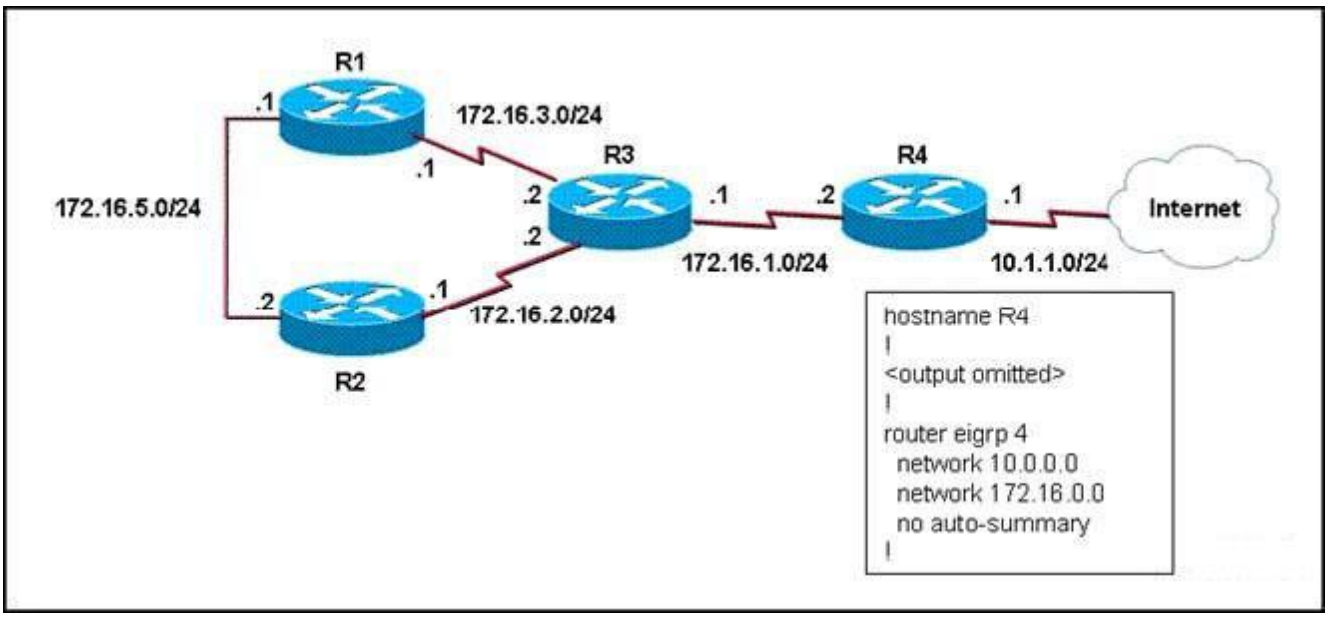
Exam : Cisco 642-902

Title : Implementing Cisco IP Routing (ROUTE) Practice Test

Version : Demo

1. Refer to the exhibit.



EIGRP has been configured on all routers in the network. What additional configuration statement should be included on router R4 to advertise a default route to its neighbors?

A. R4(config)# ip route 0.0.0.0 0.0.0.0 10.1.1.1

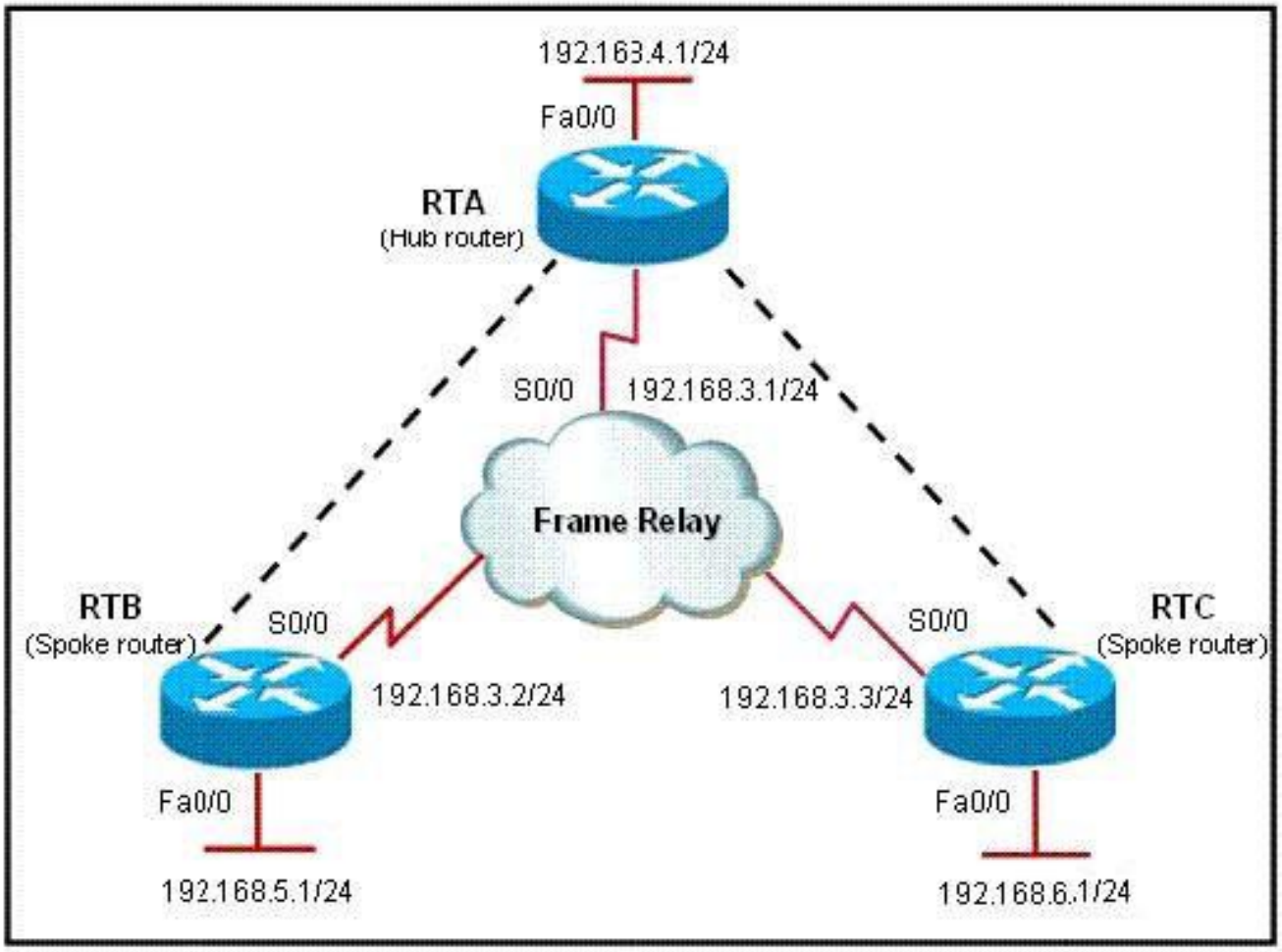
B. R4(config)# ip default-network 10.0.0.0

C. R4(config-router)# default-information originate

D. R4(config)# ip route 10.0.0.0 255.0.0.0 10.1.1.1

Answer: B

2. Refer to the exhibit.



Router RTA is the hub router for routers RTB and RTC. The Frame Relay network is configured with EIGRP, and the entire network is in autonomous system 1. However, router RTB and RTC are not receiving each other's routes. What is the solution?

A. Check and change the access lists on router RTA.

B. Configure the auto summary command under router eigrp 1 on router RTA.

C. Configure subinterfaces on the spoke routers and assign different IP address subnets for each subinterface.

D. Issue the no ip split horizon command on router RTA.

E. Issue the no ip split horizon eigrp 1 command on router RTA.

F. Configure a distribute list on router RTA that allows it to advertise all routes to the spoke routers.

Answer: E

3. Refer to the exhibit.

```
R1# show ip eigrp topology
<output omitted>
P 10.1.2.0/24, 1 successors, FD is 281600
         via Connected, FastEthernet0/0
A 10.6.1.0/24, 0 successors, FD is 3385160704, Q
   1 replies, active 00:00:41, query-origin: Local origin
   Remaining replies:
         via 10.1.2.1, r. FastEtherent0/0
```

EIGRP is configured on all routers in the network. On a basis of the show ip eigrp topology output provided, what conclusion can be derived?

A. Router R1 is waiting for a reply from the neighbor 10.1.2.1 to the hello message sent out inquiring for a second successor to network 10.6.1.0/24.

B. Router R1 can send traffic destined for network 10.6.1.0/24 out of interface FastEthernet0/0.

C. Router R1 is waiting for a reply from the neighbor 10.1.2.1 to the hello message sent out before it declares the neighbor unreachable.

D. Router R1 is waiting for a reply from the neighbor 10.1.2.1 in response to the query sent out about network 10.6.1.0/24.

Answer: D

4. Refer to the exhibit. Which three statements are true? (Choose three.)

S 62.99.153.0/24 [1/0] via 209.177.64.130

172.209.12.0/32 is subnetted, 1 subnets

D EX 172.209.1

[170/2590720] via 209.179.2.114, 06:47:28, Serial0/0/0.1239

62.113.17.0/24 is variably subnetted, 2 subnets, 2 masks

D EX 99.3.215.0/24

[170/27316] via 209.180.96.45, 09:52:10, FastEthernet11/0/0

[170/27316] via 209.180.96.44, 09:52:10, FastEthernet11/0/0

25.248.17.0/24

[90/1512111] via 209.179.66.25, 10:33:13, Serial0/0/0.1400001

[90/1512111] via 209.179.66.41, 10:33:13, Serial0/0/0.1402001

62.113.1.0/24 is variably subnetted, 12 subnets, 2 masks

D 62.113.1.227/32

[90/2611727] via 209.180.96.45, 10:33:13, FastEthernet1/0/0

[90/2611727] via 209.180.96.44, 10:33:13, FastEthernet1/0/0

S* 0.0.0.0/0 [1/0] via 209.180.96.14

A. On the routing table of R4, the 10.1.1.0/24 route appears as an O E2 route.

B. On R4, the 172.16.1.0/24 route has a metric of 20.

C. The R3 S0/0 interface should not need the no ip split-horizon eigrp 1 configuration command for the 172.16.1.0/24 route to appear in the routing table of R2 as an D EX route.

D. The administrative distance of the 172.16.1.0/24 route in the routing table of R3 is 170.

E. On R5, the 4.0.0.0/8 route will have an administrative distance of 120 and a hop count of 6.

Answer: ABD

5. Which command will display EIGRP packets sent and received, as well as statistics on hello packets, updates, queries, replies, and acknowledgments?

A. debug eigrp packets

B. show ip eigrp traffic

C. debug ip eigrp

D. show ip eigrp interfaces

Answer: B

6. Which three statements are true about EIGRP operation? (Choose three.) Select 3 response(s).

A. When summarization is configured, the router will also create a route to null 0.

B. The summary route remains in the route table, even if there are no more specific routes to the network.

C. Summarization is configured on a per-interface level.

D. The maximum metric for the specific routes is used as the metric for the summary route.

E. Automatic summarization across major network boundaries is enabled by default.

Answer: ACE

7. Which two statements about the EIGRP DUAL process are correct? (Choose two.) Select 2 response(s).

A. An EIGRP route will go active if there are no successors or feasible successors in the EIGRP topology

table.

B. An EIGRP route will go passive if there are no successors in the EIGRP topology table.

C. DUAL will trigger an EIGRP query process while placing the flapping routes in the holddown state.

D. A feasible successor in the EIGRP topology table can become the successor only after all the query requests have been replied to.

E. The stuck in active state is caused when the wait for the query replies have timed out.

F. EIGRP queries are sent during the loading state in the EIGRP neighbor establishment process.

Answer: AE

8. What are three key concepts that apply when configuring the EIGRP stub routing feature in a hub and spoke network? (Choose three.) Select 3 response(s).

A. A hub router prevents routes from being advertised to the remote router.

B. Only remote routers are configured as stubs.

C. Stub routers are not queried for routes.

D. Spoke routers connected to hub routers answer the route queries for the stub router.

E. A stub router should have only EIGRP hub routers as neighbors.

F. EIGRP stub routing should be used on hub routers only.

Answer: BCE

9. Based on the exhibited output, which three statements are true? (Choose three.)

```
R1# show ip eigrp topology

IP-EIGRP Topology Table for process 200

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

P 192.168.1.64/28 1 successors, FD is 281600
          via Connected, Ethernet0
P 192.168.1.32/28 1 successors, FD is 40512000
          via Connected, Serial1
P 192.168.1.48/28, 1 successors, FD is 40537600
          via 192.168.1.66 (40537600/40512000), Ethernet0
          via 192.168.1.17 (41024000/40512000), Serial0
          via 192.168.1.33 (41024000/40512000), Serial1
P 192.168.1.16/28 1 successors, FD is 40512000
          via Connected, Serial0
```

A. All the routes are in the passive mode because R1 is in the query process for those routes.

B. R1 is in AS 200.

C. R1 will load balance between three paths to reach the 192.168.1.48/28 prefix because all three paths have the same advertised distance (AD) of 40512000.

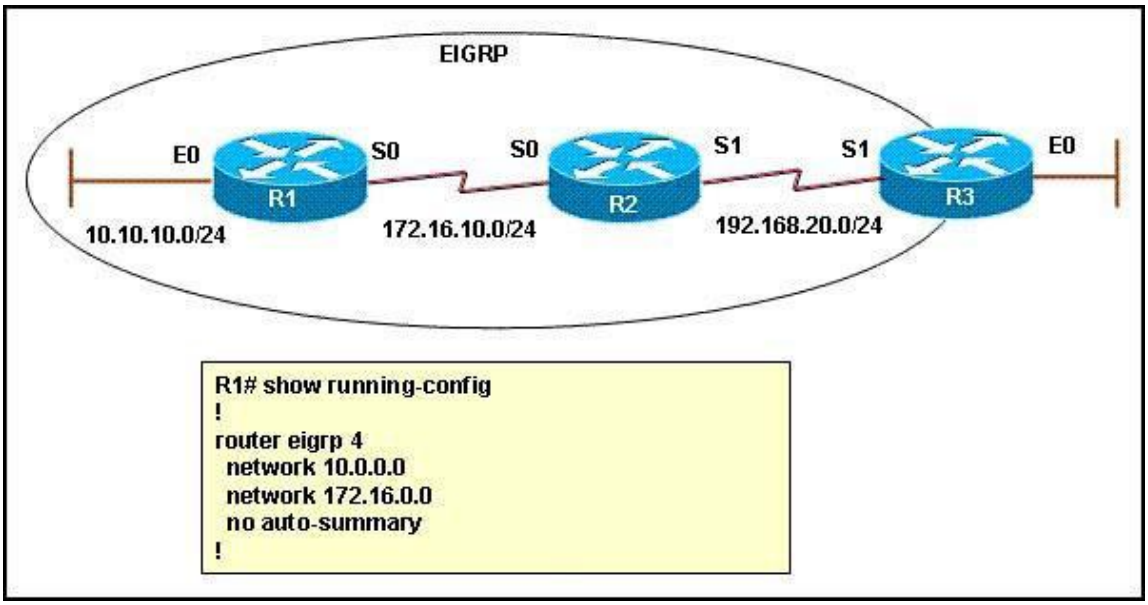
D. 40512000 is the advertised distance (AD) via 192.168.1.66 to reach the 192.168.1.48/28 prefix.

E. All the routes are in the passive mode because these routes are in the hold-down state.

F. The best path for R1 to reach the 192.168.1.48/28 prefix is via 192.168.1.66.

Answer: BDF

10. Refer to the exhibit.



EIGRP is configured with the default configuration on all routers. Auto summarization is enabled on routers R2 and R3, but it is disabled on router R1. Which two EIGRP routes will be seen in the routing table of router R3? (Choose two.)

A. 10.0.0.0/8

B. 172.16.10.0/24

C. 172.16.0.0/24

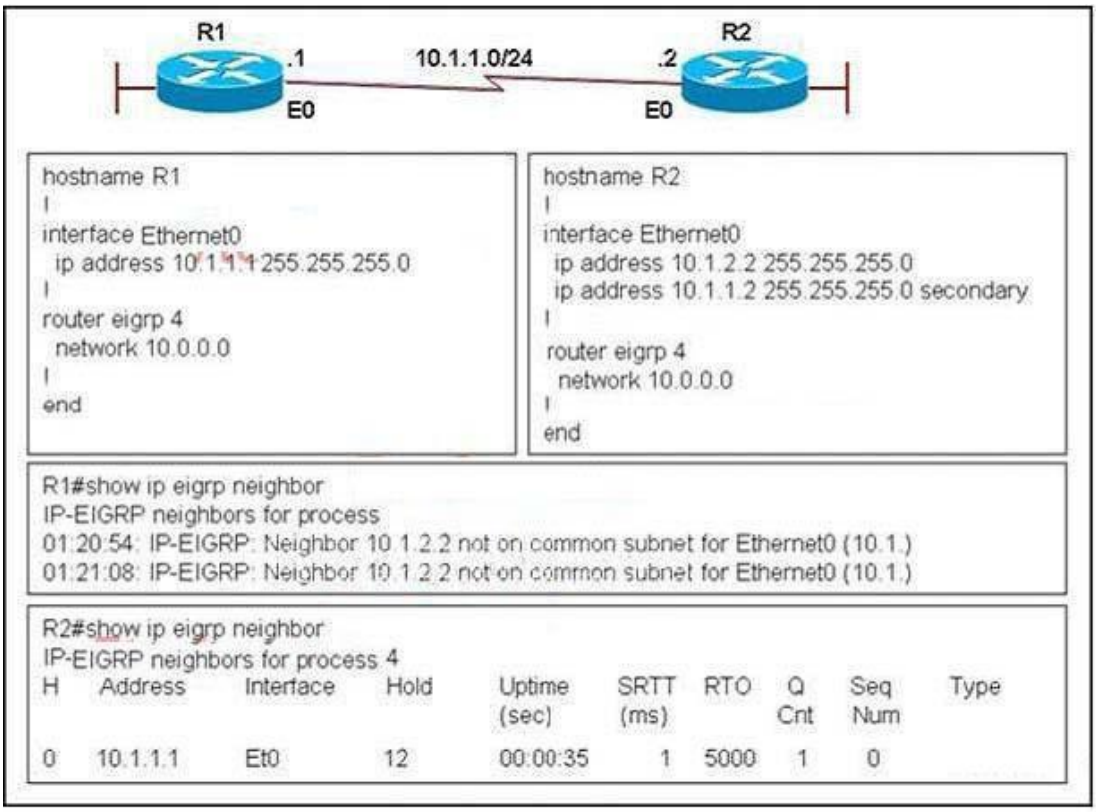
D. 10.10.10.0/24

E. 172.16.0.0/16

F. 10.10.0.0/16

Answer: DE

11. Refer to the exhibit.



EIGRP has been configured on routers R1 and R2. However, R1 does not show R2 as a neighbor and does not accept routing updates from R2. What could be the cause of the problem?

A. The no auto-summary command has not been issued under the EIGRP process on both routers.

B. Interface E0 on router R1 has not been configured with a secondary IP address of 10.1.2.1/24.

C. EIGRP cannot exchange routing updates with a neighbor's router interface that is configured with two IP addresses.

D. EIGRP cannot form neighbor relationship and exchange routing updates with a secondary address.

Answer: D

12. Which EIGRP packet statement is true?

A. Update packets route reliable change information only to the affected routers.

B. Reply packets are multicast to IP address 224.0.0.10 using RTP.

C. On high-speed links, hello packets are broadcast every 5 seconds for neighbor discovery.

D. Reply packets are used to send routing updates.

E. On low-speed links, hello packets are broadcast every 15 seconds for neighbor discovery.

Answer: A

13. EIGRP has been configured to operate over Frame Relay multipoint connections. What should the bandwidth command be set to?

A. the CIR rate of the lowest speed connection multiplied by the number of circuits

B. the CIR rate of the lowest speed connection

C. the CIR rate of the highest speed connection

D. the sum of all the CIRs divided by the number of connections

Answer: A

14. Refer to the exhibit.

```
R1#show running-config
<Output omitted>
!
router eigrp 100
 network 172.16.0.0
 distribute-list prefix TEST out
 auto-summary
 no eigrp log-neighbor-changes
!
ip prefix-list TEST seq 5 permit 172.16.1.0/26
!
<Output omitted>
```

Router R1 is connected to networks 172.16.1.0 /26 and 172.16.1.64 /27. On the basis of the partial output in the exhibit, which statement is true?

A. Router R1 will deny the 172.16.1.0/26 route while permitting the 172.16.1.64/27 route to be advertised.

B. Router R1 will advertise both routes.

C. Router R1 should be reconfigured with an ACL instead of an ip prefix-list command.

D. Router R1 will deny the 172.16.1.0/27 route while permitting the 172.16.1.0/26 route to be advertised.

Answer: D

15. Based on the exhibited output, which three statements are true? (Choose three.)

```
R1#show ip route

Gateway of last resort is 10.1.1.2 to network 0.0.0.0

C    1.0.0.0/8 is directly connected, Loopback0
     172.17.0.0/24 is subnetted, 1 subnets
D       172.17.1.0 [90/25632000] via 10.1.1.2, 00:05:20, Serial0/0
     172.16.0.0/24 is subnetted, 1 subnets
D       172.16.1.0 [90/23072000] via 10.1.1.2, 00:05:20, Serial0/0
                   [90/20640000] via 10.1.1.3, 00:00:13, Serial0/0
D    172.19.0.0/16 [90/391248640] via 10.1.1.3, 00:05:20, Serial0/0
D    172.22.0.0/16 [90/20640000] via 10.1.1.3, 00:05:21, Serial0/0
D EX 172.25.0.0/16 [170/32032000] via 10.1.1.2, 00:00:10, Serial0/0
     10.0.0.0/8 is variably subnetted, 3 subnets, 2 masks
D       10.2.0.0/16 is a summary, 00:06:18, Null0
C       10.2.1.0/24 is directly connected, FastEthernet0/0
C       10.1.1.0/24 is directly connected, Serial0/0
D*EX 0.0.0.0/0 [170/20514560] via 10.1.1.2, 00:00:11, Serial0/0
R1#
```

A. The route to 10.2.0.0/16 was redistributed into EIGRP.

B. A default route has been redistributed into the EIGRP autonomous system.

C. R1 is configured with the ip summary-address command.

D. R1 is sourcing an external EIGRP route from Null0.

E. The router at 10.1.1.2 is configured with the ip default-network 0.0.0.0 command.

F. R1 is configured with the variance command.

Answer: BCF

16. After DUAL calculations, a router has identified a successor route, but no routes have qualified as a feasible successor. In the event that the current successor goes down, what process will EIGRP use in the selection of a new successor?

A. EIGRP will automatically use the route with the lowest advertised distance (AD).

B. The route will transition to the active state.

C. The route will transition to the passive state.

D. EIGRP will find the interface with the lowest MAC address.

E. EIGRP will automatically use the route with the lowest feasible distance (FD).

Answer: B

17. Which three statements about the EIGRP routing protocol are true? (Choose three.)

A. EIGRP supports five generic packet types, including hello, database description (DBD), link-state request (LSR), link-state update (LSU), and LSAck.

B. EIGRP sends periodic hello packets to the multicast IP address 224.0.0.10.

C. EIGRP will not form a neighbor relationship with another peer when their K values are mismatched.

D. EIGRP sends periodic hello packets to the multicast IP address 224.0.0.9.

E. EIGRP will form a neighbor relationship with another peer even when their K values are mismatched.

F. EIGRP supports five generic packet types, including hello, update, query, reply, and ACK packets.

Answer: BCF

18. EIGRP has been configured to operate over Frame Relay multipoint connections. What should the bandwidth command be set to?

A. the CIR rate of the lowest speed connection multiplied by the number of circuits

B. the CIR rate of the lowest speed connection

C. the CIR rate of the highest speed connection

D. the sum of all the CIRs divided by the number of connections

Answer: A

19. Refer to the exhibit.

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        via Connected, FastEthernet0/0
A 10.6.1.0/24, 0 successors, FD is 3385160704, Q
   1 replies, active 00:00:41, query-origin: Local origin
   Remaining replies:
        via 10.1.2.1, r. FastEtherent0/0
```

EIGRP is configured on all routers in the network. On a basis of the show ip eigrp topology output provided, what conclusion can be derived?

A. Router R1 is waiting for a reply from the neighbor 10.1.2.1 to the hello message sent out inquiring for a second successor to network 10.6.1.0/24.

B. Router R1 can send traffic destined for network 10.6.1.0/24 out of interface FastEthernet0/0.

C. Router R1 is waiting for a reply from the neighbor 10.1.2.1 to the hello message sent out before it

declares the neighbor unreachable.

D. Router R1 is waiting for a reply from the neighbor 10.1.2.1 in response to the query sent out about network 10.6.1.0/24.

Answer: D

20. Which three statements are true about EIGRP route summarization? (Choose three.)

A. When manual summarization is configured, the router immediately creates a route that points to null0 interface.

B. Manual route summarization is configured in router configuration mode when the router is configured for EIGRP routing.

C. Manual route summarization is configured on the interface.

D. The ip summary-address eigrp command generates a default route with an administrative distance of 5.

E. When manual summarization is configured, the summary route will use the metric of the largest specific metric of the summary routes.

F. The ip summary-address eigrp command generates a default route with an administrative distance of 90.

Answer: ACD