642-902 Q&As

Implementing cisco ip routing

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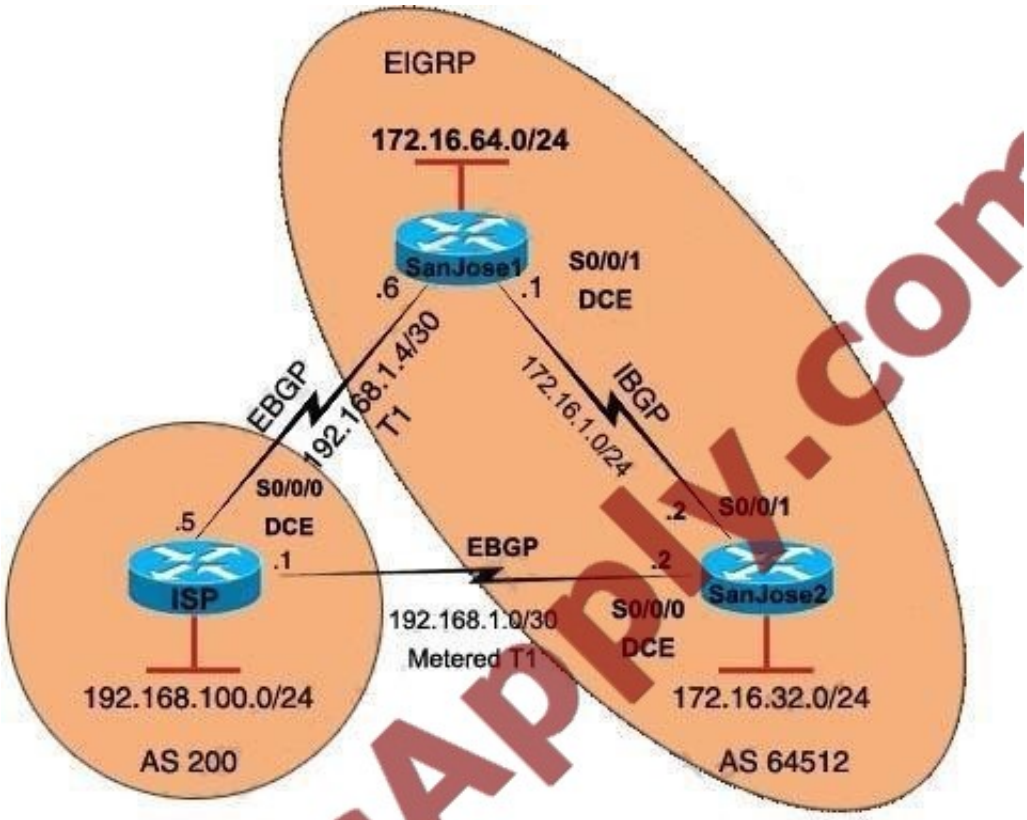
QUESTION 1

Refer to the exhibit.




```
BGP table version is 12, local router ID is 192.168.100.1
Status codes: s suppressed, d damped, h history, * valid, > best, i -
internal     Origin codes: i - IGP, e - EGP, ? - incomplete
   Network          Next Hop            Metric LocPrf Weight Path
*  172.16.0.0       192.168.1.2              75             0 64512 i
*>                  192.168.1.6              50             0 64512 i
*> 192.168.1.0/30   0.0.0.0                   0         32768 i
*> 192.168.1.4/30   0.0.0.0                   0         32768 i
*> 192.168.100.0    0.0.0.0                   0         32768 i
```

On the basis of the information in the exhibit, which two statements are true? (Choose two.)

A. The output was generated by entering the show ip bgp command on the ISP router.

B. The output was generated by entering the show ip bgp command on the SanJose1 router.

C. The serial 0/0/1 interface on the ISP router has been configured with the set metric 50 command.

D. The serial 0/0/1 interface on the ISP router has been configured with the set metric 75 command.

E. When traffic is sent from the ISP to autonomous system 64512, the traffic will be forwarded to SanJose1 because of

the lower MED value of SanJose1.

F. When traffic is sent from the ISP to autonomous system 64512, the traffic will be forwarded to SanJose2 because of the higher MED value of SanJose2.

Correct Answer: AD

The "show ip route bgp" command will display any BGP-learned routes that make it into the IP routing table, the command "show ip bgp" is required to display the contents of the actual BGP routing table. This output was seen on ISP because the local router ID is 192.168.100.1 (ISP). Since we know that this output must have been seen by ISP, we know the serial 0/0/1 interface has been configured with a metric of 75, as this is the metric to the peer with IP address 192.168.1.2 (the other side of the serial 0/0/1 interface).

QUESTION 2

During a redistribution of routes from OSPF into EIGRP, an administrator notices that none of the OSPF routes are showing in EIGRP. What are two possible causes? (Choose two.)

A. incorrect distribute lists have been configured

B. missing ip classless command

C. CEF not enabled

D. no default metric configured for EIGRP

Correct Answer: AD

An incorrect distribute list can filter out updates therefore none of the OSPF routes are showing in EIGRP.

The default metric when redistributing into EIGRP is infinite so we must specify a seed metric for EIGRP to work with.

QUESTION 3

Which three are characteristics of IPv6? (Choose three.)

A. An IPv6 address is 128 bits long.

B. An IPv6 header is 20 bits long.

C. An IPv6 header contains the next header field.

D. An IPv6 header contains the protocol field.

E. IPv6 routers send RA messages.

F. An IPv6 header contains the header checksum field.

Correct Answer: ACE

All IPv6 addresses are 128 bits long to accommodate a far larger number of stations than what was possible with the 32 bit IPv4 addresses.

The following displays the IPv6 header field in detail:

IPv6 header:

Version. 4 bits.

IPv6 version number.

Traffic Class. 8 bits.

Internet traffic priority delivery value.

Flow Label. 20 bits.

Used for specifying special router handling from source to destination(s) for a sequence of packets.

Payload Length. 16 bits unsigned.

Specifies the length of the data in the packet. When cleared to zero, the option is a hop-by- hop Jumbo payload.

Next Header. 8 bits.

Specifies the next encapsulated protocol. The values are compatible with those specified for the IPv4 protocol field.

Hop Limit. 8 bits unsigned.

For each router that forwards the packet, the hop limit is decremented by 1. When the hop limit field reaches zero, the packet is discarded. This replaces the TTL field in the IPv4 header that was originally intended to be used as a time based

hop limit.

Source address. 16 bytes.

The IPv6 address of the sending node.

Destination address. 16 bytes.

The IPv6 address of the destination node.

Reference: http://www.networksorcery.com/enp/protocol/ipv6.htm

QUESTION 4

Identify three characteristics of EIGRP feasible successors? (Choose three.)

A. A feasible successor is selected by comparing the advertised distance of a non-successor route to the feasible distance of the best route.

B. If the advertised distance of the non-successor route is less than the feasible distance of best route, then that route is identified as a feasible successor.

C. If the successor becomes unavailable, then the feasible successor can be used immediately without recalculating for a lost route.

D. The feasible successor can be found in the routing table.

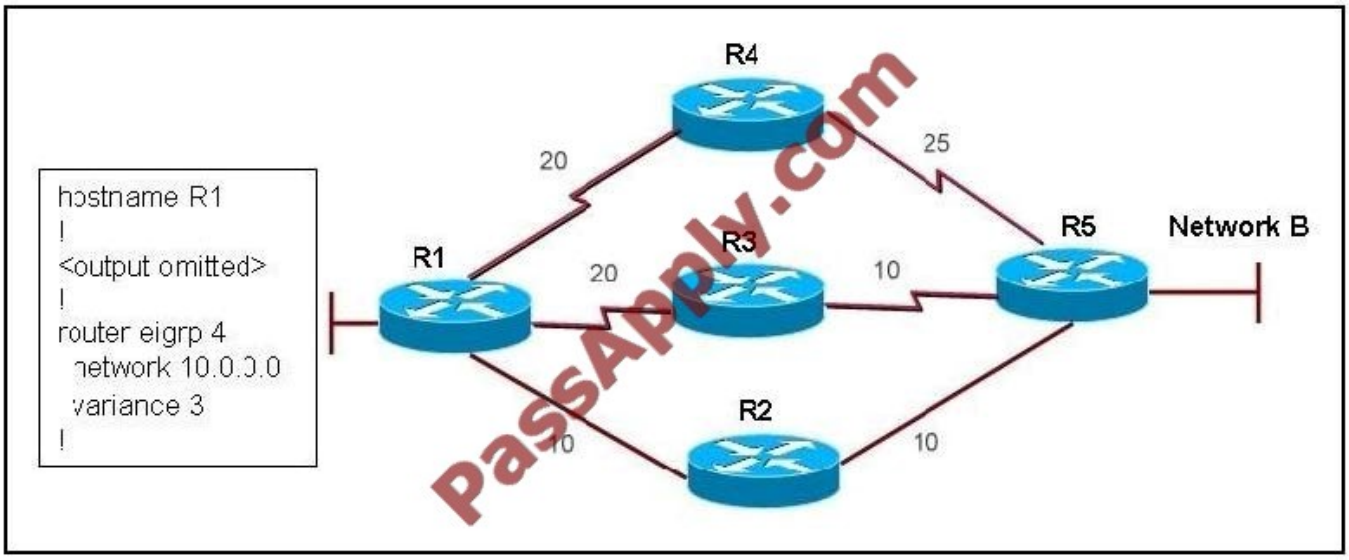
E. Traffic will be load balanced between feasible successors with the same advertised distance.

Correct Answer: ABC

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

QUESTION 5

Refer to the exhibit.



On all routers in the network, EIGRP has been configured for load balancing across the three links. However, traffic destined for Network B from R1 is only load balanced over paths R1- R2-R5 and R1-R3-R5. What is the cause of the problem?

A. EIGRP will not select more than two links for unequal cost path load balancing.

B. Because the path has a different link type, EIGRP will not select path R1-R4-R5 for load balancing.

C. Because Router R4 is not a feasible successor, EIGRP will not select path R1-R4-R5 for load balancing.

D. EIGRP will not select path R1-R4-R5 for load balancing unless the value of the variance parameter is increased.

Correct Answer: C

Since R4 is not configured as a feasible successor, EIGRP will not select that path for load balancing. IN EIGRP, you

need to configure feasible successor to enable load balancing on the path.