.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 68
Which attribute enables BGP confederation to prevent loops?

A. ATOMIC_AGGREGATE
B. ORIGIN

C. NEXT_HOP

D. AS-PATH

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 69
In a Catalyst 6500 VSS setup, what is the function of RRP?

A. It determines link integrity and rejects any unidirectional links.

B. It determines which chassis becomes active and which chassis becomes standby.

C. It determines which links in an Ether Channel forward traffic.

D. It prepares the configuration file and brings up the VSL interfaces.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 70
Refer to the exhibit.
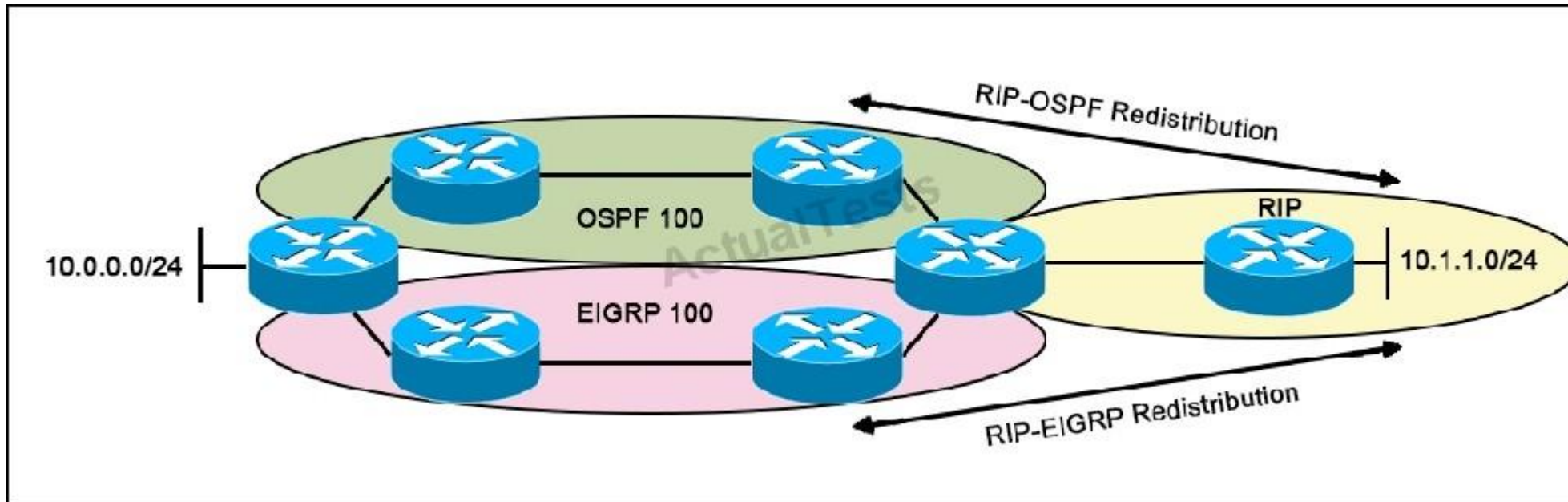
Assume that the distances are set to default. Which statement about how the 10.0.0.0 network will reach the 10.1.1.0/24 network is true?

A. A routing loop will occur.
B. Packets will be load balanced.
C. The path through OSPF will be used.
D. The path through EIGRP will be used.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 71
Refer to the exhibit.

```
R1#sho ip route 192.168.1.0 255.255.255.254
Routing entry for 192.168.1.0/31
      Known via "ospf 1", distance 110, metric 20, type intra area
      Last update from 192.168.1.2 on Ethernet0/0, 00:06:03 ago
      Routing Descriptor Blocks:
      * 192.168.1.4, from 2.2.2.2, 00:31:07 ago, via Ethernet1/0
          Route metric is 20, traffic share count is 1
        192.168.1.2, from 1.1.1.1, 00:06:03 ago, via Ethernet0/0
          Route metric is 20, traffic share count is 1
```

Prefix 192.168.1.0/31 is currently two-way ECMP. How can you make Ethernet0/0 the preferred path?

A. "Pass Any Exam. Any Time." - www.actualtests.com 762
   Cisco 400-101 Exam
   Increase the OSPF cost of Ethernet1/0 so that the OSPF cost is higher on Ethernet1/0 than on Ethernet0/0.
B. Increase the bandwidth of Ethernet1/0 so that it has a higher bandwidth than Ethernet0/0.
C. Increase the OSPF cost of Ethernet0/0 so that the OSPF cost is higher on Ethernet1/0 than on Ethernet0/0.
D. Log in to the router that is connected to Ethernet0/0 and lower the OSPF cost on the interface that is connected to Ethernet0/0.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 72
Refer to the exhibit.

```
☐ Open Shortest Path First
  ☐ OSPF Header
      Version: 2
      Message Type: Hello Packet (1)
      Packet Length: 44
      Source OSPF Router: 10.155.255.1 (10.155.255.1)
      Area ID: 0.0.0.10 (0.0.0.10)
      Checksum: 0x0000 (None)
      Auth Type: Cryptographic (2)
      Auth Crypt Key id: 121
      Auth Crypt Data Length: 16
      Auth Crypt Sequence Number: 1421584632
      Auth Crypt Data: 589382284493a1312be3511bdf6673cd
  ☐ OSPF Hello Packet
      Network Mask: 255.255.255.0 (255.255.255.0)
      Hello Interval [sec]: 10
    ☐ Options: 0x12 (L, E)
        0... .... = DN: Not set
        .0.. .... = O: Not set
        ..0. .... =   DC: Demand Circuits are NOT supported
        ...1 .... =   L: The packet contains LLS data block
        .... 0... =   NP: NSSA is NOT supported
        .... .0.. =   MC: NOT Multicast Capable
        .... ..1. =   E : External Routing Capability
        .... ...0 =   MT: NO Multi-Topology Routing
      Router Priority: 1
      Router Dead Interval [sec]: 40
      Designated Router:  10.155.135.1 (10.155.135.1)
      Backup Designated Router: 0.0.0.0 (0.0.0.0)
  ⊞ OSPF LLS Data Block
```

```
☐ Open Shortest Path First
  ☐ OSPF Header
      Version: 2
      Message Type: Hello Packet (1)
      Packet Length: 44
      Source OSPF Router: 10.155.255.2 (10.155.255.2)
      Area ID: 0.0.0.10 (0.0.0.10)
      Checksum: 0x0000 (None)
      Auth Type: Cryptographic (2)
      Auth Crypt Key id: 121
      Auth Crypt Data Length: 16
      Auth Crypt Sequence Number: 1421584519
      Auth Crypt Data: e135d573c8e2f5e89cd336e80cccf398
  ☐ OSPF Hello Packet
      Network Mask: 255.255.255.0 (255.255.255.0)
      Hello Interval [sec]: 10
    ☐ Options: 0x18 (L, NP)
        0... .... = DN: Not set
        .0.. .... = O: Not set
        ..0. .... =   DC: Demand Circuits are NOT support
        ...1 .... =   L: The packet contains LLS data blo
        .... 1... =   NP: NSSA is supported
        .... .0.. =   MC: NOT Multicast Capable
        .... ..0. =   E : NO External Routing Capability
        .... ...0 =   MT: NO Multi-Topology Routing
      Router Priority: 10
      Router Dead Interval [sec]: 40
      Designated Router:  10.155.135.2 (10.155.135.2)
      Backup Designated Router: 0.0.0.0 (0.0.0.0)
  ⊞ OSPF LLS Data Block
```

The OSPF adjacency between two routers cannot be established. What is the root cause of the problem?

A. Both routers are designated routers.

B. different area ID

C. "Pass Any Exam. Any Time." - www.actualtests.com 763
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mismatched OSPF network types

D. authentication error

E. area type mismatch

Correct Answer: E
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 73
If MPLS label packets are swapped, what happens to the TTL value?

A. It is preserved.

B. It is set to 255.

C. It is decremented.

D. It is set to zero.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 74
Which encapsulation is used when deploying EIGRP OTP?

A. GRE

B. LISP

C. "Pass Any Exam. Any Time." - www.actualtests.com 764
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PPP

D. dot1q

E. MPLS

F. ISL

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 75
What is the minimum link MTU value for IPv6?

A. 68 bytes

B. 1200 bytes

C. 500 bytes

D. 1280 bytes

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 76
Which two statements about BFD operation are true? (Choose two)

A. It can detect and bypass failed peers.

B. It supports asynchronous mode.

C. It detects failure in the forwarding path between routers over a long duration.

D. It supports fast peer failure detection independently of the routing protocol.

E. It provides a high-overhead, shot-duration method of detecting path failures.

Correct Answer: BD
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 77
Refer to the exhibit.

```
class-map match-all APP1
  match ip dscp af31
!
!
policy-map PROTECT_APPS
  class APP1
     bandwidth 2000
!
```

A TCP application in class APP1 is guaranteed bandwidth as shown in the exhibit. A UDP-based application is introduced that is also running the DSCP AF31 markings.

Which option describes what happens when link congestion occurs and both applications need more bandwidth as guaranteed by the bandwidth statement?

A. UDP dominance occurs, which causes the TCP-based application in class APP1 to underperform.
B. Both applications receive a bandwidth of 2 Mb/s and are best effort within the class APP1.
C. There is no impact when the UDP-based application is introduced.
D. Both applications receive a bandwidth of 2 Kb/s and are best effort within the class APP1.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 78
Which three topologies are standardized by the Metro Ethernet Forum? (Choose three)

A. E-LAN
B. VPWS
C. E-Tree
D. E-Line
E. NPE
F. PNNI

Correct Answer: ACD
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 79
Which three options describe characteristics of a link state routing protocol? (Choose three)

A. It uses cost in the metric calculation to determine the best path.
B. It uses hop count in the metric calculation to determine the best path.
C. It provides faster convergence as opposed to distance vector routing protocols.
D. It is better in detecting suboptimal routing.
E. "Pass Any Exam. Any Time." - www.actualtests.com 773
   Cisco 400-101 Exam
   It is topology driven and has an overall overview of the network.
F. It only has a neighbor routing table.

Correct Answer: ACE
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 80
Refer to the exhibit.

```
ABC-1#telnet 192.168.5.5.
% telnet connections not permitted from this terminal
```

When attempting to use Telnet to connect to 192.168.5.5, you received the given error message. Which configuration change is most likely to correct the problem?

A. Remove protocol filtering on 192.168.5.5
B. Configure the VTY lines to allow Telnet as a transport output.
C. Configure ACL on the control plane interface of ABC-1, to allow TCP connections to port 21.

D. Configure the VTY lines to allow Telnet as a transport input.
E. Configure the AUX port to allow Telnet as a transport output.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 81
Which three features are supported by PIMv6? (Choose three)

A. "Pass Any Exam. Any Time." - www.actualtests.com 774
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    embedded RP
B. MSDP
C. Auto-RP
D. sparse mode
E. SSM
F. dense mode

Correct Answer: ADE
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 82
Which packet is sent out by the DIS in IS-IS?

A. LSP
B. PSNP
C. CSNP
D. LSDB

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 83
Refer to the exhibit.

```
P#show ip route multicast

Routing Table: multicast

       10.0.0.0/8 is variably subnetted, 8 subnets, 2 masks
C         10.1.1.0/24 is directly connected, Ethernet1/0
L         10.1.1.4/32 is directly connected, Ethernet1/0
L         10.1.2.4/32 is directly connected, Ethernet2/0
L         10.1.3.4/32 is directly connected, Ethernet3/0
O    +    10.100.1.1/32 [110/11] via 10.1.1.1, 00:02:56, Ethernet1/0
O    +    10.100.1.2/32 [110/11] via 10.1.2.2, 00:02:56, Ethernet2/0
O    +    10.100.1.3/32 [110/11] via 10.1.3.3, 00:02:56, Ethernet3/0
C         10.100.1.4/32 is directly connected, Loopback0
```

Which statement is true?

A. The "+" indicates that the routes will be removed after a times expires.
B. The "+" indicates that the routes were added through multicast static route.
C. The "+" indicates that the routes are replicated routes from the unicast RIB.
D. The "+" indicates that the routes are SAFI 2 routes.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 84
Which two statements are true about DAI? (Choose two)

A. A valid binding in the database takes precedence over an ARP ACL.
B. The switch intercepts and checks ARP traffic on trusted and untrusted ports.
C. DAI uses the ARP table to determine the validity of the IP to MAC bindings.
D. DAI ensures that only valid ARP requests and responses are relayed.
E. DAI uses the DHCP snooping binding database to determine the validity of the IP to MAC bindings.

Correct Answer: DE
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 85
What are the minimum requirements for Cisco PfR to provide routing control?

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

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 86
Which enhancement does IGMP version 3 offer over IGMP version 2?

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

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 87
Refer to the exhibit.
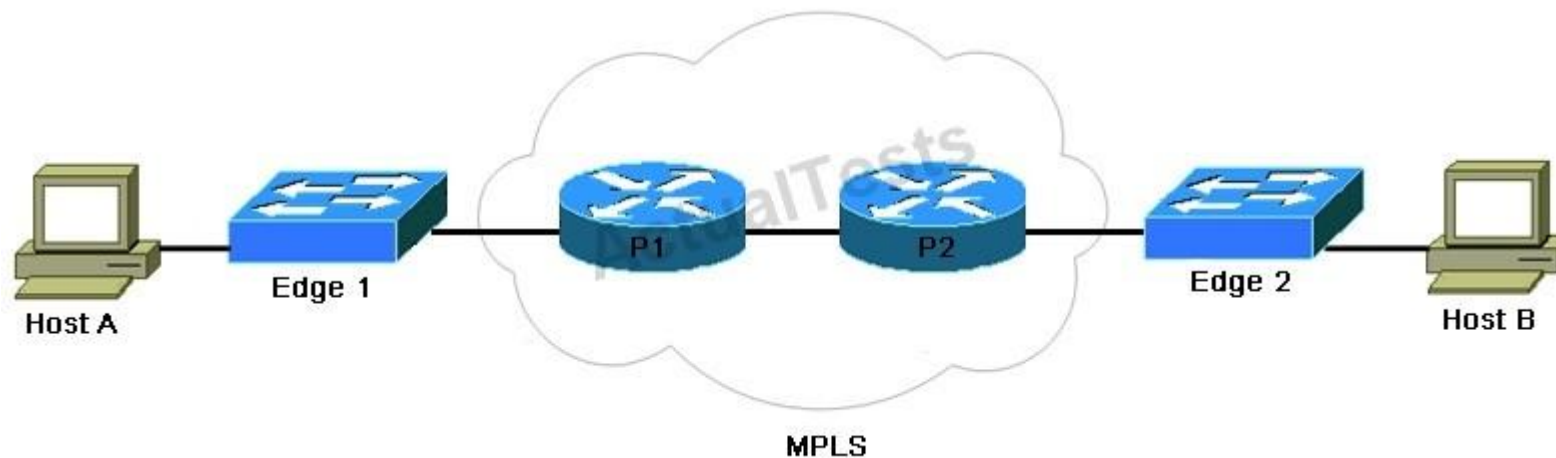
Which two technologies allow the Host MAC address to be visible to Host A? (Choose two)

A. L2TPv3
B. AToM
C. MPLS Layer 3 VPN
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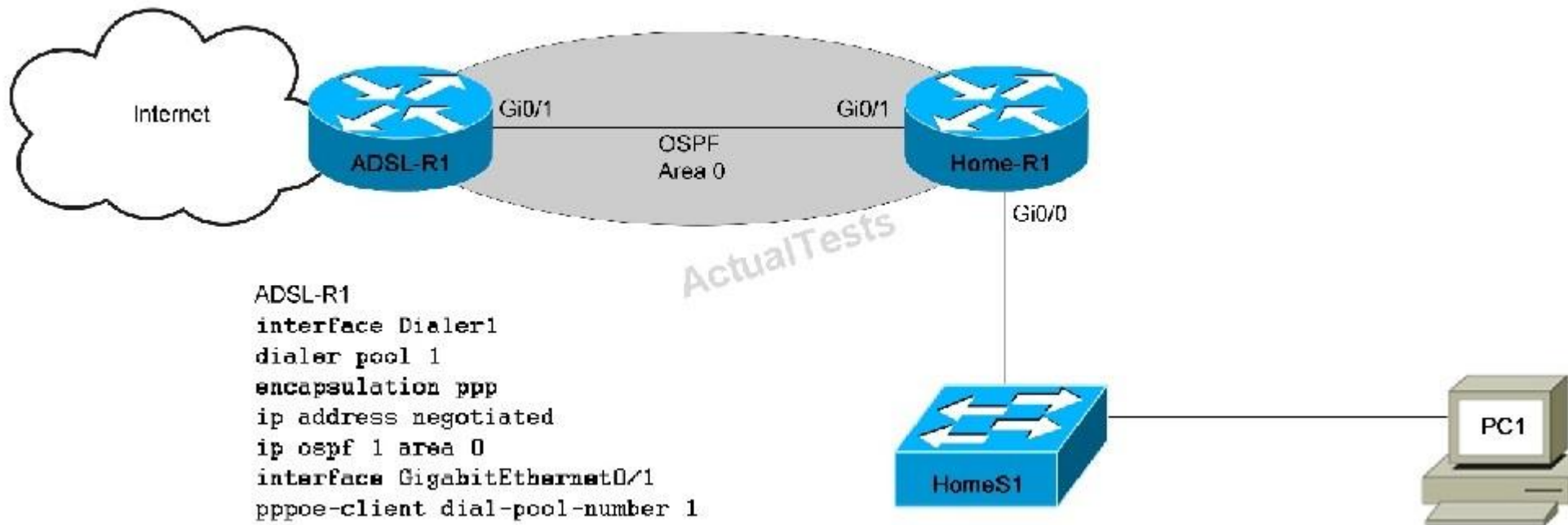   Cisco 400-101 Exam
D. GRE tunneling
E. LISP tunneling
F. 802.3ad

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 88
Refer to the exhibit.

ADSL-R1
interface Dialer1
dialer pool 1
encapsulation ppp
ip address negotiated
ip ospf 1 area 0
interface GigabitEthernet0/1
pppoe-client dial-pool-number 1

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

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

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 89
Refer to the exhibit.

```
Router#show management-interface
Management interface GigabitEtherent0/1
     Protocol   Packets processed
  Ssh          983
  Snmp         1275
```

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

A. The device has control-plane protection enabled.
B. The device implicitly allows Telnet connections.
C. The GigabitEthernet0/1 interface of the device allows incoming SSH and SNMP connections.
D. The device has management-plane protection enabled.
E. The device allows SSH connections to its loopback interface.

Correct Answer: CD
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 90
Which two statements about OSPF route filtering are true? (Choose two)

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

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 91
Which IP SLA operation requires Cisco endpoints?

A. UDP Jitter for VoIP
B. ICMP Path Echo
C. ICMP Echo
D. UDP Jitter

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 92
Which statement is true regarding UDLD and STP timers?

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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:
Explanation:

UDLD is designed to be a helper for STP. Therefore, UDLD should be able to detect an unidirectional link before STP would unblock the port due to missed BPDUs. Thus, when you configure UDLD timers, make sure your values are set so that unidirectional link is detected before "STP MaxAge + 2xForwardDelay" expires.

Reference: http://blog.ine.com/tag/stp/

QUESTION 93
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
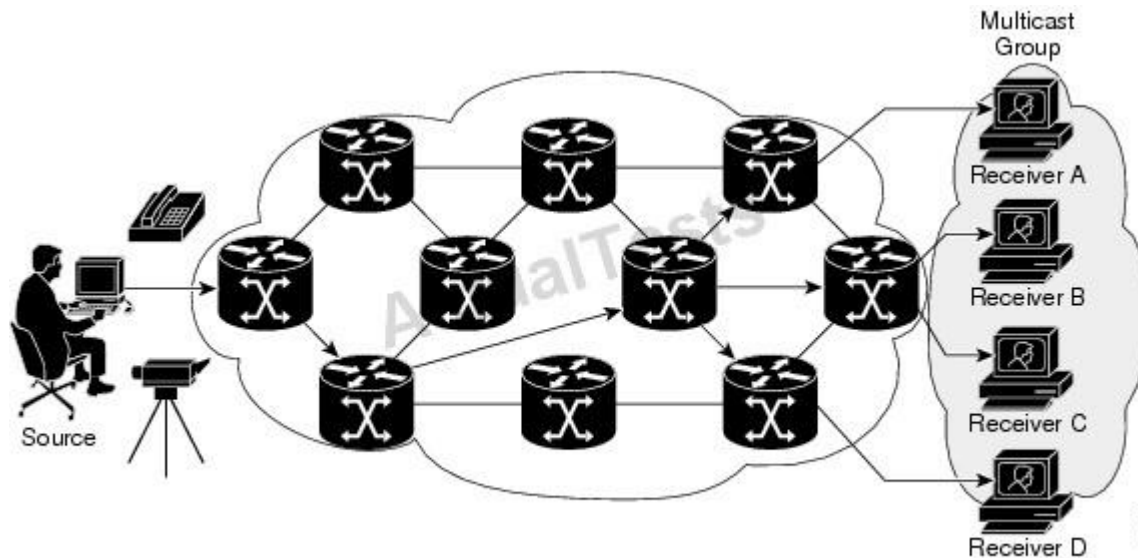**Section: (none)**
Explanation

Explanation/Reference:
Explanation:

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In the example shown above, the receivers (the designated multicast group) are interested in receiving the video data stream from the source. The receivers indicate their interest by sending an Internet Group Management Protocol (IGMP) host report to the routers in the network. The routers are then responsible for delivering the data from the source to the receivers.

Reference:

http://www.cisco.com/c/en/us/td/docs/ios/solutions_docs/ip_multicast/White_papers/mcst_ovr.html

QUESTION 94
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:

Explanation:

IPv6 Multicast Listener Discovery (MLD) is used by IPv6 devices to discover multicast listeners (nodes that want to receive multicast packets destined for specific multicast addresses) on directly attached links. There are two versions of MLD. MLD version 1 is based on version 2 of the IGMP for IPv4, and MLD version 2 is based on version 3 of the IGMP for IPv4. IPv6 multicast for Cisco software uses both MLD version 2 and MLD version 1.

Reference: http://www.cisco.com/c/en/us/td/docs/ios-xml/ios/ipmulti_lsm/configuration/xe-3s/imc- lsm-xe-3s-book/ipv6-mcast-mld-xe.html

QUESTION 95
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:
Explanation:

"mtrace" is a diagnostic tool to trace the multicast path from a specified source to a destination for

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a multicast group. It runs over IGMP protocol. Mtrace uses any information available to it to determine a previous hop to forward the trace towards the source.

Reference:
http://www.brocade.com/downloads/documents/html_product_manuals/NI_05500c_MULTICAST/ wwhelp/wwhimpl/common/html/ wwhelp.htm#context=NI_MCAST&file=IP_Multicast.3.04.html

QUESTION 96
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:
Explanation:

In networks where a Layer 2 switch interconnects several routers, such as an Internet exchange point (IXP), the switch floods IP multicast packets on all multicast router ports by default, even if there are no multicast receivers downstream. With PIM snooping enabled, the switch restricts

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multicast packets for each IP multicast group to only those multicast router ports that have downstream receivers joined to that group. When you enable PIM snooping, the switch learns which multicast router ports need to receive the multicast traffic within a specific VLAN by listening to the PIM hello messages, PIM join and prune messages, and bidirectional PIM designated forwarder-election messages.

Reference: http://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst6500/ios/12- 2SX/configuration/guide/book/snooppim.html

QUESTION 97
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:
Explanation:

Cisco High-Level Data Link Controller (HDLC) is the Cisco proprietary protocol for sending data over synchronous serial links using HDLC. Cisco HDLC also provides a simple control protocol called Serial Line Address Resolution Protocol (SLARP) to maintain serial link keepalives. For each encapsulation type, a certain number of keepalives ignored by a peer triggers the serial interface to transition to the down state. For HDLC encapsulation, three ignored keepalives causes the interface to be brought down.

By default, synchronous serial lines use the High-Level Data Link Control (HDLC) serial encapsulation method, which provides the synchronous framing and error detection functions of

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HDLC without windowing or retransmission.

Reference:
http://www.cisco.com/c/en/us/td/docs/routers/access/800/819/software/configuration/Guide/819_S CG/6ser_conf.html#78662

QUESTION 98
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:
Explanation:

The interfaces from which traffic can be monitored are called SPAN sources. Sources designate the traffic to monitor and whether to copy ingress, egress, or both directions of traffic. SPAN sources include the following:

Ethernet ports

Port channels

The inband interface to the control plane CPU -- You can monitor the inband interface only from the default VDC. Inband traffic from all VDCs is monitored.

VLANs -- When a VLAN is specified as a SPAN source, all supported interfaces in the VLAN are

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SPAN sources.

⬚emote SPAN (RSPAN) VLANs

⬚abric port channels connected to the Cisco Nexus 2000 Series Fabric Extender

⬚atellite ports and host interface port channels on the Cisco Nexus 2000 Series Fabric Extender

-- These interfaces are supported in Layer 2 access mode, Layer 2 trunk mode, and Layer 3 mode.

Reference: http://www.cisco.com/c/en/us/td/docs/switches/datacenter/sw/5_x/nx- os/system_management/configuration/guide/sm_nx_os_cg/ sm_14span.html#wp1239492

QUESTION 99
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:
Explanation:

Like IGMP snooping, MLD snooping performs multicast router discovery, with these characteristics:

?Ports configured by a user never age out.

?Dynamic port learning results from MLDv1 snooping queries and IPv6 PIMv2 packets.
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?If there are multiple routers on the same Layer 2 interface, MLD snooping tracks a single multicast router on the port (the router that most recently sent a router control packet).

?Dynamic multicast router port aging is based on a default timer of 5 minutes; the multicast router is deleted from the router port list if no control packet is received on the port for 5 minutes.

?IPv6 multicast router discovery only takes place when MLD snooping is enabled on the switch.

Reference: https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst3750/software/release/12- 2_55_se/configuration/guide/scg3750/swv6mld.pdf

QUESTION 100
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:
Explanation:

When using the EIGRP Stub Routing feature, you need to configure the distribution and remote routers to use EIGRP, and to configure only the remote router as a stub. Only specified routes are propagated from the remote (stub) router. The router responds to queries for summaries, connected routes, redistributed static routes, external routes, and internal routes with the message "inaccessible." A router that is configured as a stub will send a special peer information packet to all neighboring routers to report its status as a stub router.

Without the stub feature, even after the routes that are sent from the distribution router to the remote router have been filtered or summarized, a problem might occur. If a route is lost somewhere in the corporate network, EIGRP could send a query to the distribution router, which in turn will send a query to the remote router even if routes are being summarized. If there is a problem communicating over the WAN link between the distribution router and the remote router, an EIGRP stuck in active (SIA) condition could occur and cause instability elsewhere in the network. The EIGRP Stub Routing feature allows a network administrator to prevent queries from being sent to the remote router.

Reference: http://www.cisco.com/c/en/us/td/docs/ios/12_0s/feature/guide/eigrpstb.html

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QUESTION 101
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
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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:
Explanation:

An OSPFv3 interface must have a compatible configuration with a remote interface before the two can be considered neighbors. The two OSPFv3 interfaces must match the following criteria:

Hello interval

Dead interval

Area ID

Optional capabilities

The OSPFv3 header includes an instance ID field to identify that OSPFv3 packet for a particular OSPFv3 instance. You can assign the OSPFv3 instance. The interface drops all OSPFv3 packets that do not have a matching OSPFv3 instance ID in the packet header.

Reference: http://www.cisco.com/c/en/us/td/docs/switches/datacenter/sw/5_x/nx- os/unicast/configuration/guide/l3_cli_nxos/l3_ospfv3.html

QUESTION 102
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:
Explanation:

DR/DIS election

Setting priority to 0 doesn't disable DIS election; use point-to-point to disable it.

There can be separate DRs for L1 and L2 adjacencies.

There is no backup DR. If the primary DR fails, a new DR is elected.

DR preemption is enabled by default.

Reference: http://ccie-in-2-months.blogspot.com/2013/12/is-is-hints.html

QUESTION 103
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.
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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:
Explanation:

Poison Reverse in EIGRP states: "Once you learn of a route through an interface, advertise it as unreachable back through that same interface". For more information please read here. http://www.cisco.com/c/en/us/support/docs/ip/enhanced-interior-gateway-routing-protocol- eigrp/16406-eigrp-toc.html#splithorizon.

QUESTION 104
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:
Explanation:

RPF stands for "Reverse Path Forwarding". The RPF Interface of a router with respect to an address is the interface that the MRIB indicates should be used to reach that address. In the case of a BIDIR-PIM multicast group, the RPF interface is determined by looking up the Rendezvous Point Address in the MRIB. The RPF information determines the interface of the router that would be used to send packets towards the Rendezvous Point Link for the group.

Reference: https://tools.ietf.org/html/rfc5015

QUESTION 105
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:
Explanation:

Reference: http://packetlife.net/blog/2008/jun/24/ospf-area-types/

QUESTION 106
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:
Explanation:

To configure a router running IS-IS to generate and accept only new-style TLVs (TLV stands for type, length, and value object), use the metric-style wide command.

Reference:
http://www.cisco.com/c/en/us/td/docs/ios/12_0s/feature/guide/TE_1208S.html#wp49409

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QUESTION 107
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:
Explanation:

The OL bit is used to prevent unintentional blackholing of packets in BGP transit networks. Due to the nature of these protocols, IS-IS and OSPF converge must faster than BGP. Thus there is a possibility that while the IGP has converged, IBGP is still learning the routes. In that case if other IBGP routers start sending traffic towards this IBGP router that has not yet completely converged it will start dropping traffic. This is because it isnt yet aware of the complete BGP routes. OL bit comes handy in such situations. When a new IBGP neighbor is added or a router restarts, the IS- IS OL bit is set. Since directly connected (including loopbacks) addresses on an "overloaded" router are considered by other routers, IBGP can be bought up and can

begin exchanging routes. Other routers will not use this router for transit traffic and will route the packets out through an alternate path. Once BGP has converged, the OL bit is cleared and this router can begin forwarding transit traffic.

Reference: https://routingfreak.wordpress.com/category/ospf-vs-is-is/

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QUESTION 108
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:
Explanation:

OSPFv3 requires the use of IPsec to enable authentication. Crypto images are required to use authentication, because only crypto images include the IPsec API needed for use with OSPFv3.

In OSPFv3, authentication fields have been removed from OSPFv3 packet headers. When OSPFv3 runs on IPv6, OSPFv3 requires the IPv6 authentication header (AH) or IPv6 ESP header to ensure integrity, authentication, and confidentiality of routing exchanges. IPv6 AH and ESP extension headers can be used to provide authentication and confidentiality to OSPFv3.

To use the IPsec AH, you must enable the ipv6 ospf authentication command. To use the IPsec ESP header, you must enable the ipv6 ospf encryption command. The ESP header may be applied alone or in combination with the AH, and when ESP is used, both encryption and authentication are provided. Security services can be provided between a pair of communicating hosts, between a pair of communicating security gateways, or between a security gateway and a host.

To configure IPsec, you configure a security policy, which is a combination of the security policy index (SPI) and the key (the key is used to create and validate the hash value). IPsec for OSPFv3 can be configured on an interface or on an OSPFv3 area. For higher security, you should configure a different policy on each interface configured with IPsec. If you configure IPsec for an OSPFv3 area, the policy is applied to all of the interfaces in that area, except for the interfaces that have IPsec configured directly. Once IPsec is configured for OSPFv3, IPsec is invisible to you.

Reference: http://www.cisco.com/c/en/us/td/docs/ios-xml/ios/iproute_ospf/configuration/15-sy/iro-

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15-sy-book/ip6-route-ospfv3-auth-ipsec.html

QUESTION 109
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:
Explanation:

There are several advantages to implementing BFD over reduced timer mechanisms for routing protocols:

Although reducing the EIGRP, IS-IS, and OSPF timers can result in minimum detection timer of one to two seconds, BFD can provide failure detection in less than one second.

Because BFD is not tied to any particular routing protocol, it can be used as a generic and consistent failure detection mechanism for EIGRP, IS-IS, and OSPF.

Because some parts of BFD can be distributed to the data plane, it can be less CPU-intensive than the reduced EIGRP, IS-IS, and OSPF timers, which exist wholly at the control plane.

Reference: http://www.cisco.com/c/en/us/td/docs/ios/12_0s/feature/guide/fs_bfd.html

QUESTION 110
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:
Explanation:

EIGRP has the notion of internal and external routes. Internal routes are ones that have been originated within an EIGRP autonomous system (AS). Therefore, a directly attached network that is configured to run EIGRP is considered an internal route and is propagated with this information throughout the EIGRP AS. External routes are ones that have been learned by another routing protocol or reside in the routing table as static routes. These routes are tagged individually with the identity of their origination.

External routes are tagged with the following information:

Reference: http://www.cisco.com/c/en/us/support/docs/ip/enhanced-interior-gateway-routing- protocol-eigrp/13669-1.html#route_tagging

QUESTION 111
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.
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Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Explanation:

An EIGRP router advertises each destination it can reach as a route with an attached metric. This metric is called the route's reported distance (the term advertised distance has also been used in older documentation). A successor route for any given destination is chosen as having the lowest computed

feasible distance; that is, the lowest sum of reported distance plus the cost to get to the advertising router.

By default, an EIGRP router will store only the route with the best (lowest) feasible distance in the routing table (or, multiple routes with equivalent feasible distances).

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

QUESTION 112
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:
Explanation:

isis hello-interval

To specify the length of time between hello packets that the Cisco IOS software sends, use the isis hello-interval command in interface configuration mode.

By default, a value three times the hello interval seconds is advertised as the hold time in the hello packets sent. (Change the multiplier of 3 by specifying the isis hello-multiplier command.) With smaller hello intervals, topological changes are detected faster, but there is more routing traffic. The default is 10 seconds.

Reference:
http://www.cisco.com/c/en/us/td/docs/ios/12_2/iproute/command/reference/fiprrp_r/1rfisis.html

QUESTION 113
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.
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F. It allows the administrator to use different autonomous system numbers per EIGRP domain.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:
Explanation:

EIGRP Over the Top (OTP) allows EIGRP routers to peer across a service provider infrastructure without the SP's involvement. In fact with OTP, the provider won't see customer routes at all. EIGRP OTP acts as a provider-independent overlay that transports customer data between the customer's routers.

To the customer, the EIGRP domain is contiguous. A customer's EIGRP router sits at the edge of the provider cloud, and peers with another EIGRP router a different location across the cloud. Learned routes feature a next hop of the customer router -- not the provider. Good news for service providers is that customers can deploy EIGRP OTP with their involvement

Reference: http://ethancbanks.com/2013/08/01/an-overview-of-eigrp-over-the-top-otp/

QUESTION 114
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:
Explanation:

The IP Enhanced IGRP Route Authentication feature provides MD5 authentication of routing updates from the EIGRP routing protocol. The MD5 keyed digest in each EIGRP packet prevents the introduction of unauthorized or false routing messages from unapproved sources.

The EIGRP stub routing feature improves network stability, reduces resource utilization, and simplifies the stub device configuration.

Stub routing is commonly used in hub-and-spoke network topologies. In a hub-and-spoke network, one or more end (stub) networks are connected to a remote device (the spoke) that is connected to one or more distribution devices (the hub). The remote device is adjacent to one or more distribution devices. The only route for IP traffic to reach the remote device is through a distribution device.

References:

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http://www.cisco.com/c/en/us/td/docs/ios-xml/ios/iproute_eigrp/configuration/15-s/ire-15-s- book/ire-rte-auth.html

http://www.cisco.com/c/en/us/td/docs/ios-xml/ios/iproute_eigrp/configuration/15-s/ire-15-s- book/ire-eigrp-stub-rtg.html

QUESTION 115
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:
Explanation:

External routes fall under two categories, external type 1 and external type 2. The difference between the two is in the way the cost (metric) of the route is being calculated. The cost of a type 2 route is always the external cost, irrespective of the interior cost to reach that route. A type 1 cost is the addition of the external cost and the internal cost used to reach that route. A type 1 route is always preferred over a type 2 route for the same destination.

Reference: http://www.cisco.com/c/en/us/support/docs/ip/open-shortest-path-first-ospf/7039-1.html

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QUESTION 116
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.
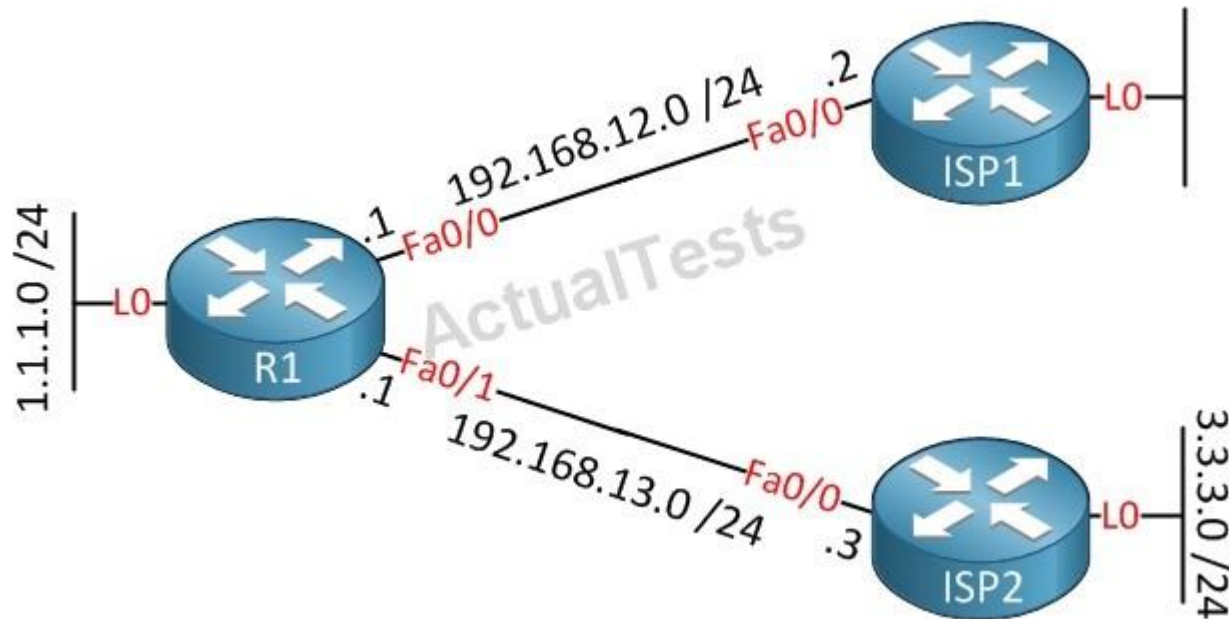D. Add the community NO_EXPORT when receiving updates from EBGP neighbors.

Correct Answer: CD
Section: (none)
Explanation

Explanation/Reference:
Explanation:

By default BGP will advertise all prefixes to EBGP (External BGP) neighbors. This means that if you are multi-homed (connected to two or more ISPs) that you might become a transit AS. Let me show you an example:

R1 is connected to ISP1 and ISP2 and each router is in a different AS (Autonomous System). Since R1 is multi-homed it's possible that the ISPs will use R1 to reach each other. In order to prevent this we'll have to ensure that R1 only advertises prefixes from its own autonomous system.

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As far as I know there are 4 methods how you can prevent becoming a transit AS:

Reference: http://networklessons.com/bgp/bgp-prevent-transit-as/

QUESTION 117
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:
Explanation:

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A community is a group of prefixes that share some common property and can be configured with the BGP community attribute. The BGP Community attribute is an optional transitive attribute of variable length. The attribute consists of a set of four octet values that specify a community. The community attribute values are encoded with an Autonomous System (AS) number in the first two octets, with the remaining two octets defined by the AS. A prefix can have more than one community attribute. A BGP speaker that sees multiple community attributes in a prefix can act based on one, some or all the attributes. A router has the option to add or modify a community attribute before the router passes the attribute on to other peers.

Reference:

http://www.cisco.com/c/en/us/support/docs/ip/border-gateway-protocol-bgp/28784-bgp- community.html

QUESTION 118
In GETVPN, which key is used to secure the control plane?

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

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Explanation:

GDOI introduces two different encryption keys. One key secures the GET VPN control plane; the other key secures the data traffic. The key used to secure the control plane is commonly called the Key Encryption Key (KEK), and the key used to encrypt data traffic is known as Traffic Encryption Key (TEK).

Reference: Group Encrypted Transport VPN (Get VPN) Design and Implementation Guide PDF

QUESTION 119
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:
Explanation:

VPLS uses MPLS labels so an MPLS network is required. VPLS MPLS packets have a two-label stack. The outer label is used for normal MPLS forwarding in the service provider's network. If BGP is used to establish the VPLS, the inner label is allocated by a PE as part of a label block. If LDP is used, the inner label is a virtual circuit ID assigned by LDP when it first established a mesh between the participating PEs. Every PE keeps track of assigned inner label, and associates these with the VPLS instance.

Reference: http://en.wikipedia.org/wiki/Virtual_Private_LAN_Service

QUESTION 120
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:
Explanation:

Ethernet Relay Service (ERS or EVPL)

An Ethernet Virtual Circuit (EVC) is used to logically connect endpoints, but multiple EVCs could exist per single UNI. Each EVC is distinguished by 802.1q VLAN tag identification. The ERS network acts as if the Ethernet frames have crossed a switched network, and certain control traffic is not carried between ends of the EVC. ERS is analogous to Frame Relay where the CE-VLAN tag plays the role of a Data-Link Connection Identifier (DLCI). The MEF term for this service is

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EVPL.

Reference: http://www.cisco.com/c/en/us/td/docs/net_mgmt/ip_solution_center/5- 1/carrier_ethernet/user/guide/l2vpn51book/concepts.html

QUESTION 121
Which two statements are true about an EVPL? (Choose two.)

A. It has a high degree of transparency.
B. "Pass Any Exam. Any Time." - www.actualtests.com 394
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   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:
Explanation:

Following the MEF approach, the services that comprise the Metro Ethernet (ME) solution can be classified into the following two general categories:

?Point-to-point (PtP) -- A single point-to-point Ethernet circuit provisioned between two User Network Interfaces (UNIs).

?Multipoint-to-multipoint (MPtMP) -- A single multipoint-to-multipoint Ethernet circuit provisioned between two or more UNIs. When there are only two UNIs in the circuit, more UNIs can be added to the same Ethernet virtual connection if required, which distinguishes this from the point-to-point type.

In the MEF terminology, this maps to the following Ethernet service types:

?Ethernet Line Service Type (E-Line) -- Point-to-point Ethernet service

?Ethernet LAN Service Type (E-LAN) -- Multipoint-to-multipoint Ethernet service

Reference:
http://www.cisco.com/c/en/us/td/docs/solutions/Enterprise/Data_Center/HA_Clusters/HA_Clusters/ HA_ME3_6.pdf

QUESTION 122
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Refer to the exhibit.

```
interface tunnel 1
  tunnel source ethernet 0
  tunnel mode ipv6ip isatap
  ipv6 address 2001:DB8::/64 eui-64
```

What is wrong with the configuration of this tunnel interface?

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:
Explanation:

Sending of IPv6 router advertisements is disabled by default on tunnel interfaces. This command reenables the sending of IPv6 router advertisements to allow client autoconfiguration:

Example:

Router(config-if)# no ipv6 nd ra suppress

Reference: http://www.cisco.com/c/en/us/td/docs/ios-xml/ios/interface/configuration/xe-3s/ir-xe-3s- book/ip6-isatap-xe.html

QUESTION 123
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:
Explanation:

Tunnel Configuration Parameters by Tunneling Type

Tunneling Type

Tunnel Configuration Parameter

Tunnel Mode

Tunnel Source

Tunnel Destination

Interface Prefix or Address

Manual

ipv6ip

An IPv4 address, or a reference to an interface on which IPv4 is configured.

An IPv4 address.

An IPv6 address.

GRE/IPv4

gre ip

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An IPv4 address.

An IPv6 address.

IPv4-

compatible

ipv6ip auto-tunnel

Not required. These are all point-to-multipoint tunneling types. The IPv4 destination address is calculated, on a per-packet basis, from the IPv6 destination.

Not required. The interface address is generated as ::tunnel-source/96.

6to4

ipv6ip 6to4

An IPv6 address. The prefix must embed the tunnel source IPv4 address

ISATAP

ipv6ip isatap

An IPv6 prefix in modified eui-64 format. The IPv6 address is generated from the prefix and the tunnel source IPv4 address.

Reference:
http://www.cisco.com/c/en/us/td/docs/ios/ipv6/configuration/guide/12_4t/ipv6_12_4t_book/ip6- tunnel.html

QUESTION 124
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. "Pass Any Exam. Any Time." - www.actualtests.com 412
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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:
Explanation:

Since the core and aggregation parts of the network are integrated and end-to-end LSPs are provided, the Unified MPLS solution is also referred to as "Seamless MPLS."

New technologies or protocols are not used here, only MPLS, Label Distribution Protocol (LDP), IGP, and BGP. Since you do not want to distribute the loopback prefixes of the PE routers from one part of the network into another part, you need to carry the prefixes in BGP. The Internal Border Gateway Protocol (iBGP) is used in one network, so the next hop address of the prefixes is the loopback prefixes of the PE routers, which is not known by the IGP in the other parts of the network. This means that the next hop address cannot be used to recurse to an IGP prefix. The trick is to make the ABR routers Route Reflectors (RR) and set the next hop to self, even for the reflected iBGP prefixes. In order for this to work, a new knob is needed.

Reference: http://www.cisco.com/c/en/us/support/docs/multiprotocol-label-switching- mpls/mpls/116127-configure-technology-00.html

QUESTION 125
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:
Explanation:

To enable LDP-IGP Synchronization on each interface that belongs to an OSPF or IS-IS process, enter the mpls ldp sync command. If you do not want some of the interfaces to have LDP-IGP Synchronization enabled, issue the no mpls ldp igp sync command on those interfaces.

If the LDP peer is reachable, the IGP waits indefinitely (by default) for synchronization to be achieved. To limit the length of time the IGP session must wait, enter the mpls ldp igp sync holddown command. If the LDP peer is not reachable, the IGP establishes the adjacency to enable the LDP session to be established.

When an IGP adjacency is established on a link but LDP-IGP Synchronization is not yet achieved or is lost, the IGP advertises the max-metric on that link.

Reference: http://www.cisco.com/c/en/us/td/docs/ios/12_0s/feature/guide/fsldpsyn.html

QUESTION 126
Which three components comprise the structure of a pseudowire FEC element? (Choose three.)

A. pseudowire ID
B. pseudowire type
C. control word
D. Layer 3 PDU
E. header checksum
F. type of service

Correct Answer: ABC
Section: (none)
Explanation

Explanation/Reference:
Explanation:

The Pseudowire ID FEC element has the following components:

Reference: http://www.ciscopress.com/articles/article.asp?p=386788&seqNum=2

QUESTION 127
Which IPv6 tunneling type establishes a permanent link between IPv6 domains over IPv4?

A. IPv4-compatible tunneling
B. ISATAP tunneling

C. 6to4 tunneling
D. manual tunneling

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Explanation:

A manually configured tunnel is equivalent to a permanent link between two IPv6 domains over an IPv4 backbone. The primary use is for stable connections that require regular secure communication between two edge routers or between an end system and an edge router, or for connection to remote IPv6 networks.

Reference:
http://www.cisco.com/c/en/us/td/docs/ios/ipv6/configuration/guide/12_4t/ipv6_12_4t_book/ip6- tunnel.html

QUESTION 128
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:
Explanation:

Unicast RPF requires Cisco express forwarding (CEF) to function properly on the router.

Strict Versus Loose Checking Mode

The Unicast RPF in Strict Mode feature filters ingress IPv4 traffic in strict checking mode and forwards packets only if the following conditions are satisfied.

An IPv4 packet must be received at an interface with the best return path (route) to the packet source (a process called symmetric routing). There must be a route in the Forwarding Information Base (FIB) that matches the route to the receiving interface. Adding a route in the FIB can be done via static

route, network statement, or dynamic routing.

᠁Pv4 source addresses at the receiving interface must match the routing entry for the interface.

References:
http://www.cisco.com/c/en/us/td/docs/ios/12_2/security/configuration/guide/fsecur_c/scfrpf.html

http://www.cisco.com/c/en/us/td/docs/ios/12_0s/feature/guide/srpf_gsr.html

QUESTION 129
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. "Pass Any Exam. Any Time." - www.actualtests.com 477
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   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:
Explanation:

Modes are:

Mode monitor passive

Passive monitoring is the act of PfR gathering information on user packets assembled into flows by Netflow. Passive monitoring is typically only recommended in Internet edge deployments because active probing is ineffective because of security policies that block probing. PfR, when enabled, automatically enables Netflow on the managed interfaces on the Border Routers. By aggregating this information on the Border Routers and periodically reporting the collected data to the Master Controller, the network prefixes and applications in use can automatically be learned.

Mode monitor active

Active monitoring is the act of generating Cisco IOS IP Service Level Agreements (SLAs) probes to generate test traffic for the purpose of obtaining information regarding the characteristics of the WAN links. PfR can either implicitly generates active probes when passive monitoring has identified destination hosts, or the network manager can explicitly configured probes in the PfR configuration. When jitter probes are used (common use case),

Target Discovery is used to learn the respond address and to automatically generate the probes.

Mode monitor Fast

This mode generates active probes through all exists continuously at the configured probe frequency. This differs from either active or both modes in that these modes only generate probes through alternate paths (exits) in the event the current path is out-of-policy.

Reference: http://docwiki.cisco.com/wiki/PfR:Technology_Overview#Mode_monitor_passive

QUESTION 130
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:
Explanation:

An application-level gateway (ALG), also known as an application-layer gateway, is an application that translates the IP address information inside the payload of an application packet. An ALG is used to interpret the application-layer protocol and perform firewall and Network Address Translation (NAT) actions. These actions can be one or more of the following depending on your configuration of the firewall and NAT:

Reference: http://www.cisco.com/c/en/us/td/docs/ios-xml/ios/ipaddr_nat/configuration/xe- 3s/asr1000/nat-xe-3s-asr1k-book/fw-msrpc-supp.html

QUESTION 131
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:
Explanation:

SLAAC is by far the easiest way to configure IPv6 addresses, simply because you don't have to configure any IPv6 address. With SLAAC, a host uses the IPv6 Neighbor Discovery Protocol (NDP) to determine its IP address and default routers. Using SLAAC, a host requests and listens

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for Router Advertisements (RA) messages, and then taking the prefix that is advertised to form a unique address that can be used on the network. For this to work, the prefix that is advertised must advertise a prefix length of 64 bits (i.e., /64). But the most significant of Stateless Address Autoconfiguration (SLAAC) is it provided no mechanism for configuring DNS resolver information.Therefore SLACC can be used along with DHCPv6 (Stateless) to push DNS and other information to the clients.

QUESTION 132
For which three routing protocols can Cisco PfR provide direct route control? (Choose three.)

A. OSPF
B. IS-IS
C. BGP
D. EIGRP
E. static routing
F. ODR

Correct Answer: CDE
Section: (none)
Explanation

Explanation/Reference:
Explanation:

Q. Can you elaborate more on the Parent Route and why it's so important to PfR?

A. Yes. For any route that PfR modifies or controls (BGP, Static, PIRO, EIGRP, PBR), having a Parent prefix in the routing table eliminates the possibility of a routing loop occurring. This is naturally a good thing to prevent in routed networks.

Reference: http://docwiki.cisco.com/wiki/Performance_Routing_FAQs#Route_Control

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QUESTION 133
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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:
Explanation:

Default SNMP Configuration

Feature

Default Setting

SNMP agent

Enabled

SNMP community strings

Read-Only: Public

Read-WritE. Private

Read-Write-all: Secret

SNMP trap receiver

None configured

SNMP traps

None enabled

SNMP version

If no version keyword is present, the default is version 1.

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SNMPv3 authentication

If no keyword is entered, the default is the noauth (noAuthNoPriv) security level.

SNMP notification type

If no type is specified, all notifications are sent.

Reference: http://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst2950/software/release/12- 1_19_ea1/configuration/guide/2950scg/swsnmp.html

QUESTION 134
Which three protocols can use enhanced object tracking? (Choose three.)

A. HSRP
B. Proxy-ARP
C. VRRP
D. GLBP
E. NTP
F. DHCP
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Correct Answer: ACD
Section: (none)
Explanation

Explanation/Reference:
Explanation:

The Enhanced Object Tracking feature separates the tracking mechanism from HSRP and creates a separate standalone tracking process that can be

used by other processes and HSRP. This feature allows tracking of other objects in addition to the interface line-protocol state.

A client process such as HSRP, Virtual Router Redundancy Protocol (VRRP), or Gateway Load Balancing Protocol (GLBP), can register its interest in tracking objects and then be notified when the tracked object changes state.

Reference: http://www.cisco.com/c/en/us/td/docs/ios-xml/ios/ipapp/configuration/15-mt/iap-15-mt- book/iap-eot.html

QUESTION 135
Which three statements about implementing an 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:
Explanation:

An ALG may offer the following functions:

Reference: http://en.wikipedia.org/wiki/Application-level_gateway

QUESTION 136
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:

Explanation:

QUESTION 137
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:
Explanation:

QUESTION 138
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:

Explanation:

QUESTION 139
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:
Explanation:

QUESTION 140
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:
Explanation:

QUESTION 141
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:
Explanation:

QUESTION 142
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
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    Cisco 400-101 Exam
D. after the router ID comparison

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 143
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:
Explanation:

QUESTION 144
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:
Explanation:

QUESTION 145
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.
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   Cisco 400-101 Exam
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:
Explanation:

QUESTION 146
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:
Explanation:

QUESTION 147
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:
Explanation:

QUESTION 148
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:
Explanation:

QUESTION 149
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:
Explanation:

QUESTION 150
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Cisco 400-101 Exam
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:
Explanation:

QUESTION 151
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:
Explanation:

QUESTION 152
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

Explanation/Reference:
Explanation:

QUESTION 153
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:
Explanation:

QUESTION 154
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.
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    Cisco 400-101 Exam
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:
Explanation:

QUESTION 155
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.
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   Cisco 400-101 Exam

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:
Explanation:

QUESTION 156
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:
Explanation:

QUESTION 157
Which three statements are true about unicast RPF? (Choose three.)

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.
F. Unicast RPF loose mode is typically used with ISP networks.

Correct Answer: ACF
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 158
Which two statements about GLBP are true? (Choose two.)

A. Packets are forwarded by multiple routers that share one virtual IP address.
B. The active router forwards packets received on one virtual IP and MAC address.
C. The standby router forwards packets when the active router fails.
D. Hosts on the network are configured with multiple gateways for load balancing.
E. Routers in a GLBP group can share multiple virtual MAC addresses.

Correct Answer: AE
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 159
Which LSA type is associated with the default route in a totally stubby area?

A. interarea-prefix LSA for ABRs (Type 3)
B. autonomous system external LSA (Type 5)
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    Cisco 400-101 Exam
C. router LSA (Type 1)
D. interarea-router LSAs for ASBRs (Type 4)

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 160
Which two statements about UDP and latency are true? (Choose two.)

A. UDP is connection oriented, so the size of a UDP stream is independent of latency.
B. UDP is connection oriented, so latency can increase the size of a UDP stream.
C. UDP is connectionless, so latency can increase the size of a UDP stream.
D. If latency decreases, throughput also decreases.
E. If latency increases, throughput also increases.
F. Latency can cause jitter on UDP connections.

Correct Answer: CF
Section: (none)
Explanation

Explanation/Reference:
Explanation:

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QUESTION 161
What are the three HDLC operating modes? (Choose three.)

A. "Pass Any Exam. Any Time." - www.actualtests.com 724
Cisco 400-101 Exam
normal response
B. asynchronous balanced
C. synchronous response
D. asynchronous response
E. normal balanced
F. synchronous balanced

Correct Answer: ABD
Section: (none)
Explanation

Explanation/Reference:

Explanation:

QUESTION 162
Which three statements about IPsec VTIs are true? (Choose three.)

A. IPsec sessions require static mapping to a physical interface.
B. They can send and receive multicast traffic.
C. They can send and receive traffic over multiple paths.
D. They support IP routing and ACLs.
E. They can send and receive unicast traffic.
F. They support stateful failover.

Correct Answer: BDE
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 163
Which two statements about Cisco IOS software and Cisco IOS-XE software are true? (Choose two)

A. The process IOSd on Cisco IOS-XE software runs all routing protocols.
B. Cisco IOS-XE software is based on a monolithic architecture.
C. Cisco IOS software allows processes to use different CPU cores.
D. Cisco IOS-XE software uses a hardened BSD version as the base OS.
E. Cisco IOS-XE software utilizes a separate control and forwarding plane.

Correct Answer: AE
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 164
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Cisco 400-101 Exam
Which two methods does Cisco IOS XE use to implement separation between the data plane and control plane? (Choose two)

A. the FED

B. a Linux-based CPU scheduler to efficiently manage the control and data planes.

C. separates FFM-spawned subshells in the Linux kernels for the control plane and the data plane.

D. a set of APIs to manage data plane processes

E. a set of APIs to manage control plane processes

Correct Answer: AE
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 165
What is used to acknowledge the receipt of LSPs on a point-to-point network in IS-IS?

A. hello

B. CSNP

C. PSNP

D. IIH

E. CSH

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 166
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Cisco 400-101 Exam
What is the function of the rendezvous point in PIM?

A. It acts as a shared root for a multicast tree.

B. It is the main source of the multicast traffic.

C. It redistributes the multicast configuration to its connected neighbors.

D. It will redistribute the unicast routes to avoid an RPF failure.

Correct Answer: A

Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 167
DRAG DROP

Drag and drop the argument of the mls ip cef load-sharing command on the left to the function it performs on the right.

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 multi[...] 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 multiple 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

A.
B.
C.
D.

Correct Answer:
Section: (none)
Explanation

Explanation/Reference:

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	full simple
full	exclude-port source
full simple	simple
exclude-port source	exclude-port destination
exclude-port destination	full

Explanation:

| full simple |
| exclude-port source |
| simple |
| exclude-port destination |
| full |

QUESTION 168
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:
Explanation:

Restrictions for Embedded Packet Capture

Reference: http://www.cisco.com/c/en/us/td/docs/ios-xml/ios/epc/configuration/15-mt/epc-15-mt- book/nm-packet-capture.html

QUESTION 169
DRAG DROP

Drag and drop the argument of the mpls 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
full	configures CEF load balancing to use only destination Layer 4 ports
full simple	configures CEF load balancing to use only Layer 3 information,
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

A.
B.
C.
D.

Correct Answer:
Section: (none)
Explanation

Explanation/Reference:

simple	full simple
full	exclude-port source
full simple	simple
exclude-port source	exclude-port destination
exclude-port destination	full

Explanation:

| full simple |
| exclude-port source |
| simple |
| exclude-port destination |
| full |

QUESTION 170
Refer to the exhibit.
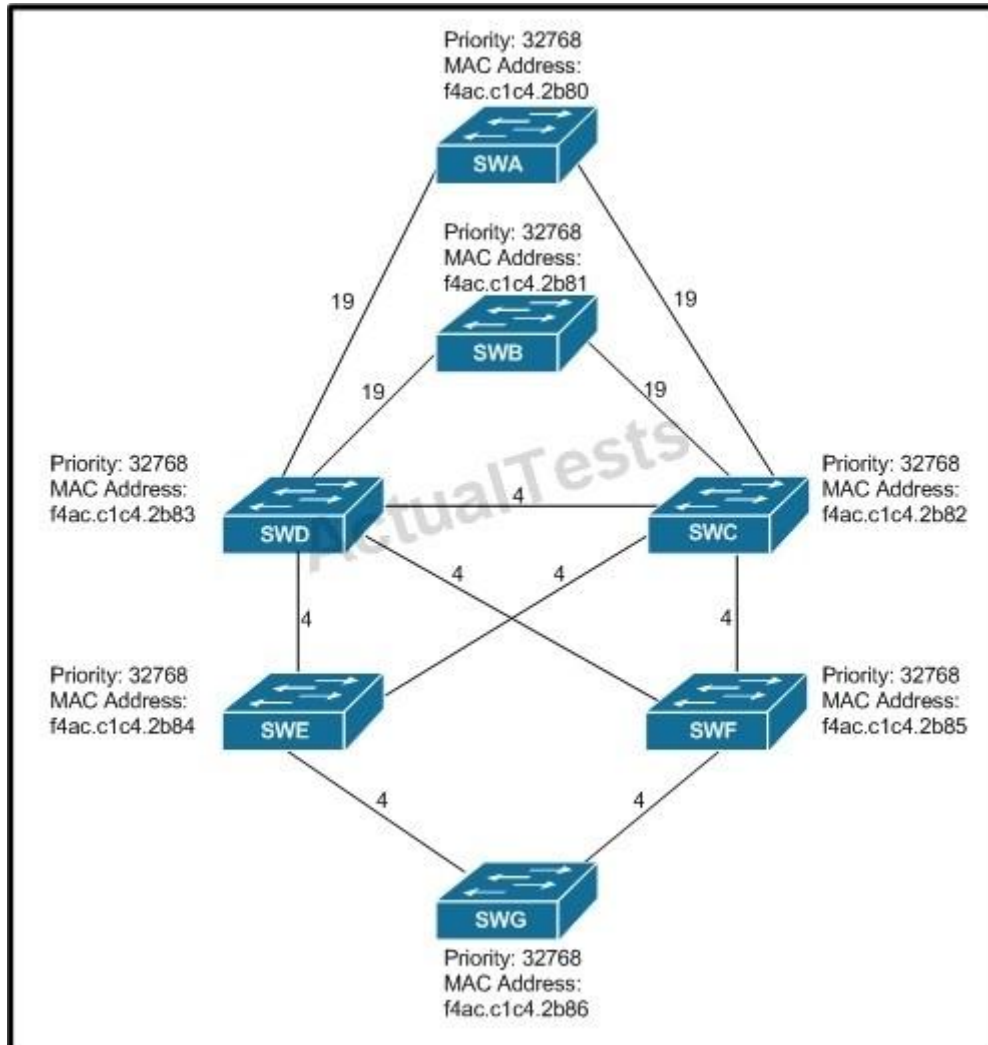
All switches have default bridge priorities, and originate BPDUs with MAC addresses as indicated. The numbers shown are STP link metrics. Which two ports are forwarding traffic after STP converges? (Choose two.)

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:
Explanation:

Here, we know SWB to SWC are forwarding because we already identified the blocking port. So "Pass Any Exam. Any Time." - www.actualtests.com 62
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for the last correct answer let's consider what must be done to prevent a switch loop between SWC/SWD/SWE. SWE to SWD will be blocked because SWC has a lower MAC address so it wins the forwarding port. And to look at it further, you could try to further understand what would happen with ports on SWG. Would the ports on SWG try to go through SWE or SWF? SWE has the lower MAC address so the port from SWG to SWE would win the forwarding election.
Therefore, answer B could never be correct.

QUESTION 171
Refer to the exhibit.

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Cisco 400-101 Exam
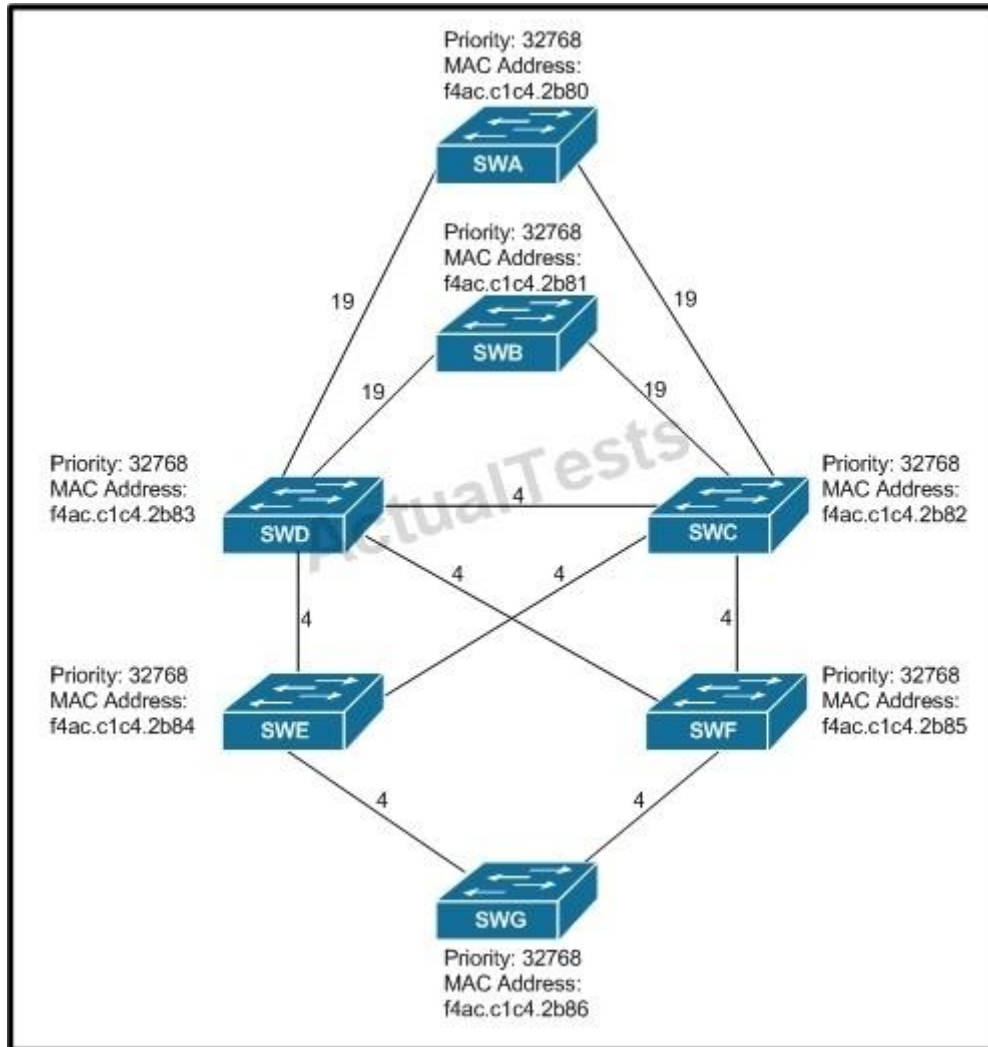
All switches have default bridge priorities, and originate BPDUs with MAC addresses as indicated. The numbers shown are STP link metrics. Which two ports are in blocking state after STP converges? (Choose two.)

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:
Explanation:

This is a scenario that wants you to demonstrate understanding of the Root switch and Root port "Pass Any Exam. Any Time." - www.actualtests.com 78
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election process. So, it's best to start with where the root switch will be and work down from there. It's setup nicely because the lowest MAC address switch starts at the top and then the lower priority/higher mac addresses move down the architecture. SWA wins the root election and of course all ports in SWA are forwarding. SWB introduces the possibility for a switching loop so it's important to understand which ports will be put into the blocking state. Since SWD is a higher MAC address it will end up with a blocked port connected to SWB to prevent a loop: and this is one of the correct answers. To prevent the possibility of another potential switching loop, SWD again ends up with the higher MAC address so blocking the link between D and C prevents a B/C/D switching loop.

QUESTION 172
DRAG DROP

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Cisco 400-101 Exam
Drag and drop the PPPoE packet type on the left to the corresponding description on the right.

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 pack[et] indicates the type of service requested.
PADT	A packet that is sent with the destination_addr set to the unicast address of the PPPoE client. The packet contains an offer for the client.
PADO	A packet that is sent from the PPPoE client with the destination_addr set to the chosen access concentrator. The packet contains a session request from the client.
PADI	A packet that is sent as confirmation to the client. The packet contains the unique PPPoE session ID.
PADS	A packet that is sent to terminate the PPPoE session.

A.
B.
C.
D.

Correct Answer:
Section: (none)
Explanation

Explanation/Reference:

Drag and drop the PPPoE packet type on the left to the corresponding description on the right.

PADR	PADI
PADT	PADO
PADO	PADR
PADI	PADS
PADS	PADT

Explanation:

PADI

PADO

PADR

PADS

PADT

QUESTION 173
Refer to the exhibit.
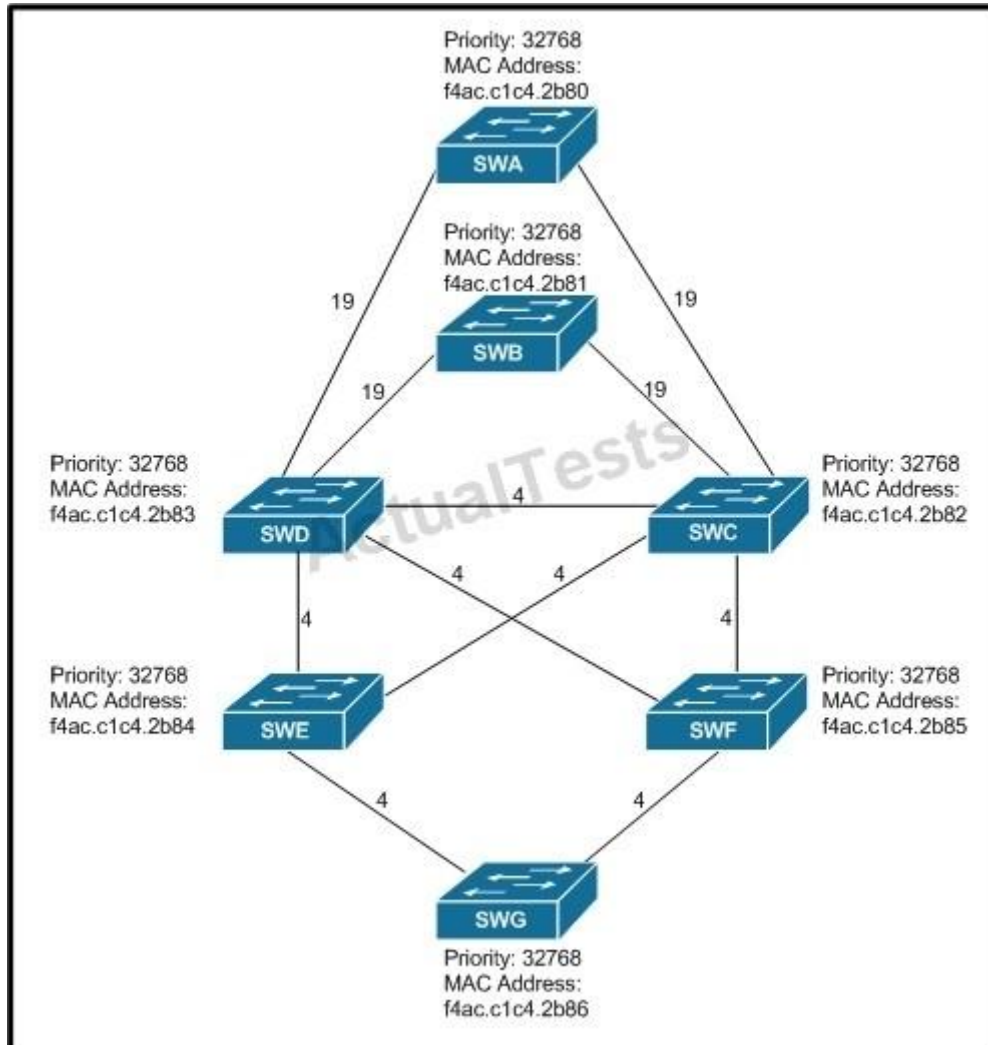
All switches have default bridge priorities, and originate BPDUs with MAC addresses as indicated.
The numbers shown are STP link metrics.

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.
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Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Explanation:

In this topology, we see that all port paths and priorities are the same, so the lowest MAC address will be used to determine the best STP path. From SWG, SWE will be chosen as the next switch in the path because it has a lower MAC address than SWF. From SWE, traffic will go to SWC because it has a lower MAC address, and then to SWD, instead of going from SWE directly to SWD. If we lower the priority of SWD (lower means better with STP) then traffic will be sent directly to SWD.

QUESTION 174
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.
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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:
Explanation:

Bridge Assurance is enabled by default and can only be disabled globally. Also, Bridge Assurance can be enabled only on spanning tree network ports that are point-to-point links. Finally, both ends of the link must have Bridge Assurance enabled.

With Bridge Assurance enabled, BPDUs are sent out on all operational network ports, including alternate and backup ports, for each hello time period. If

the port does not receive a BPDU for a specified period, the port moves into the blocking state and is not used in the root port calculation. Once that port receives a BPDU, it resumes the normal spanning tree transitions.

Reference:

http://www.cisco.com/c/en/us/td/docs/switches/datacenter/nexus5000/sw/configuration/guide/cli/C LIConfigurationGuide/SpanningEnhanced.html

QUESTION 175
Refer to the exhibit.

```
Routing Process "ospf 1" with ID 1.1.1.1
Start time: 1w5d, Time elapsed: 4d11h
Supports only single TOS(TOS0) routes
Supports opaque LSA
Supports Link-local Signaling (LLS)
Supports area transit capability
Router is not originating router-LSAs with maximum metric
Initial SPF schedule delay 5000 msecs
Minimum hold time between two consecutive SPFs 10000 msecs
Maximum wait time between two consecutive SPFs 10000 msecs
Incremental-SPF disabled
Minimum LSA interval 5 secs
Minimum LSA arrival 1000 msecs
LSA group pacing timer 240 secs
Interface flood pacing timer 33 msecs
Retransmission pacing timer 66 msecs
Number of external LSA 0. Checksum Sum 0x000000
Number of opaque AS LSA 0. Checksum Sum 0x000000
Number of DCbitless external and opaque AS LSA 0
Number of DoNotAge external and opaque AS LSA 0
Number of areas in this router is 1. 1 normal 0 stub 0 nssa
Number of areas transit capable is 0
External flood list length 0
IETF NSF helper support enabled
Cisco NSF helper support enabled
Reference bandwidth unit is 100 mbps
    Area BACKBONE(0)
        Number of interfaces in this area is 2 (1 loopback)
        Area has no authentication
        SPF algorithm last executed 00:00:11.176 ago
        SPF algorithm executed 7 times
        Area ranges are
        Number of LSA 3. Checksum Sum 0x0140E9
        Number of opaque link LSA 0. Checksum Sum 0x000000
        Number of DCbitless LSA 0
        Number of indication LSA 0
        Number of DoNotAge LSA 0
        Flood list length 0
```

Which two statements are true? (Choose two.)

A. This is the output of the show ip ospf command.
B. This is the output of the show ip protocols command.
C. This router is an ABR.
D. This router is an ASBR.
E. Authentication is not configured for the area.
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Correct Answer: AE
Section: (none)
Explanation

Explanation/Reference:
Explanation:

The following is sample output from the show ip ospf command when entered without a specific OSPF process ID with no authentication.

Router# show ip ospf

Routing Process "ospf 201" with ID 10.0.0.1 and Domain ID 10.20.0.1

Supports only single TOS(TOS0) routes

Supports opaque LSA

SPF schedule delay 5 secs, Hold time between two SPFs 10 secs

Minimum LSA interval 5 secs. Minimum LSA arrival 1 secs

LSA group pacing timer 100 secs

Interface flood pacing timer 55 msecs

Retransmission pacing timer 100 msecs

Number of external LSA 0. Checksum Sum 0x0

Number of opaque AS LSA 0. Checksum Sum 0x0

Number of DCbitless external and opaque AS LSA 0

Number of DoNotAge external and opaque AS LSA 0

Number of areas in this router is 2. 2 normal 0 stub 0 nssa

External flood list length 0

Area BACKBONE(0)

Number of interfaces in this area is 2

Area has no authentication

SPF algorithm executed 4 times

Area ranges are

Number of LSA 4. Checksum Sum 0x29BEB

Number of opaque link LSA 0. Checksum Sum 0x0

Number of DCbitless LSA 3

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Number of indication LSA 0

Number of DoNotAge LSA 0

Flood list length 0

Reference: http://www.cisco.com/c/en/us/td/docs/ios-xml/ios/iproute_ospf/command/iro-cr- book/ospf-s1.html#wp8749965360

QUESTION 176
Refer to the exhibit.

```
R2#show ipv6 interface e0/0
Ethernet0/0 is up, line protocol is up
  IPv6 is enabled, link-local address is FE80::A8BB:CCFF:FE00:200
  No Virtual link-local address(es):
  No global unicast address is configured
  Joined group address(es):
    FF02::1
    FF02::2
    FF02::A
    FF02::1:FF00:200
```

Which part of the joined group addresses list indicates that the interface has joined the EIGRP multicast group address?

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

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Explanation:

FF02::A is an IPv6 link-local scope multicast addresses. This address is for all devices on a wire that want to "talk" EIGRP with one another.

Focusing specifically on FF02::A and how routers join it, we can see and say three things:

Reference: http://www.networkcomputing.com/networking/understanding-ipv6-what-is-solicited- node-multicast/a/d-id/1315703

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QUESTION 177
DRAG DROP

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

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

Community	BGP Well-Known Mandatory Attribute
Atomic-Aggregate	Target
Aggregator	BGP Well-Known Discretionary Attribute
Cluster List	Target
Next-Hop	BGP Optional Nontransitive Attribute
MED	Target
	Target

A.

B.

C.

D.

Correct Answer:
Section: (none)
Explanation

Explanation/Reference:

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

Community	**BGP Well-Known Mandatory Attribute**
Atomic-Aggregate	Next-Hop
Aggregator	**BGP Well-Known Discretionary Attribute**
Cluster List	Atomic-Aggregate
Next-Hop	**BGP Optional Nontransitive Attribute**
MED	Cluster List
	MED

Explanation:

BGP Well-Known Mandatory Attribute
Next-Hop

BGP Well-Known Discretionary Attribute
Atomic-Aggregate

BGP Optional Nontransitive Attribute
Cluster List
MED

QUESTION 178
Refer to the exhibit.

```
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
```

How can the EIGRP hello and hold time for Gig0/0 be changed to 5 and 15?

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. "Pass Any Exam. Any Time." - www.actualtests.com 264
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   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:
Explanation:

To configure the hello interval for an interface, use the hello-interval command in interface configuration mode

To configure the hold time for an interface, use the hold-time command in interface configuration mode.

Reference: http://www.cisco.com/c/en/us/td/docs/routers/crs/software/crs_r4- 1/routing/command/reference/b_routing_cr41crs/ b_routing_cr41crs_chapter_010.html#wp232306

QUESTION 179
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:
Explanation:

Together, a route reflector and its clients form a cluster. When a single route reflector is deployed in a cluster, the cluster is identified by the router ID of the route reflector.

The bgp cluster-id command is used to assign a cluster ID to a route reflector when the cluster has

one or more route reflectors. Multiple route reflectors are deployed in a cluster to increase redundancy and avoid a single point of failure. When multiple route reflectors are configured in a cluster, the same cluster ID is assigned to all route reflectors. This allows all route reflectors in the cluster to recognize updates from peers in the same cluster and reduces the number of updates that need to be stored in BGP routing tables.

Reference: http://ieoc.com/forums/t/5326.aspx

QUESTION 180
DRAG DROP

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

A.
B.
C.
D.

Correct Answer:
Section: (none)
Explanation

Explanation/Reference:
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Drag and drop the BGP attribute on the left to the correct category on the right.	
Local-Pref	**BGP Well-Known Mandatory Attribute**
Community	AS_path
Atomic-Aggregate	**BGP Optional Nontransitive Attribute**
AS_path	Originator ID
Cluster List	Cluster List
Originator ID	**BGP Optional Transitive Attribute**
	Community

Explanation:

BGP Well-Known Mandatory Attribute
AS_path

BGP Optional Nontransitive Attribute
Originator ID
Cluster List

BGP Optional Transitive Attribute
Community

QUESTION 181
DRAG DROP

Drag and drop each BGP attribute on the left to the matching description on the right.

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 BGP
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

A.

B.

C.

D.

Correct Answer:
Section: (none)
Explanation

Explanation/Reference:

Drag and drop each BGP attribute on the left to the matching description on the right

AS_PATH	NEXT_HOP
community	MED
LOCAL_PREF	LOCAL_PREF
MED	origin
NEXT_HOP	weight
origin	community
weight	AS_PATH

Explanation:

NEXT_HOP

MED

LOCAL_PREF

origin

weight

community

AS_PATH

QUESTION 182
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Which algorithm heavily influenced the algorithm used by path-vector protocols?

A. Bellman-Ford
B. SPF
C. DUAL
D. Spanning-Tree
E. Adaptive
F. Deflection

Correct Answer: A
Section: (none)

Explanation

Explanation/Reference:
Explanation:

A path vector protocol is a computer network routing protocol which maintains the path information that gets updated dynamically. Updates which have looped through the network and returned to the same node are easily detected and discarded. This algorithm is sometimes used in Bellman혦ord routing algorithms to avoid "Count to Infinity" problems.

Reference: http://en.wikipedia.org/wiki/Path_vector_protocol

QUESTION 183
DRAG DROP

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

Originator ID		BGP Well-Known Mandatory Attribute
		1
Community		2
Local-Preference		BGP Well-Known Discretionary Attribute
AS_Path		1
Cluster List		BGP Optional Transitive Attribute
Origin		1

A.

B.

C.

D.

Correct Answer:
Section: (none)
Explanation

Explanation/Reference:

Originator ID	BGP Well-Known Mandatory Attribute
	AS_Path
Community	Origin
Local-Preference	BGP Well-Known Discretionary Attribute
AS_Path	Local-Preference
Cluster List	BGP Optional Transitive Attribute
Origin	Community

Explanation:

Well Known Mandatory Attribute

AS_Path

Origin

Well Known Discretionary Attribute

Local Preference

Optional Transitive

Community

Reference: http://www.deepsh.it/networking/BGP/bgp-attributes.png
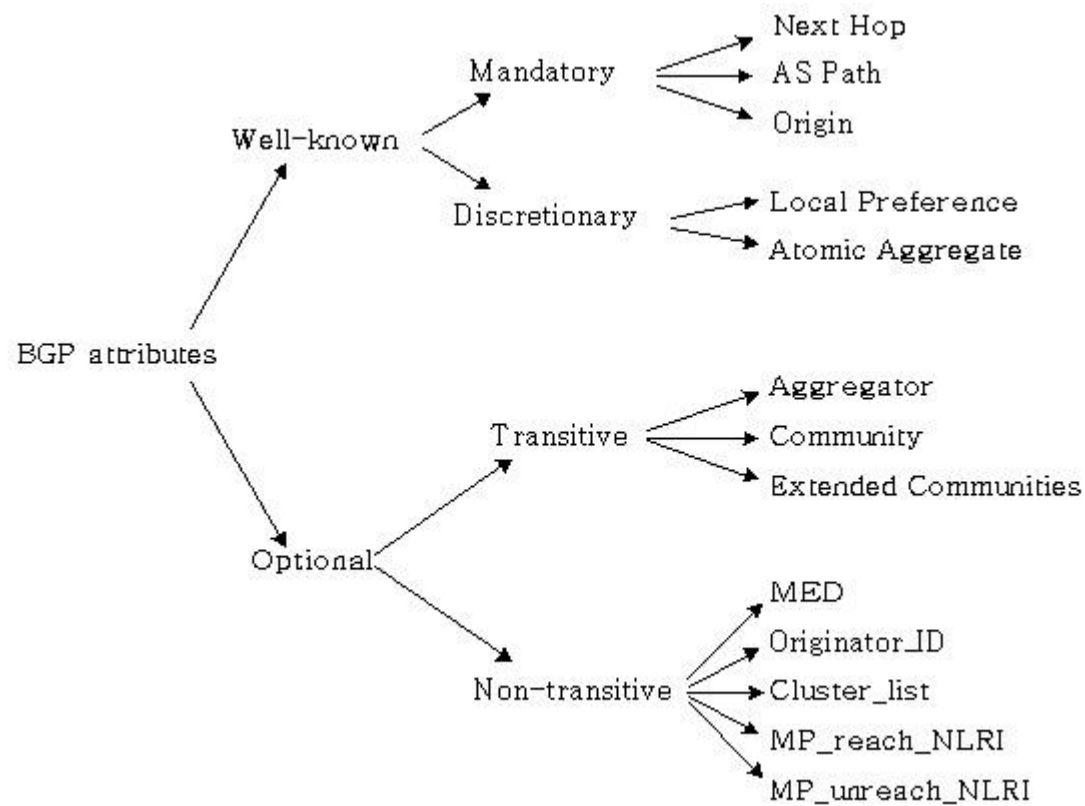
QUESTION 184
DRAG DROP

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.

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external Type 2 routes		first
external Type 1 routes		second
intra-area routes		third
inter-area routes		fourth

A.

B.

C.

D.

Correct Answer:
Section: (none)
Explanation

Explanation/Reference:

external Type 2 routes		intra-area routes
external Type 1 routes		inter-area routes
intra-area routes		external Type 1 routes
inter-area routes		external Type 2 routes

Explanation:

| intra-area routes |
| inter-area routes |
| external Type 1 routes |
| external Type 2 routes |
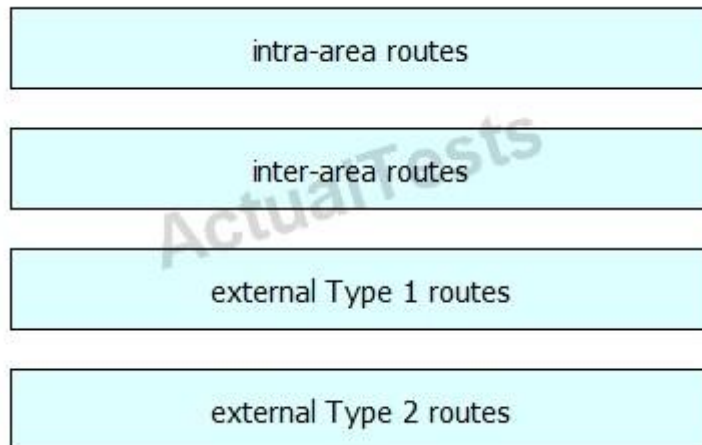
QUESTION 185
Which three statements are functions that are performed by IKE phase 1? (Choose three.)

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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:
Explanation:

The basic purpose of IKE phase 1 is to authenticate the IPSec peers and to set up a secure channel between the peers to enable IKE exchanges. IKE phase 1 performs the following functions:

Reference: http://www.ciscopress.com/articles/article.asp?p=25474&seqNum=7

QUESTION 186
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:
Explanation:

By process of elimination, from RFC 4577:

For every address prefix that was installed in the VRF by one of its associated OSPF instances, the PE must create a VPN-IPv4 route in BGP. Each

such route will have some of the following Extended Communities attributes:

?The OSPF Domain Identifier Extended Communities attribute. If the OSPF instance that installed the route has a non-NULL primary Domain Identifier, this MUST be present; if that OSPF instance has only a NULL Domain Identifier, it MAY be omitted.

?OSPF Route Type Extended Communities Attribute. This attribute MUST be present. It is encoded with a two-byte type field, and its type is 0306.

?OSPF Router ID Extended Communities Attribute. This OPTIONAL attribute specifies the OSPF Router ID of the system that is identified in the BGP Next Hop attribute. More precisely, it specifies the OSPF Router Id of the PE in the OSPF instance that installed the route into the VRF from which this route was exported.

?MED (Multi_EXIT_DISC attribute). By default, this SHOULD be set to the value of the OSPF distance associated with the route, plus 1.
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Reference: https://tools.ietf.org/html/rfc4577

QUESTION 187
Refer to the exhibit.

```
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
```

What will be the IP MTU of tunnel 0?
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A.
B.
C.
D.
E.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Explanation:

In the case of the GRE tunnel interface, the IP maximum transmission unit (MTU) is 24 bytes less than the IP MTU of the real outgoing interface. For an Ethernet outgoing interface that means the IP MTU on the tunnel interface would be 1500 minus 24, or 1476 bytes.

Reference: 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 http://www.cisco.com/c/en/us/support/docs/ip/generic-routing-encapsulation-gre/13725-56.html

QUESTION 188
DRAG DROP

Drag and drop the NHRP flag on the left to the corresponding meaning on the right.

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-to-mapping.
used	The requested NBMA mapping failed.

A.
B.
C.
D.

Correct Answer:
Section: (none)
Explanation

Explanation/Reference:

Drag and drop the NHRP flag on the left to the corresponding meaning on the right.	
authoritative	implicit
implicit	used
negative	authoritative
used	negative

Explanation:

implicit
used
authoritative
negative

QUESTION 189
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

Explanation/Reference:
Explanation:

The NHRP network ID is used to define the NHRP domain for an NHRP interface and differentiate between multiple NHRP domains or networks, when two or more NHRP domains (GRE tunnel interfaces) are available on the same NHRP node (router). The NHRP network ID is used to help keep two NHRP networks (clouds) separate from each other when both are configured on the same router.

The NHRP network ID is a local only parameter. It is significant only to the local router and it is not transmitted in NHRP packets to other NHRP nodes. For this reason the actual value of the NHRP network ID configured on a router need not match the same NHRP network ID on another router where both of these routers are in the same NHRP domain. As NHRP packets arrive on a GRE interface, they are assigned to the local NHRP domain in the NHRP network ID that is configured on that interface.

Reference:
http://www.cisco.com/c/en/us/td/docs/ios/12_4/ip_addr/configuration/guide/hadnhrp.html

QUESTION 190
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:
Explanation:

Supported Condition Types

The new crypto conditional debug CLIs--debug crypto condition, debug crypto condition unmatched, and show crypto debug-condition--allow you to specify conditions (filter values) in which to generate and display debug messages related only to the specified conditions. The table below lists the supported condition types.

Table 1 Supported Condition Types for Crypto Debug CLI

Condition Type (Keyword)

Description

connid 1

An integer between 1-32766. Relevant debug messages will be shown if the current IPSec operation uses this value as the connection ID to interface with the crypto engine.

flowid 1

An integer between 1-32766. Relevant debug messages will be shown if the current IPSec operation uses this value as the flow-ID to interface with the crypto engine.

FVRF

The name string of a virtual private network (VPN) routing and forwarding (VRF) instance. Relevant debug messages will be shown if the current IPSec operation uses this VRF instance as its front-door VRF (FVRF).

IVRF

The name string of a VRF instance. Relevant debug messages will be shown if the current IPSec operation uses this VRF instance as its inside VRF

(IVRF).

peer group

A Unity group-name string. Relevant debug messages will be shown if the peer is using this group name as its identity.

peer hostname

A fully qualified domain name (FQDN) string. Relevant debug messages will be shown if the peer is using this string as its identity; for example, if the peer is enabling IKE Xauth with this FQDN string.

peeripaddress

A single IP address. Relevant debug messages will be shown if the current IPSec operation is related to the IP address of this peer.

peer subnet

A subnet and a subnet mask that specify a range of peer IP addresses. Relevant debug messages will be shown if the IP address of the current IPSec peer falls into the specified subnet range.

peer username

A username string. Relevant debug messages will be shown if the peer is using this username as its identity; for example, if the peer is enabling IKE Extended Authentication (Xauth) with this username.

SPI 1

A 32-bit unsigned integer. Relevant debug messages will be shown if the current IPSec operation uses this value as the SPI.

Reference: http://www.cisco.com/c/en/us/td/docs/ios-xml/ios/sec_conn_vpnips/configuration/xe- 3s/sec-sec-for-vpns-w-ipsec-xe-3s-book/sec-crypto-debug-sup.html

QUESTION 191
DRAG DROP

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

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

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A.

B.

C.

D.

Correct Answer:
Section: (none)
Explanation

Explanation/Reference:

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

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

Explanation:

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

QUESTION 192
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:
Explanation:

Figure 1. UDP Echo Operation
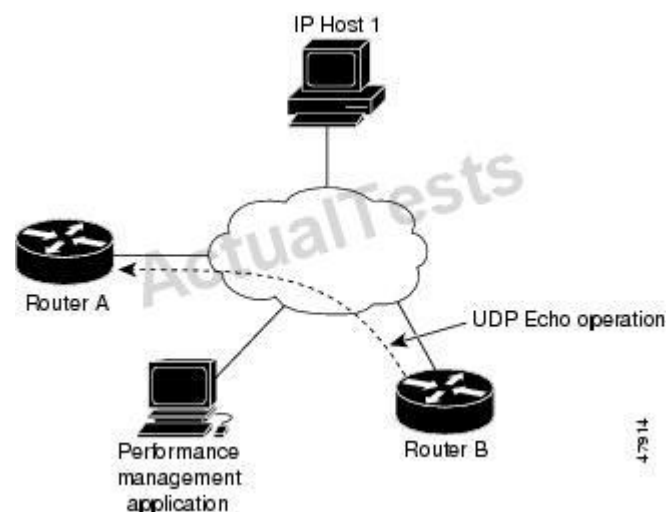
Response time (round-trip time) is computed by measuring the time taken between sending a UDP echo request message from Device B to the destination device--Device A--and receiving a UDP echo reply from Device A. UDP echo accuracy is enhanced by using the IP SLAs Responder at Device A, the destination Cisco device. If the destination device is a Cisco device, then IP SLAs sends a UDP datagram to any port number that you specified. Using the IP SLAs Responder is optional for a UDP echo operation when using Cisco devices. The IP SLAs Responder cannot be configured on non-Cisco devices.

Reference: http://www.cisco.com/c/en/us/td/docs/ios-xml/ios/ipsla/configuration/15-mt/sla-15-mt- book/sla_udp_echo.html

QUESTION 193
DRAG DROP

Drag and drop the NAT operations on the left into the correct sequential order on the right.

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

A.

B.

C.

D.

Correct Answer:
Section: (none)
Explanation

Explanation/Reference:

Drag and drop the NAT operations on the left into the correct sequential order on the right.

Check the IP routing table.	Check the inbound access list.
Check the outbound access list.	Check the policy routing
Check the inbound access list.	Check the IP routing table.
Inspect CBAC.	Translate inside local to outside global.
Translate inside local to outside global.	Check the outbound access list
Check the policy routing	Inspect CBAC

Explanation:

Check the inbound access list.
Check the policy routing
Check the IP routing table.
Translate inside local to outside global.
Check the outbound access list.
Inspect CBAC.

QUESTION 194
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:
Explanation:

Key Advantages of using PfR for Load balancing:

Reference: http://docwiki.cisco.com/wiki/PfR:Solutions:InternetOutboundLoadBalancing

QUESTION 195
Refer to the exhibit.

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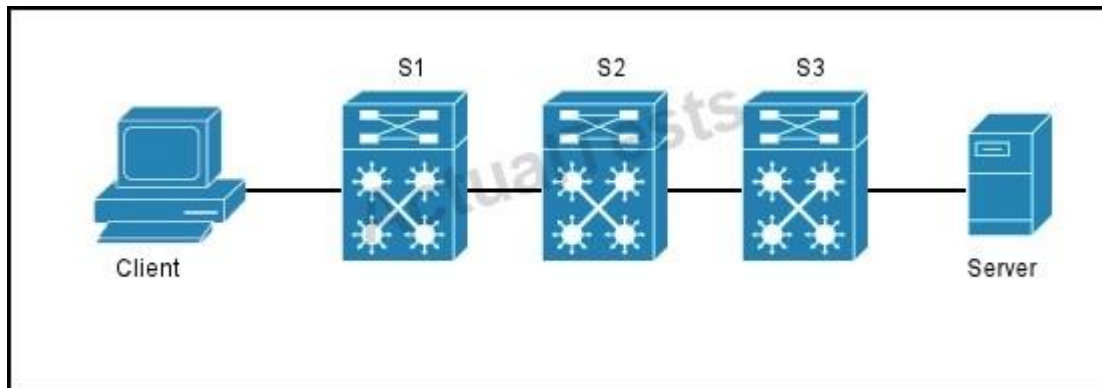
You are configuring the S1 switch for the switch port that connects to the client computer. Which configuration blocks users on the port from using more than 6 Mbps of traffic and marks the traffic for a class of service of 1?

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
```

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```
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
```

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

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Explanation:

Only option A specified that the exceed and violate actions are set to drop for traffic over the CIR of 6 Mbps, and is also configured to set all traffic with a COS of 1 using the "set cos1" command.

Topic 7, Mix Questions

QUESTION 196
Refer to the exhibit.

```
RP1#show ipv6 mroute
  Multicast Routing Table
  Flags: D - Dense, S - Sparse, B - Bidir Group, s - SSM Group,
           C - Connected, L - Local, I - Received Source Specific Host Report,
           P - Pruned, R - RP-bit set, F - Register flag, T - SPT-bit set,
           J - Join SPT
  Timers: Uptime/Expires
  Interface state: Interface, State

  (*, FF7E:200:2A02:B111:FC02:1:11FF:11EE), 00:00:35/never, RP
  2A02:B111:FC02:1::1, flags: SCLJ
     Incoming interface: Null
     RPF nbr: ::
     Immediate Outgoing interface list:
       Ethernet2/0, Forward, 00:00:35/never
```

Which statement is true?

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

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Explanation:

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QUESTION 197
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
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Correct Answer: ABC
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 198
Refer to the exhibit.

```
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):
```

Which log levels are enabled for the console?

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:
Explanation:

QUESTION 199
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

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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:
Explanation:

QUESTION 200
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:
Explanation:

QUESTION 201
DRAG DROP

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

A Cisco Proprietary protocol.	PAgP	
	1	
Supports 8 ports in a port group, with all active.		
	2	
Supports auto and desirable configuration modes.		
	3	
Supported by the IEEE 802.3ad protocol.		
	LACP	
Supports 16 ports in a port group, with 8 active.	1	
	2	
Supports active and passive configuration modes.		
	3	

A.
B.
C.
D.

Correct Answer:
Section: (none)
Explanation

Explanation/Reference:

Cisco 400-101 Exam

A Cisco Proprietary protocol.

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

Supports auto and desirable configuration modes.

Supported by the IEEE 802.3ad protocol.

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

Supports active and passive configuration modes.

PAgP

A Cisco Proprietary protocol.

Supported by the IEEE 802.3ad protocol.

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

LACP

Supports auto and desirable configuration modes.

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

Supports active and passive configuration modes.

Explanation:

```
┌─────────────────────────────────────────────────┐
│ PAgP                                             │
│  ┌───────────────────────────────────────────┐  │
│  │       A Cisco Proprietary protocol.       │  │
│  └───────────────────────────────────────────┘  │
│  ┌───────────────────────────────────────────┐  │
│  │   Supported by the IEEE 802.3ad protocol. │  │
│  └───────────────────────────────────────────┘  │
│  ┌───────────────────────────────────────────┐  │
│  │ Supports 8 ports in a port group, with all active. │
│  └───────────────────────────────────────────┘  │
└─────────────────────────────────────────────────┘

┌─────────────────────────────────────────────────┐
│ LACP                                             │
│  ┌───────────────────────────────────────────┐  │
│  │ Supports auto and desirable configuration modes. │
│  └───────────────────────────────────────────┘  │
│  ┌───────────────────────────────────────────┐  │
│  │ Supports 16 ports in a port group, with 8 active. │
│  └───────────────────────────────────────────┘  │
│  ┌───────────────────────────────────────────┐  │
│  │ Supports active and passive configuration modes. │
│  └───────────────────────────────────────────┘  │
└─────────────────────────────────────────────────┘
```

QUESTION 202
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:
Explanation:

QUESTION 203
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:
Explanation:

QUESTION 204
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

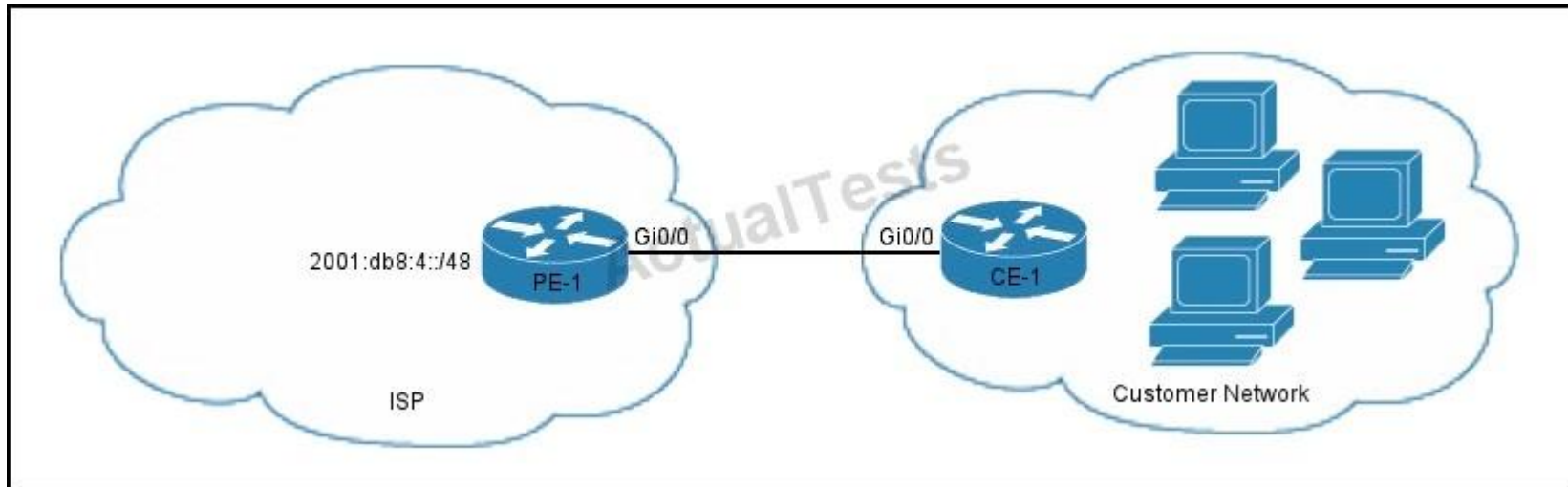E. block all traffic

Correct Answer: A

Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 205
Refer to the exhibit.

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

A. "Pass Any Exam. Any Time." - www.actualtests.com 694
   Cisco 400-101 Exam

```
ipv6 local pool CE-1 2001:db8:4:8888::/48 56
ipv6 dhcp pool CE-1-DHCP
    prefix-delegation pool CE-1 lifetime infinite infinite
interface GigiabitEthernet0/0
    ipv6 address 2001:db8:4:822::1/64
    ipv6 dhcp server CE-1-DHCP
```

B.

```
ipv6 local pool CE-1 2001:db8:4:8888/49 56
ipv6 dhcp pool CE-1-DHCP
interface GigiabitEthernet0/0
    ipv6 address 2001:db8:4:822::1/64
    ipv6 dhcp server CE-1
```

C.

```
ipv6 local pool CE-1 2001:db8:4:8888/56 48
ipv6 dhcp pool CE-1-DHCP
    prefix-delegation pool CE-1 lifetime infinite infinite
interface GigiabitEthernet0/0
    ipv6 address 2001:db8:4:822::1/64
    ipv6 dhcp server CE-1-DHCP
```

D.

```
ipv6 local pool CE-1 2001:db8:4:8888::/48 32
ipv6 dhcp pool CE-1-DHCP
    prefix-delegation pool CE-1 lifetime infinite infinite
interface GigiabitEthernet0/0
    ipv6 address 2001:db8:4:822::1/64
    ipv6 dhcp server CE-1-DHCP
```

E.

```
ip local pool CE-1 2001:db8:4:8888::/64 48
ipv6 dhcp pool CE-1-DHCP
    prefix-delegation pool CE-1 lifetime infinite infinite
interface GigiabitEthernet0/0
    ipv6 address 2001:db8:4:822::1/64
    ipv6 dhcp server CE-1-DHCP
```

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

E. Exhibit E

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 206
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:
Explanation:

QUESTION 207
Which statement about the VLAN database is true?

A. Manually deleting the vlan.dat file can cause inconsistency in the database.
B. "Pass Any Exam. Any Time." - www.actualtests.com 704
   Cisco 400-101 Exam
   Private VLAN information is stored in the database.
C. VLAN configurations 1 through 4096 are stored in the vlan.dat file.
D. The VLAN database is used only if the VTP domain name in the VLAN database matches the VTP domain name in the startup-config file.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 208
A floating static route appears in the routing table of an interface even when the interface is unusable.

Which action can you take to correct the problem?

A. Remove the permanent option from the static route.
B. Correct the administrative distance.
C. "Pass Any Exam. Any Time." - www.actualtests.com 717
   Cisco 400-101 Exam
   Configure the floating static route to point to another route in the routing table.
D. Correct the DHCP-provided route on the DHCP server.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 209
Which statement about the bgp soft-reconfig-backup command is true?

A. It requires BGP to store all inbound and outbound updates.
B. It overrides soft reconfiguration for devices that support inbound soft reconfiguration.
C. When the peer is unable to store updates, the updates are implemented immediately.
D. It provides soft reconfiguration capabilities for peers that are unable to support route refresh.
E. It provides outbound soft reconfiguration for peers.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 210
Which IPv6 tunneling mechanism requires a service provider to use one of its own native IPv6 blocks to guarantee that its IPv6 hosts will be reachable?

A. 6rd tunneling
B. automatic 6to4 tunneling

C. NAT-PT tunneling
D. ISATAP tunneling
E. manual ipv6ip tunneling
F. automatic 4to6 tunneling

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 211
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:
Explanation:

Auto-Summarization of External Routes

EIGRP will not auto-summarize external routes unless there is a component of the same major network that is an internal route. To illustrate, let us look at Figure 15.
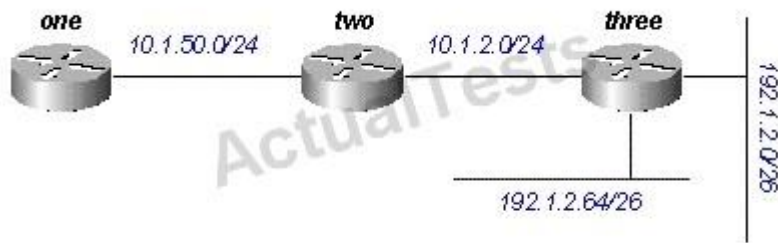
Figure 15

Router Three is injecting external routes to 192.1.2.0/26 and 192.1.2.64/26 into EIGRP using the redistribute connected command, as shown in the configurations below.

Router Three

interface Ethernet0

ip address 192.1.2.1 255.255.255.192

!

interface Ethernet1

ip address 192.1.2.65 255.255.255.192

!

interface Ethernet2

ip address 10.1.2.1 255.255.255.0

!router eigrp 2000

Cisco 400-101 Exam
redistribute connected

network 10.0.0.0

default-metric 10000 1 255 1 1500

With this configuration on Router Three, the routing table on Router One shows:

one# show ip route

10.0.0.0/8 is subnetted, 2 subnets

D 10.1.2.0 [90/11023872] via 10.1.50.2, 00:02:03, Serial0

C 10.1.50.0 is directly connected, Serial0

192.1.2.0/26 is subnetted, 1 subnets

D EX 192.1.2.0 [170/11049472] via 10.1.50.2, 00:00:53, Serial0

D EX 192.1.2.64 [170/11049472] via 10.1.50.2, 00:00:53, Serial0

Although auto-summary normally causes Router Three to summarize the 192.1.2.0/26 and 192.1.2.64/26 routes into one major net destination (192.1.2.0/24), it does not do this because both routes are external. However, if you reconfigure the link between Routers Two and Three to 192.1.2.128/26, and add network statements for this network on Routers Two and Three, the 192.1.2.0/24 auto-summary is then generated on Router Two.

Router Three

interface Ethernet0

ip address 192.1.2.1 255.255.255.192

!

interface Ethernet1

ip address 192.1.2.65 255.255.255.192

!

interface Serial0

ip address 192.1.2.130 255.255.255.192

!

router eigrp 2000

network 192.1.2.0

Now Router Two generates the summary for 192.1.2.0/24:

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two# show ip route

D 192.1.2.0/24 is a summary, 00:06:48, Null0

And Router One shows only the summary routE.

one# show ip route

10.0.0.0/8 is subnetted, 1 subnets

C 10.1.1.0 is directly connected, Serial0

D 192.1.2.0/24 [90/11023872] via 10.1.50.2, 00:00:36, Serial0

Reference: http://www.cisco.com/c/en/us/support/docs/ip/enhanced-interior-gateway-routing- protocol-eigrp/16406-eigrp-toc.html

QUESTION 212
What two values are required to implement an EIGRP named configuration? (Choose two.)

A. virtual-instance-name
B. address-family
C. router-id
D. subnet-mask
E. process-id
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Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 213
Which three events can cause a control plane to become overwhelmed? (Choose three.)

A. a worm attack

B. processing a stream of jumbo packets

C. a microburst

D. a configuration error

E. "Pass Any Exam. Any Time." - www.actualtests.com 709
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a reconvergence failure

F. a device-generated FTP session

Correct Answer: ADE
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 214
What are three benefits of deploying NAT with ALG? (Choose three.)

A. the use of dynamic ephemeral ports through a firewall

B. "Pass Any Exam. Any Time." - www.actualtests.com 710
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the synchronization of translations between multiple streams of data

C. the use of deep packet inspection

D. the use of static ephemeral ports through a firewall

E. the conversion of session layer addresses from the application payload to outside global addresses

F. NAT traversal to support asymmetric data sessions

Correct Answer: ABC
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 215
Which three statements are true for a network with 10 switches and 126 segments? (Choose three.)

A. It has 10 designated ports.

B. It has 63 designated ports.

C. It has 10 root ports.

D. It has 9 root ports.
E. It has 126 designated ports.
F. It has only one root bridge.

Correct Answer: DEF
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 216
Which routing protocol is used on PE routers to exchange VPNv4 routes?

A. "Pass Any Exam. Any Time." - www.actualtests.com 766
   Cisco 400-101 Exam
   EIGRP
B. OSPF
C. MP-BGP
D. 0SPFv3

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 217
Which two configuration options are available for PIM snooping? (Choose two)

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

Correct Answer: BE

Section: (none)
Explanation

Explanation/Reference:
Explanation:

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QUESTION 218
Which two statements about PIM snooping are true? (Choose two)

A. It floods join and prune messages on all router ports.
B. It requires designated forwarder election messages.
C. When PIM snooping is enabled, the switch allows all multicast packets for each IP multicast group to send multicast packets to multicast router.
D. It requires RGMP to be enabled on the VLAN.
E. It requires IGMP snooping to be enabled on the switch.
F. The ip pirn snooping command is an interface-level command.

Correct Answer: BE
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 219
Which statement about Type-4 LSA in OSPFv2 is true?

A. "Pass Any Exam. Any Time." - www.actualtests.com 795
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    It is present only in the backbone area.
B. It is generated by each ABR and forwarded in non-stub areas.
C. It is forwarded in NSSA areas.
D. It is generated by the ASBR and forwarded throughout the whole OSPF domain.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

Explanation:

QUESTION 220
Which statement about the BGP synchronization rule is true?

A. A BGP router with synchronization enabled does not advertise its iBGP learned routes to its iBGP peers unless it has learned or verified this route on its routing table through an IGP.
B. A BGP router with synchronization enabled does not advertise its eBGP learned routes to its iBGP peers unless it has learned or verified this route on its routing table through an IGP.
C. A BGP router with synchronization enabled does not advertise its eBGP learned routes to its eBGP peers unless it has learned or verified this route on its routing table through an IGP.
D. A BGP router with synchronization enabled does not advertise its iBGP learned routes to its eBGP peers unless it has learned or verified this route on its routing table through an IGP.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 221
Which three statements are true about the spanning-tree loop guard feature? (Choose three.)

A. Loop guard affects UplinkFast operation.
B. Loop guard can be enabled on PortFast ports.
C. Loop guard operation is not affected by the spanning-tree timers.
D. Loop guard must be enabled on point-to-point link only.
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   Cisco 400-101 Exam
E. Loop guard cannot be enabled on a switch that also has root guard enabled.
F. Loop guard can detect a unidirectional link.

Correct Answer: CDE
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 222

Which three statements are true for a network with 10 switches and 126 segments? (Choose three.)

A. It has 10 designated ports.
B. It has 63 designated ports.
C. It has 10 root ports.
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   Cisco 400-101 Exam
D. It has 9 root ports.
E. It has 126 designated ports.
F. It has only one root bridge.

Correct Answer: DEF
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 223
Which two statements about VRF-lite are true? (Choose two)

A. It can increase the packet switching rate.
B. "Pass Any Exam. Any Time." - www.actualtests.com 765
   Cisco 400-101 Exam
   It supports most routing protocols, including EIGRP, ISIS, and OSPF.
C. It supports MPLS-VRF label exchange and labeled packets.
D. It should be used when a customer's router is connected to an ISP over OSPF.
E. It can support multiple customers on a single switch.

Correct Answer: DE
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 224
Which routing protocol is used on PE routers to exchange VPNv4 routes?

A. "Pass Any Exam. Any Time." - www.actualtests.com 766

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EIGRP

B. OSPF
C. MP-BGP
D. 0SPFv3

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 225
Which two options describe the effect of configuring an interface as passive under OSPF? (Choose two)

A. An adjacency cannot be established, and the interface is not included in the routing protocol update.
B. The interface processes OSPF hello packets but does not send hello packets.
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   Cisco 400-101 Exam
C. An adjacency cannot be established, and the interface is included in the routing protocol update.
D. The interface processes OSPF hello packets and also sends hello packets.
E. An adjacency can be established, and the interface is not included in the routing protocol update.

Correct Answer: BC
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 226
Which feature can be used to block traffic from one host to another within one VLAN on a Layer 2 switch?

A. port security
B. dot1x
C. access list
D. protected ports

Correct Answer: D

Section: (none)
Explanation

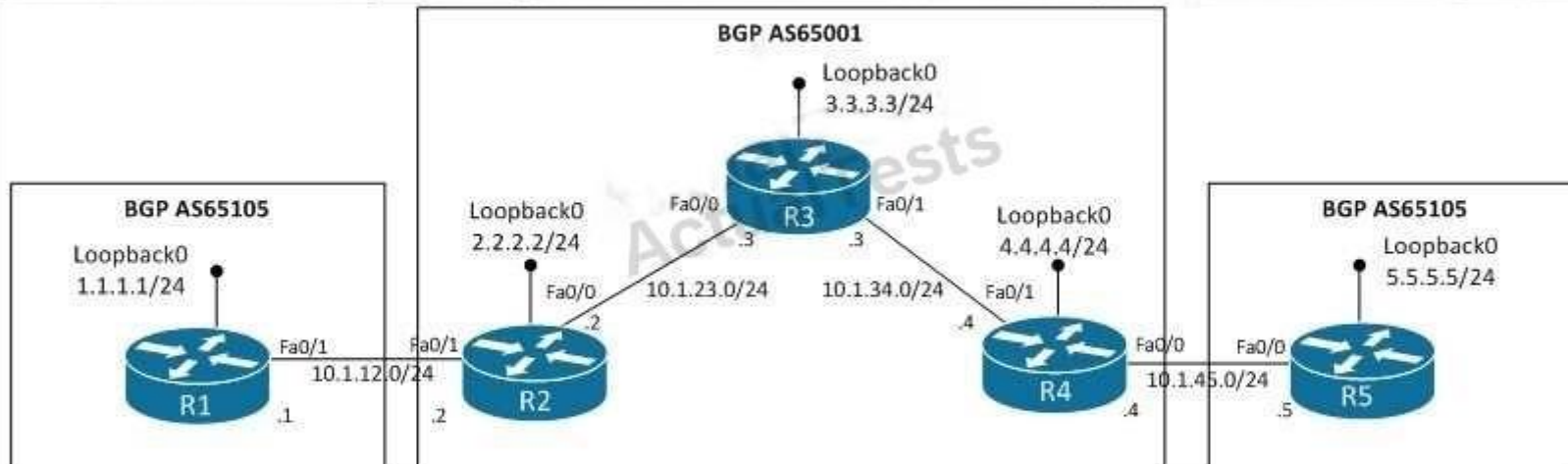**Explanation/Reference:**
Explanation:

QUESTION 227
Refer to the exhibit.

```
hostname R2
!
router ospf 1
network 0.0.0.0 255.255.255.255 area 0
!
router bgp 65001
 no synchronization
 bgp cluster-id 3.3.3.3
 network 2.2.2.0 mask 255.255.255.0
 neighbor 10.1.12.1 remote-as 65105
 neighbor 10.1.23.3 remote-as 65001
 no auto-summary
```

```
hostname R3
!
router ospf 1
network 0.0.0.0 255.255.255.255 area 0
!
router bgp 65001
 no synchronization
 network 3.3.3.0 mask 255.255.255.0
 neighbor 10.1.23.2 remote-as 65001
 neighbor 10.1.34.4 remote-as 65001
 neighbor 10.1.34.4 route-reflector-client
 no auto-summary
```

```
hostname R4
!
router ospf 1
network 0.0.0.0 255.255.255.255 area 0
!
router bgp 65001
 no synchronization
 network 4.4.4.0 mask 255.255.255.0
 neighbor 10.1.34.3 remote-as 65001
 neighbor 10.1.45.5 remote-as 65105
 no auto-summary
```

BGP AS65001

Loopback0
3.3.3.3/24

R3
Fa0/0   Fa0/1
.3   .3

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

Fa0/1   Fa0/1
10.1.12.0/24

Fa0/0   Fa0/0
10.1.45.0/24

R1   R2   R4   R5
.1   .2   .4   .5

```
R2#sh ip bgp
BGP table version is 20, 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    1
*>  2.2.2.0/24        0.0.0.0                0                  32768    1
*>13.3.3.0/24         10.1.23.3              0        100         0      1
```

Why is interface loopback 0 of R4 missing in the BGP table of R2?

A. R2 is not configured as a route reflector client.
B. The route is originating in the same cluster list.
C. The route originated within the same AS.
D. The next hop is not reachable form R2.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 228
Which two statements about static route configuration are true? (Choose two)

A. They add to the number of routes in the routing table.
B. "Pass Any Exam. Any Time." - www.actualtests.com 770
   Cisco 400-101 Exam
   The distance command modifies the administrative distance
C. The redistribute static command will redistribute classful networks into OSPF.
D. They add significant overhead to the router CPU.
E. The ip route static bfd command is used for BFD peer discovery.
F. The permanent key word allows the route to remain in the route table if the interface goes down.

Correct Answer: CF
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 229
Which three statements about dot1Q trunking are true? (Choose three)

A. A trunk port can be a tunnel port.
B. The default switchport mode is dynamic desirable.
C. A trunk port can be a secure port.

D. Trunk ports negotiate encapsulation by default.

E. Enabling 802.1x on a trunk port results in an error.

F. The default switchport mode is dynamic auto.

Correct Answer: AEF
Section: (none)
Explanation

Explanation/Reference:
Explanation:

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QUESTION 230
What are two requirements for BFD static route support? (Choose two)

A. CEF must be configured on all routers that will carry traffic.

B. BFD must be configured on all Ethernet, virtual-template, and dialer interfaces that will carry traffic.

C. All routers that will carry traffic must have the same software version.

D. All routers that will carry traffic must be the same model.

E. Parameters must be configured on all routers that will carry traffic.

F. Parameters must be configured on all interfaces that will carry traffic.
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Correct Answer: AF
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 231
Which two statements about marking fields are true? (Choose two)

A. The IP Precedence field is in the IP header and is 4 bits long.

B. The Frame Relay DE field is in the IP header and is 1 bit long.

C. The 3 priority bits are in 802.1Q/P.

D. The IP DSCP field is in the IP header and is 6 bits long.

E. The ToS 6 bits are in the IP header.

Correct Answer: CD
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 232
How is traffic directed to a 6RD tunnel interface from the native IPv6 Internet?

A. Traffic is routed to the 6RD gateway of the ISP and encapsulated over IPv4 to the tunnel interface.
B. Traffic is sent encapsulated in IPv4 from the native IPv6 host directly to the tunnel interface.
C. Traffic is routed to the nearest public gateway and encapsulated over IPv4 to the tunnel interface.
D. Traffic is routed to the nearest public relay and encapsulated over IPv4 to the tunnel interface.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 233
Which function does PHP perform?

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A. popping the top label one hop before the egress LSR
B. popping the top label at the egress LSR
C. popping the bottom label one hop before the egress LSR
D. popping the bottom label at the egress LSR
E. popping the two topmost labels one hop before the egress LSR
F. popping the two bottommost labels one hop before the egress LSR

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 234
Which three actions can you take to mitigate excessive unicast packet flooding? (Choose three)

A. Configure a switchport for trunking mode.
B. Enable spanning tree portfast.
C. Configure storm control.
D. Configure switchport blocking.
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    Cisco 400-101 Exam
E. Create a native VLAN.
F. Configure a switchport for protected mode.

Correct Answer: BCD
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 235
Refer to the exhibit.

```
R2(config)#class-map match qos
R2(config-cmap)#match access-group 8
R2(config-cmap)#match dscp EF
```

Which option describes how a device with this configuration applies traffic matching?

A. It matches traffic in ACL 8 that has a DCSP marking of EF.
B. It matches all traffic that has QoS markings.
C. It matches all traffic in ACL 8 and all traffic that has a DSCP marking of EF.
D. It matches all traffic that has a DSCP marking of EF.
E. It matches all traffic in ACL 8.

Correct Answer: A

Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 236
Which information does RA guard use to determine if an RA is allowed?

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A. a trusted binding-table database generated from RS messages.
B. information output from IPv6 snooping.
C. a trusted binding-table database generated from ND messages.
D. manually configured trust sources.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 237
Which GET VPN component maintains security policies?

A. group member
B. CE
C. P
D. key server
E. PE
F. GDOI

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 238
Which two statements about VPLS are true? (Choose two)

A. The service provider provisions CE devices.
B. It transmits broadcast traffic more efficiently than Ethernet switches.
C. It uses broadcast replication to transmit Ethernet packets with multicast MAC addresses.
D. It enables CE devices to operate as part of an L3 VPN.
E. It enables CE devices on different networks to operate as if they were in the same LAN.
F. It enables PE and CE devices to operate as if they were routing neighbors.

Correct Answer: CE
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 239
What is the default IS-IS interface metric on a Cisco router?

A.
B.
C.
D.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 240
Which statement is true about PIM?

A.   PIM SM uses shared trees.

B.   In Bidir-PIM, sources register to RP as in PM SM.

C.   The PIM DM flood and prune process is repeated every five minutes.

D.   PIM SM mode, by default, always forwards multicast traffic on shared tree.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 241
Refer to the exhibit.

```
⊟ Ethernet II, Src: D-Link_ac:fe:56 (00:50:ba:ac:fe:56), Dst: IPv6-Neighbor-Discovery_ff:84:18:d9 (33:33:ff:84:18:d9)
    ⊟ Destination: IPv6-Neighbor-Discovery_ff:84:18:d9 (33:33:ff:84:18:d9)
        Address: IPv6-Neighbor-Discovery_ff:84:18:d9 (33:33:ff:84:18:d9)
        .... ...1 .... .... .... .... = Multicast: This is a MULTICAST frame
        .... ..1. .... .... .... .... = Locally Administrated Address: This is NOT a factory default address
    ⊟ Source: D-Link_ac:fe:56 (00:50:ba:ac:fe:56)
        Address: D-Link_ac:fe:56 (00:50:ba:ac:fe:56)
        .... ...0 .... .... .... .... = Multicast: This is a UNICAST frame
        .... ..0. .... .... .... .... = Locally Administrated Address: This is a FACTORY DEFAULT address
    Type: IPv6 (0x86dd)
⊟ Internet Protocol Version 6
    Version: 6
    Traffic class: 0x00
    Flowlabel: 0x00000
    Payload length: 32
    Next header: ICMPv6 (0x3a)
    Hop limit: 255
    Source address: fe80::250:baff:feac:fe56
    Destination address: ff02::1:ff84:18d9
⊟ Internet Control Message Protocol v6
    Type: 135
    Code: 0
    Checksum: 0xc92d [correct]
    Target: fe80::20e:cff:fe84:18d9
    ⊟ ICMPv6 options
        Type: 1 (Source link-layer address)
        Length: 8 bytes (1)
        Link-layer address: 00:50:ba:ac:fe:56
```

Which kind of ICMPv6 packet is shown in the output?

A. neighbor advertisement
B. neighbor solicitation
C. router discovery
D. time exceeded
E. router advertisement

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 242
Which two statements are true about control plane policing? (Choose two.)

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

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 243
Which two security risks can occur with PMTUD? (Choose two)

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A. An attacker can block valid Datagram Too small messages, to cause a DDos.
B. An attacker can block valid Datagram Too small messages, to cause a Dos.
C. An attacker can slow data flow by sending false messages that indicate that the PMTU is significantly smaller than the true PMTU.
D. An attacker can cause data lost by sending false messages that indicate that the PMTU is significantly smaller than the true PMTU.
E. An attacker can cause data lost by sending false messages that indicate that the PMTU is significantly larger than the true PMTU.
F. An attacker can slow data flow by sending false messages that indicate that the PMTU is significantly larger than the true PMTU.

Correct Answer: BD
Section: (none)
Explanation

Explanation/Reference:

Explanation:

QUESTION 244
Which three statements about BGP soft reconfiguration are true?

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

Correct Answer: BDF
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 245
Which option describes the purpose of the no ip next-hop-self eigrp configuration line in DMVPN deployment?

A. It allows the spoke routers to change the next hop value when sending EIGRP updates to the hub router.
B. It enables EIGRP to dynamically assign the next hop value based on the EIGRP database.
C. It preserves the original next hop value as learned by the spoke routers.
D. It preserves the original next hop value as learned by the hub routers.
E. It allows the spoke routers to change the next hop value when sending EIGRP updates to the spoke router.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 246
Which option describes the effect of the command ip route vrf DMZ 192.168.0.0 255.255.0.0 172.16.5.5 global?

A. It creates a static route in the global routing table for 192.168.0.0 255.255.0.0, and the next hop is in the VRF DMZ.
B. "Pass Any Exam. Any Time." - www.actualtests.com 787
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   It creates a static route in the global routing table for 192.168.0.0 255.255.0.0 and the next hop is in the global routing table.
C. It creates a static default route in the VRF DMZ; and the next hop is in the global routing table.
D. It creates a static route in the VRF DMZ for 192.168.0.0 255.255.0.0, and the next hop is in the VRF DMZ.
E. It creates a static route in the VRF DMZ for 192.168.0.0 255.255.0.0, and the next hop is in the global routing table.

Correct Answer: E
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 247
Which two statements about private VLAN communications are true? (Choose two)

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

Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 248
What are the two Cisco recommended methods for reducing the size of the TCAM on a Layer 3 switch?

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A. Use the ip route profile command.
B. Adjust the output queue buffers.
C. Filter unwanted routes.
D. Optimize the SDM template.

E. Use summary routes.

Correct Answer: CE
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 249
You are performing a system diagnostics on a CSU in local loop mode and notice that the mineseen counter has failed to increment. Which type of problem does this behavior indicate?

A. a cabling problem
B. an encoding problem
C. a framing problem
D. a timing problem

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 250
Which three fields are present in the IPv6 header? (Choose three)

A. Next Header
B. Traffic Class
C. Options
D. Time to Live
E. Flags
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F. Flow Label

Correct Answer: ABF
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 251
Refer to the exhibit.

```
EIGRP-IPv4 neighbors for process 99
H     Address          Interface          Hold Uptime      SRTT     RTO      0      Se
                                           (sec)            (ms)              Cnt    Nu
0     192.168.252.8  Gi1/13               14 00:00:28         1      200       0      5
      Restart time 00:00:24
      Version 12.2/3.0, Retrans: 1, Retries: 0
      Topology-ids from peer - 0
```

Which two statements can this output verify? (Choose two)

A. The device will wait 200 ms before retransmitting an EIGRP packet.
B. The device must receive an EIGRP packet within 24 seconds to maintain a neighbor relationship.
C. The EIGRP neighbor has been up for 28 seconds.
D. The device must receive an EIGRP packet within 28 seconds to maintain a neighbor relationship.
E. The device will tear down and restart its EIGRP process in 24 seconds.
F. The EIGRP neighbor has been up for 28 ms.

Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 252
Which two configuration options are available for PIM snooping? (Choose two)

A. on a specific interface on the device

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

Correct Answer: BE
Section: (none)
Explanation

Explanation/Reference:
Explanation:

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QUESTION 253
Which statement best describes IPv6 RA Guard?

A. It redirects authorized device hello messages.
B. It filters authorized IPv6 device advertisements on a link.
C. It blocks unexpected IPv6 router announcements on a link.
D. It validates ingress hello messages on a port.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 254
Which two options are restrictions of BGP ORF? (Choose two)

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

Correct Answer: CD

Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 255
Which two statements about PIM snooping are true? (Choose two)

A. It floods join and prune messages on all router ports.
B. It requires designated forwarder election messages.
C. When PIM snooping is enabled, the switch allows all multicast packets for each IP multicast group to send multicast packets to multicast router.
D. It requires RGMP to be enabled on the VLAN.
E. It requires IGMP snooping to be enabled on the switch.
F. The ip pirn snooping command is an interface-level command.

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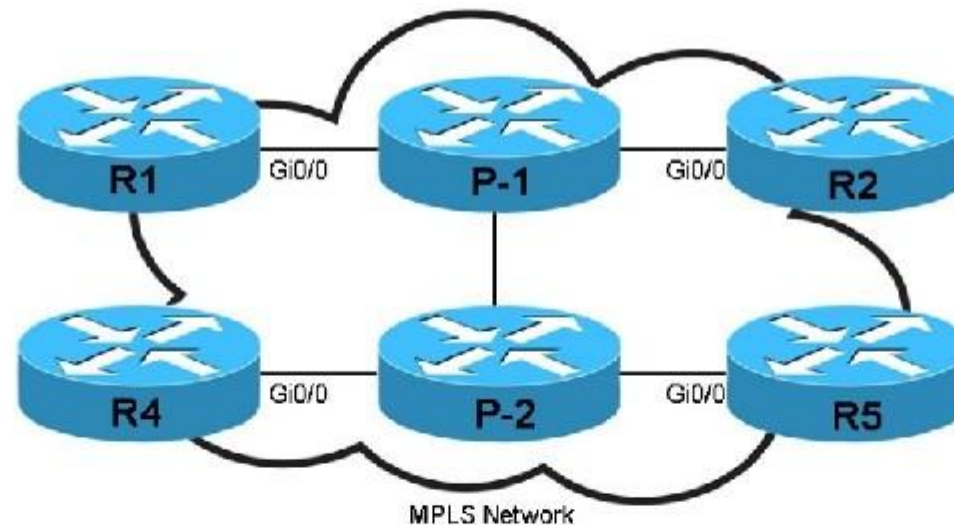**Section: (none)**
Explanation

Explanation/Reference:
Explanation:

QUESTION 256
Refer to the exhibit.

MPLS Network

R1

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

R5

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

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

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

Correct Answer: AD
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 257
Which statement about Type-4 LSA in OSPFv2 is true?

A. "Pass Any Exam. Any Time." - www.actualtests.com 795
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   It is present only in the backbone area.
B. It is generated by each ABR and forwarded in non-stub areas.
C. It is forwarded in NSSA areas.
D. It is generated by the ASBR and forwarded throughout the whole OSPF domain.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 258
Refer to the exhibit.

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```
R3#sho ip route

Gateway of last resort is not set

        10.0.0.0/8 is variably subnetted, 7 subnets, 2 masks
O         10.12.12.0/24  [110/2] via  10.32.32.2,  00:02:44,  FastEthernet2/
O E2      10.14.14.0/24  [10/20] via  10.32.32.2,  00:01:47,  FastEthernet2/
C         10.23.23.0/24  is directly  connected, FastEthernet0/0
L         10.23.23.3/32  is directly  connected, FastEthernet0/0
C         10.32.32.0/24  is directly  connected, FastEthernet2/1
L         10.32.32.3/32  is directly  connected, FastEthernet2/1
O         10.42.42.0/24  [110/2] via  10.32.32.2,  00:03:16,  FastEthernet2/1
        172.16.0.0/16 is variably subnetted, 14 subnets, 2 masks
O         172.16.1.1/32 [110/3] via  10.32.32.2,  00:02:34,  FastEthernet2/
R         172.16.2.0/24  [120/1] via  10.32.32.2,  00:00:25,  FastEthernet2/
                      [120/1] via 10.23.23.2, 00:00:28,  FastEthernet0/0
O         172.16.2.2/32 [110/2] via  10.32.32.2,  00:03:16,  FastEthernet2/1
C         172.16.3.0/24  is directly  connected, Loopback30
L         172.16.3.3/32  is directly  connected, Loopback30
O         172.16.4.4/32 [110/3] via  10.32.32.2,  00:03:16,  FastEthernet2/1
O         172.16.10.1/32 [110/3] via  10.32.32.2,  00:02:34,  FastEthernet2/1
O         172.16.14.4/32 [110/3] via  10.32.32.2,  00:03:16,  FastEthernet2/1
O E2      172.16.20.0/24 [10/20] via  10.32.32.2,  00:01:47,  FastEthernet2/1
C         172.16.23.0/24 is directly  connected, Loopback10
O         172.16.23.2/32 [110/2] via  10.32.32.2,  00:03:16,   FastEthernet2/
L         172.16.23.3/32 is directly  connected, Loopback10
C         172.16.32.0/24 is directly  connected, Loopback20
L         172.16.32.3/32 is directly  connected, Loopback20
```

Which statement about the R3 network environment is true?

A. 172.1.20.0/24 has an administrative distance of 20.
B. RIP, OSPF and IS-IS are running.
C. OSPF external routes are preferred over OSPF internal routes.
D. The administrative distance for 172.16.X.X addresses is 110.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 259
What are IPv6 addresses of the form FC00::/7 known as?

A. unique local addresses
B. "Pass Any Exam. Any Time." - www.actualtests.com 797
   Cisco 400-101 Exam
   transition addresses for 6to4
C. link-local addresses
D. multicast RP addresses

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 260
Which two statements are correct about route redistribution? (Choose two)

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

Correct Answer: BE
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 261
Which two conditions are required for tracking the interface IP routing state? (Choose two)

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

Correct Answer: DE
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 262
Which two statements about asymmetric routing are true? (Choose two)

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

Correct Answer: BD
Section: (none)
Explanation

Explanation/Reference:

Explanation:

QUESTION 263
Which two methods do IPsec VTIs use to identify and transmit encrypted traffic through the tunnel? (Choose two)

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A. object groups
B. ACLs
C. dynamic routing
D. static routing
E. NAT

Correct Answer: CD
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 264
Which two statements about the STP dispute function are true? (Choose two)

A. It compares the downstream port states reported in received BPDUs.
B. The upstream switch uses received BPDUs to detect unidirectional link failures.
C. The downstream switch uses received BPDUs to detect unidirectional link failures.
D. When a designated port detects a conflict, it changes its role by reverting to a discarding state.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 265
What does the DIS on a LAN periodically transmit in multicast to ensure that the IS-IS link-state database is accurate?

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A. ISH

B. CSNP

C. IIH

D. PSNP

E. LIP

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 266
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Which three technologies can be used to implement redundancy for IPv6? (Choose three)

A. IPv6 NA

B. NHRP

C. HSRP

D. DVMRP

E. GLBP

F. IPv6 RA

Correct Answer: CEF
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 267
Which three values are used to generate a unique bridge ID for each VLAN in PVST+? (Choose three)

A. port cost

B. max age

C. spanning-tree MAC address

D. port priority
E. switch priority
F. extended system ID
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Cisco 400-101 Exam

Correct Answer: CEF
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 268
When is it useful to disable split horizon on an EIGRP interface?

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

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 269
Which BGP attribute is used to influence inbound traffic?

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

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
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Explanation:

QUESTION 270
Refer to the exhibit.

wrr-queue cos-map 1 2 2 3

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

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

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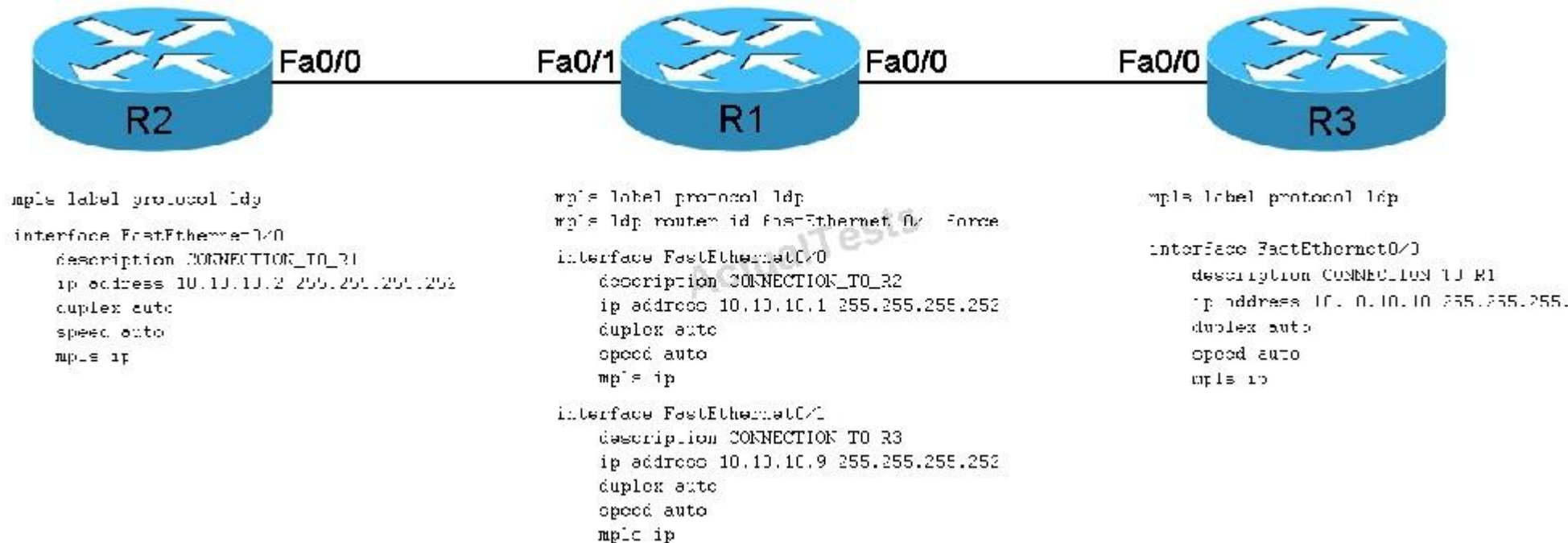**Section: (none)**
Explanation

Explanation/Reference:
Explanation:

QUESTION 271
Refer to the exhibit.

```
Fa0/0        Fa0/1          Fa0/0           Fa0/0
    R2              R1                          R3
```

mpls label protocol ldp

interface FastEthernet0/0
    description CONNECTION_TO_R1
    ip address 10.10.10.2 255.255.255.252
    duplex auto
    speed auto
    mpls ip

mpls label protocol ldp
mpls ldp router id FastEthernet 0/ force

interface FastEthernet0/0
    description CONNECTION_TO_R2
    ip address 10.10.10.1 255.255.255.252
    duplex auto
    speed auto
    mpls ip

interface FastEthernet0/1
    description CONNECTION TO R3
    ip address 10.10.10.9 255.255.255.252
    duplex auto
    speed auto
    mpls ip

mpls label protocol ldp

interface FastEthernet0/0
    description CONNECTION TO R1
    ip address 10.0.10.10 255.255.255.
    duplex auto
    speed auto
    mpls ip

Between which routers is an LDP session established?

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

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 272
Which Cisco PfR monitoring mode is recommended for Internet edge deployments?

A. active mode

B. active throughput mode

C. fast mode

D. passive mode

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
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Cisco 400-101 Exam

Explanation:

QUESTION 273
Refer to the exhibit.

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Cisco 400-101 Exam

```
R1

ip community-list 10 permit 64512:100 64512:200 645212:41650 64513:1220

route-map INTERNET-OUT permit 10
    match community 10

router bgp 64512
    no synchronization
    neighbor INTERNET peer-group
    neighbor INTERNET remote-as 64513
    neighbor INTERNET password c1sC0
    neighbor 192.168.250.53 peer-group INTERNET

address-family ipv4
    no synchronization
    neighbor INTERNET send-community both
    neighbor INTERNET route-map INTERNET-OUT out

R1#show bgp 172.29.224.0

BGP routing table entry for 172.29.224.0/24, version 607252621
Paths: (1 available, best #1, table default)
Multipath: eBGP 1BGP
    Advertised to update-groups:
    3           4           7
    53739
        10.10.153.12 from 10.10.153.120 (10.10.153.12)
            Origin IGP, metric 0, localpref 130, valid, external, best
            Community: 64512:555  64513:200  64513:53090  64512:64002  64513:64090
```

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

A. Modify the community list to match communities 64513:69040 attached to 172.29.224.0/24.
B. Configure soft reconfiguration to peering 192.168.250.53.
C. Modify the outbound route map to permit all additional traffic.
D. Configure additional address families to peering 192.168.250.53.
E. Modify the inbound route map to permit all additional traffic.
F. Modify the community list to match community 64513:64090 attached to 172.29.224.0/24.

Correct Answer: CF
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 274
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Which two statements about the spanning-tree timers in a switched network are true? (Choose two)

A. After receiving a BPDU from the root bridge, a non-root bridge waits for the hello interval before forwarding it out.
B. The root bridge sends out a TCN every max-age interval.
C. The root bridge sends out a configuration BPDU every hello interval.
D. The default hello time is two seconds.

Correct Answer: CD
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 275
DRAG DROP

Drag each statement about IPv6 tunneling on the left to the matching IPv6 tunneling on the right.

Supports inter-site connections.	6to4
Supports intra-site connections.	
The IPv4 address has a dynamic location in the IPv6 header.	
The IPv4 address is embedded in the prefix.	ISATAP
Uses a modified EUI-64 format for the prefix.	
Uses flexible prefix format requirements.	
	6RD

A.
B.
C.
D.

Correct Answer:
Section: (none)
Explanation

Explanation/Reference:
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Supports inter-site connections.
Supports intra-site connections.
The IPv4 address has a dynamic location in the IPv6 header.
The IPv4 address is embedded in the prefix.
Uses a modified EUI-64 format for the prefix.
Uses flexible prefix format requirements.

6to4

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

ISATAP

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

6RD

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

Explanation:

Answer:

6to4

Supports inter-site connections.

The IPv4 address is embedded in the prefix.

ISATAP

Supports intra-site connections.

Uses a modified EUI-64 format for the prefix.

6RD

The IPv4 address has a dynamic location in the IPv6 header.

Uses flexible prefix format requirements.

QUESTION 276
DRAG DROP

Drag and drop the description on the left to the correct EIGRP term in the right.

reported metric to the neighbor router	reported distance
best metric along a path to the destination including the metric to the neighbor	feasible distance
best metric along a path to the feasible successor	feasible succesor
path with a reported distance lower than the feasible distance	
total metric along a path to the destination as advertised by the upstream neighbor	

A.

B.

C.

D.

Correct Answer:
Section: (none)
Explanation

Explanation/Reference:

reported metric to the neighbor router

best metric along a path to the destination including the metric to the neighbor

best metric along a path to the feasible successor

path with a reported distance lower than the feasible distance

total metric along a path to the destination as advertised by the upstream neighbor

---

total metric along a path to the destination as advertised by the upstream neighbor

best metric along a path to the destination including the metric to the neighbor

path with a reported distance lower than the feasible distance

Explanation:

Answer:

total metric along a path to the destination as advertised by the upstream neighbor

best metric along a path to the destination including the metric to the neighbor

path with a reported distance lower than the feasible distance

QUESTION 277
DRAG DROP

Drag and drop each BGP attribute on the left into the priority order in which the attributes are preferred when determining the best path on the right.

highest LOCAL_PREF	First
highest WEIGHT	Second
locally originated path	Third
lowest MED	Fourth
lowest origin type	Fifth
shortest AS_PATH	Sixth

A.
B.
C.
D.

Correct Answer:
Section: (none)
Explanation

Explanation/Reference:

highest LOCAL_PREF	highest WEIGHT
highest WEIGHT	highest LOCAL_PREF
locally originated path	locally originated path
lowest MED	shortest AS_PATH
lowest origin type	lowest origin type
shortest AS_PATH	lowest MED

Explanation:

Answer:

highest WEIGHT
highest LOCAL_PREF
locally originated path
shortest AS_PATH
lowest origin type
lowest MED

QUESTION 278
What can PfR passive monitoring mode measure for UDP flows?

A. throughput
B. loss
C. reachability
D. delay

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 279
When do summary black holes occur in EIGRP?

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when the summary is removed due to the last component disappearing

B. when a summary is created for security purposes to draw undesired traffic to a termination point

C. when a summary is advertised that contains components that the advertising router cannot reach

D. when components of the summary are present at multiple summary points

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 280
What are two pieces of information that can be transmitted via Multiprotocol BGP? (Choose two)

A. MPLS VPN routes

B. Level 1/Level 2 routers set the overload-bit.

C. multicast sources

D. IS-IS LSAs

E. Level 2 routers set the attached bit.

F. OSPF routes

Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 281
Which two statements about Cisco IOS XE are true? (Choose two)

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

B. Its functions run as multiple separate processes in the OS.

C. It uses a service blade outside Cisco IOS XE to integrate and run applications.

D. It is deployed in a Linux-based environment.

E. The FED feature provides separation between the control plane and the data plane.

Correct Answer: BD
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 282
Which two factors can reduce NBAR2 performance? (Choose two)

A. queuing
B. multiple NBAR2-enabled interfaces
C. slow link speeds
D. stateful protocol matches
E. short-duration flows

Correct Answer: DE
Section: (none)
Explanation

Explanation/Reference:
Explanation:

QUESTION 283
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Which encryption algorithm is enabled by the Cisco IOS command service password-encryption ?

A. MD5
B. Cisco Type-5
C. Cisco AES
D. Cisco Type-7
E. TKIP

Correct Answer: D
Section: (none)

Explanation

Explanation/Reference:
Explanation:

QUESTION 284
Which two options are requirements for AToM support? (Choose two)

A. Cisco Express Forwarding must be disabled.
B. MPLS must be configured with an LSP in the SP core.
C. MPLS must be enabled between the PE and CE routers.
D. The PE routers must be able to communicate with each other over IP.
E. IP routing must be configured between the PE and CE routers.

Correct Answer: BD
Section: (none)
Explanation

Explanation/Reference:
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