Exam : **642-901**

Title : Building Scalable Cisco Internetworks

Version : Demo

1. Refer to the exhibit. Which statement is true?

```
hostname RAR1
!
<output omitted>
!
router bgp 100
  neighbor 172.16.1.2 remote-as 200
  neighbor 172.16.1.2 distribute-list 101 in
!
access-list 101 permit ip 10.10.0.0 0.0.0.0 255.255.224.0 0.0.0.0
```

A. Router RAR1 will accept only route 10.10.0.0/19 from its BGP neighbor.
B. Router RAR1 will send only route 10.10.0.0/19 to its BGP neighbor.
C. Only traffic with a destination from 10.10.0.0/19 will be permitted.
D. Only traffic going to 10.10.0.0/19 will be permitted.
Answe:A

2. If no metric is specified for the routes being redistributed into IS-IS, what metric value is assigned to the routes?
A. 0
B. 1
C. 10
D. 20
Answer: A

3. Refer to the exhibit. Which three statements accurately describe the result of applying the exhibited route map? (Choose three.)

```
router eigrp 1
  redistribute ospf 1 route-map ospf-to-eigrp
  default-metric 20000 2000 255 1 1500
 !
 !
 route-map ospf-to-eigrp deny 10
  match tag 6
  match route-type external type-2
 !
 route-map ospf-to-eigrp permit 20
  match ip address prefix-list pfx
  set metric 40000 1000 255 1 1500
 !
 route-map ospf-to-eigrp permit 30
  set tag 8
```

A. The map prohibits the redistribution of all type 2 external OSPF routes with tag 6 set.
B. The map prohibits the redistribution of all type 2 external OSPF routes.
C. The map redistributes into EIGRP all routes that match the pfx prefix list and the five metric values40000, 1000, 255, 1, and 1500.
D. The map prohibits the redistribution of all external OSPF routes with tag 6 set.
E. All routes that do no match clauses 10 and 20 of the route map are redistributed with their tags set to 8.
F. The map permits the redistribution of all type 1 external OSPF routes.
Answe:AEF

4. 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?
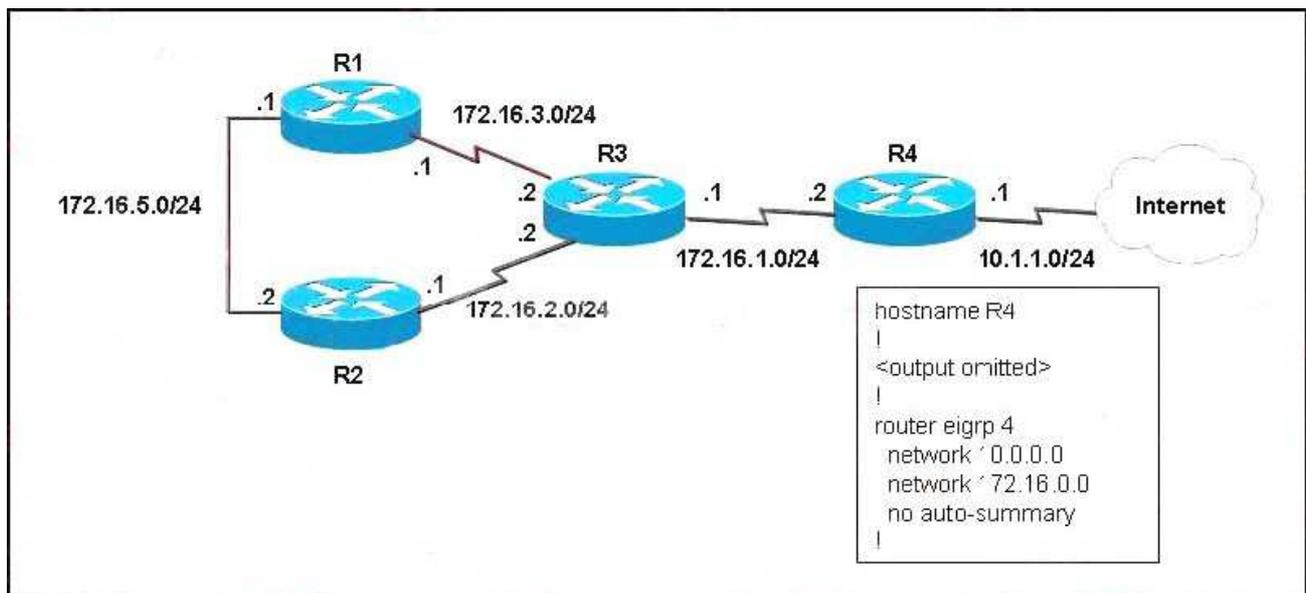
A. R4(config)# ip default-network 10.0.0.0
B. R4(config)# ip route 0.0.0.0 0.0.0.0 10.1.1.1
C. R4(config)# ip route 10.0.0.0 255.0.0.0 10.1.1.1
D. R4(config-router)# default-information originate
Answer: A

5. Into which two types of areas would an area border router (ABR) inject a default route? (Choose two.)
A. the autonomous system of a different interior gateway protocol (IGP)
B. area 0
C. totally stubby
D. NSSA
E. stub
F. the autonomous system of an exterior gateway protocol (EGP)
Answer: CE

6. Which three restrictions apply to OSPF stub areas? (Choose three.)
A. No virtual links are allowed.
B. The area cannot be a backbone area.

C. Redistribution is not allowed unless the packet is changed to a type 7 packet.

D. The area has no more than 10 routers.

E. No autonomous system border routers are allowed.

F. Interarea routes are suppressed.

Answe:ABE

7. What are the two reasons for the appearance of 0.0.0.0 as the next hop for a network in the show ip bgp command output? (Choose two.)

A. The network was originated via redistribution of an interior gateway protocol into BGP.

B. The network was defined by a static route.

C. The network was originated via a network or aggregate command.

D. The network was learned via EBGP.

E. The network was learned via IBGP.

Answer: AC

8. Refer to the exhibit. Which two statements are true about the partial configuration that is provided. (Choose two.)

```
router bgp 100
 neighbor internal peer-group
 neighbor internal remote-as 100
 neighbor internal update-source loopback 0
 neighbor internal route-map set-med out
 neighbor internal filter-list 1 out
 neighbor internal filter-list 2 in
 neighbor 171.69.232.53 peer-group internal
 neighbor 171.69.232.54 peer-group internal
 neighbor 171.69.232.55 peer-group internal
 neighbor 171.69.232.55 filter-list 3 in
```

A. All the configured neighbors are in autonomous system 100.

B. The peer group shortens the IBGP configuration.

C. The peer group shortens the EBGP configuration.

D. Only the outgoing filters are applied to BGP updates.

E. Three AS-path filters are applied to each BGP neighbor.

Answer: AB

9. Refer to the exhibit. Which two statements are correct? (Choose two.)

```
Router# show ip bgp

BGP table version is 5, local router ID is 10.0.33.34
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
*> 10.1.0.0           0.0.0.0                0          32768 ?
*  10.2.0.0           10.0.33.35            10              0 35 ?
*>                    0.0.0.0                0          32768 ?
*  10.0.0.0           10.0.33.35            10              0 35 ?
*>                    0.0.0.0                0          32768 ?
*> 192.168.0.0/16     10.0.33.35            10              0 35 ?
```

A. All six routes will be installed in the routing table.

B. Two routes will be installed in the routing table. C.

Four routes will be installed in the routing table.

D. All the routes were redistributed into BGP from an IGP.

E. All the routes were originated by BGP with the network command.

Answer: CD

10. Which three IP multicast related statements are true? (Choose three.)

A. Multicast addresses 224.0.1.0 through 238.255.255.255 are called globally scoped addresses. They are used to multicast data between organizations and across the Internet.

B. The multicast address 224.0.0.1 is a globally scoped address that has been reserved for the Network Time Protocol (NTP) by the IANA.

C. Multicast addresses 239.0.0.0 through 239.255.255.255 are called limited scope addresses. They are constrained to a local group or organization.

D. Multicast addresses 224.0.0.5 and 224.0.0.6 are limited scoped addresses that have been reserved for OSPF.

E. Multicast addresses 224.0.0.0 through 224.0.0.255 are used for network protocols on local LAN segments. Because they are always transmitted with a Time to Live (TTL) of 1, they are never forwarded by a router.

Answer: ACE

11. What are two rules for compacting IPv6 addresses? (Choose two.)

A. The maximum number of times a double colon can replace a 16-bit segment that consists of all zeroes is two.

B. The leading zeroes in any 16-bit segment do not have to be written.

C. Every 16-bit segment that consists of all zeroes can be represented with a single colon.

D. The trailing zeroes in any 16-bit segment do not have to be written.

E. Any single, continuous string of one or more 16-bit segments that consists of all zeroes can be represented with a double colon.

F. Two zeroes in the middle of any 16-bit segment do not have to be written.

Answer: BE

12. What is the difference between the IPv6 addresses ::/0 and ::/128?

A. ::/0 is the unspecified address, and ::/128 is the multicast address.

B. ::/0 is the unicast address, and ::/128 is the anycast address.

C. ::/0 is the unicast address, and ::/128 is the multicast address.

D. ::/0 is the anycast address, and ::/128 is the multicast address.

E. ::/0 is the default route, and ::/128 is the unspecified address.

F. ::/0 is the anycast address, and ::/128 is the default address.

Answer: E

13. Which three IP multicast group concepts are true? (Choose three.)

A. If a packet is sent to a multicast group address, all members of the multicast group will receive it.

B. If a packet is sent to a multicast group address, the multicast frame contains the source multicast address.

C. A router does not have to be a member of a multicast group to receive multicast data.

D. A router does not have to be a member of a multicast group to send to the group.

E. A router must be a member of a multicast group to receive multicast data.

F. A router must be a member of a multicast group to send to the group.

Answer: ADE

14. Refer to the output. What IOS command produces this output?

```
Routing Process "ospfv3 1" with ID 172.16.3.3
 It is an autonomous system boundary router
 Redistributing External Routes from,
    static
 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 240 secs
 Interface flood pacing timer 33 msecs
 Retransmission pacing timer 66 msecs
 Number of external LSA 1. Checksum Sum 0x218D
 Number of areas in this router is 1. 1 normal 0 stub 0 nssa
    Area 1
        Number of interfaces in this area is 2
        SPF algorithm executed 9 times
        Number of LSA 15. Checksum Sum 0x67581
        Number of DCbitless LSA 0
        Number of indication LSA 0
        Number of DoNotAge LSA 0
        Flood list length 0
```

A. show ip ospf

B. show ip ospf interface

C. show ipv6 ospf interface
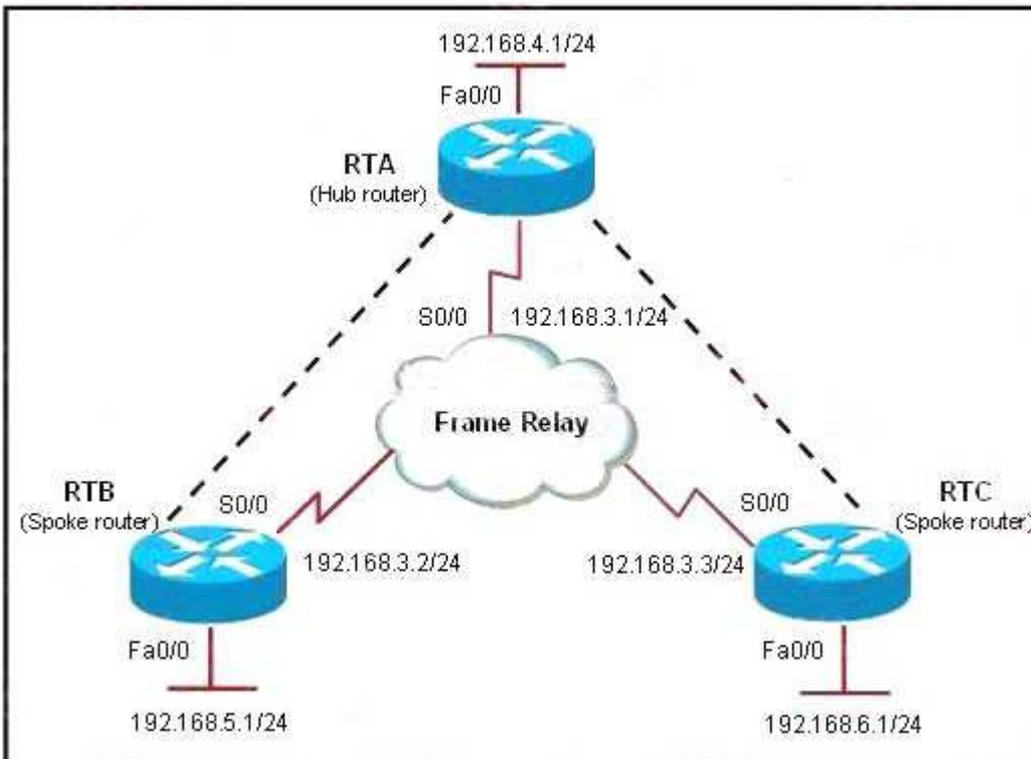
D. show ipv6 ospf

Answer: D

15. Refer to the exhibit. Router R1 is being used as a relay device for autoconfiguration of switch S1. Which configuration will accomplish this?
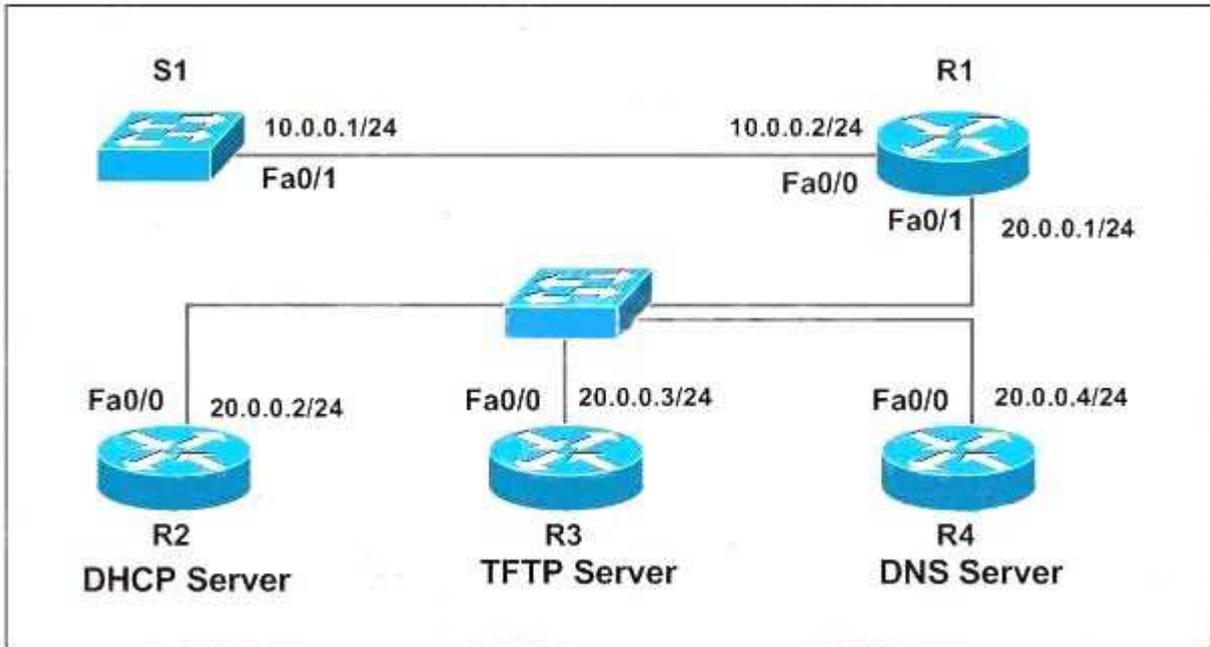
A. S1(config)# interface fastethernet 0/1
S1(config-if)# ip helper-address 10.0.0.2
B. S1(config)# interface fastethernet 0/1
S1(config-if)# ip helper-address 20.0.0.1
C. R1(config)# interface fastethernet 0/0
R1(config-if)# ip helper-address 20.0.0.2
R1(config-if)# ip helper-address 20.0.0.3
R1(config-if)# ip helper-address 20.0.0.4
R1(config-if)# exit
R1(config)# interface fastethernet 0/1
R1(config-if)# ip helper-address 10.0.0.1
D. R1(config)# interface fastethernet 0/0
R1(config-if)# ip helper-address 20.0.0.1
R2(config)# interface fastethernet 0/0
R2(config-if)# ip helper-address 20.0.0.1
R3(config)# interface fastethernet 0/0
R3(config-if)# ip helper-address 20.0.0.1
R4(config)# interface fastethernet 0/0
R4(config-if)# ip helper-address 20.0.0.1
E. S1(config)# interface fastethernet 0/1
S1(config-if)# ip helper-address 10.0.0.2
R2(config)# interface fastethernet 0/0
R2(config-if)# ip helper-address 20.0.0.1
R3(config)# interface fastethernet 0/0
R3(config-if)# ip helper-address 20.0.0.1
R4(config)# interface fastethernet 0/0
R4(config-if)# ip helper-address 20.0.0.1
Answer: C

16. 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?

192.168.4.1/24
Fa0/0
RTA
(Hub router)
S0/0   192.168.3.1/24
Frame Relay
RTB
(Spoke router)   S0/0
192.168.3.2/24
Fa0/0
192.168.5.1/24
RTC
(Spoke router)
S0/0
192.168.3.3/24
Fa0/0
192.168.6.1/24

A. Configure the auto summary command under router eigrp 1 on router RTA.
B. Issue the no ip split horizon command on router RTA.
C. Configure subinterfaces on the spoke routers and assign different IP address subnets for each subinterface.
D. Check and change the access lists 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

17. Refer to the exhibit. This network is running IS-IS. Router RTC is inside Cloud#1. From the output on RTD, which two statements are true? (Choose two.)
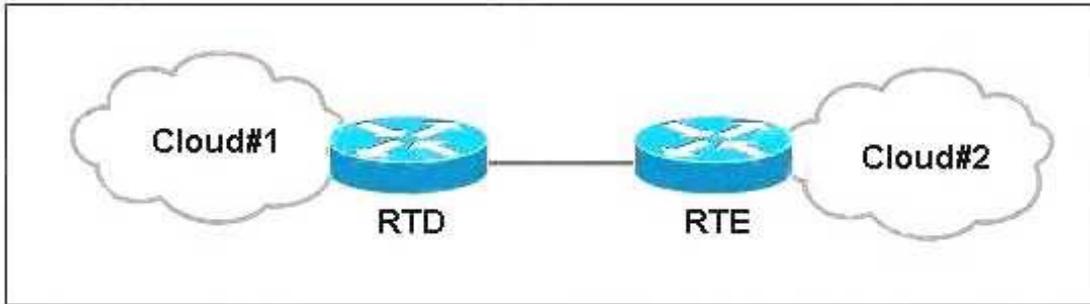
```
RTD#show clns
Global CLNS Information.
  3 Interfaces Enabled for CLNS
NET: 49.0150.1921.6800.4004.00
Configuration Timer: 60, Default Holding Timer: 300, Packet Lifetime 64
ERPDU's requested on locally generated packets
Running IS-IS in IP-only mode (CLNS forwarding not allowed)

RTD#show clns neighbors
System Id  Interface  SNPA          State Holdtime Type Protocol
RTE        Fa0/1      0019.06b7.fd5f Up   9        L2   IS-IS
RTC        Se0/1/1    *HDLC*        Up   22       L1   IS-IS
```

A. The SNPA for RTE is the source data link address that is used to transmit frames to RTD.

B. IP routing updates between RTC and RTD will be IP datagrams that are encapsulated by HDLC.

C. IP routing updates between RTC and RTD will be IP datagrams that are encapsulated by CLNS.

D. IP routing updates between RTC and RTD will be CLNS datagrams that are encapsulated by HDLC.

E. Because it is running IS-IS in IP-only mode, RTD will not transmit CLNS packets.
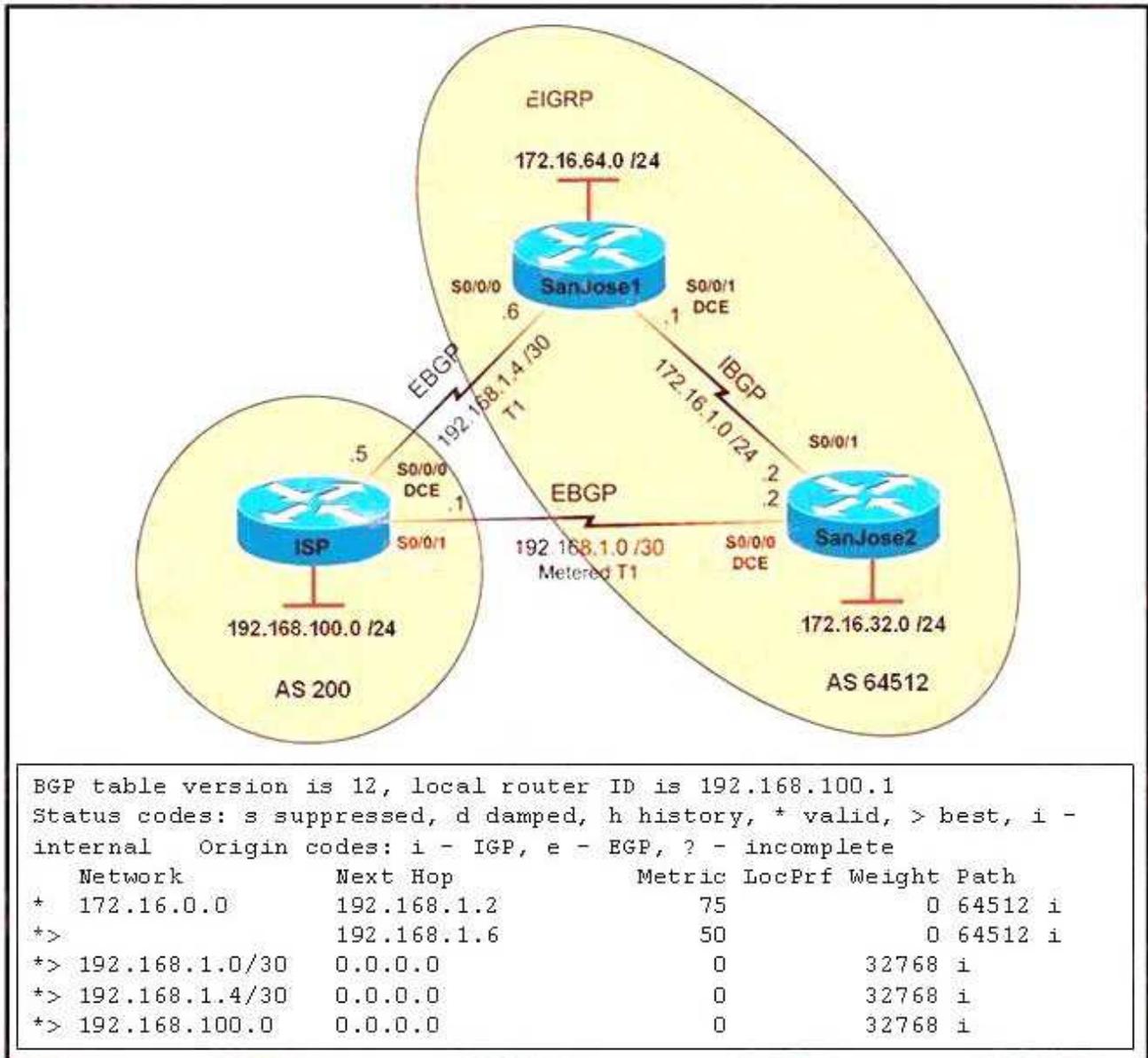
F. The NET for RTE will be 49.0150.0019.06b7.fd5f.00.

Answe:AD

18. A router has two paths to reach another network in a different autonomous system. Neither route was generated by the local router and both routes have the same default weight and local preference values. Which statement is true about how BGP would select the best path?

A. If the command bgp always-compare-med has been given, then the router will prefer the route with the highest MED.

B. The router will prefer the route with the lower MED.

C. The router will prefer the shortest autonomous system path.

D. To influence one route to be preferred, its default local preference value will be changed via the use of the command bgp default local-preference 50.

Answer: C

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

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
```

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.

Answe:AE

20. Refer to the exhibit. What two statements are true about the IS-IS configuration? (Choose two.)

```
interface FastEthernet0/0
  ip address 10.1.1.2 255.255.255.0
  ip router isis
!
interface Serial 0/0/1
  ip address 10.2.2.2 255.255.255.0
  ip router isis
!
<output omitted>
router isis
  net 49.0001.0002.0003.0004.00
```

A. The router is in area 49.0001.0002.

B. The router has a system ID of 0003.0004.

C. The router acts as a Level 1-2 router.

D. The network service access point selector (NSEL) byte has a value of 0.

E. CLNS routing is enabled for the router.

Answe:CD

21. Refer to the exhibit. On the basis of the output, what two conclusions can be reached? (Choose two.)

```
R2# show ip protocols
Routing Protocol is "isis"
  Invalid after 0 seconds, hold down 0, flushed after 0
  Outgoing update filter list for all interfaces is not set
  Incoming update filter list for all interfaces is not set
  Redistributing: isis
  Address Summarization:
    None
  Maximum path: 4
  Routing for Networks:
    FastEthernet0/0
    Loopback0
    Serial0/0/1
  Routing Information Sources:
    Gateway          Distance      Last Update
    10.10.10.10          115        00:00:02
    10.30.30.30          115        00:00:03
  Distance: (default is 115)
R2#
```

A. Three physical interfaces are taking part in integrated IS-IS.

B. Address summarization is configured.

C. There are two neighboring routers sending IS-IS routing information.

D. The default administrative distance has been changed.

E. IS-IS is not redistributing any other routing protocols.

F. IS-IS is not enabled.

Answer: CE

22. Which three options are supported as address allocation mechanisms for DHCP on Cisco routers? (Choose three.)

A. The IP address can be automatically assigned to a host.

B. The IP address can be assigned as a random hash value of the burned-in-address of the lowestnumbered

LAN interface on the router.

C. The network administrator can assign a specific IP address to a specific host MAC address.

D. The IP address can be assigned from configured pools in a reverse lexicographical order.

E. The IP address can be assigned to a host for a limited time or until the host explicitly releases the address.

F. The IP address can be assigned to a host until the host usurps the assigned value using its own dynamic

override mechanism.

Answe:ACE

23. Refer to the exhibit. On the basis of the configuration that is provided, how would the BGP updates that come from router R1 be replicated inside autonomous system 65200?
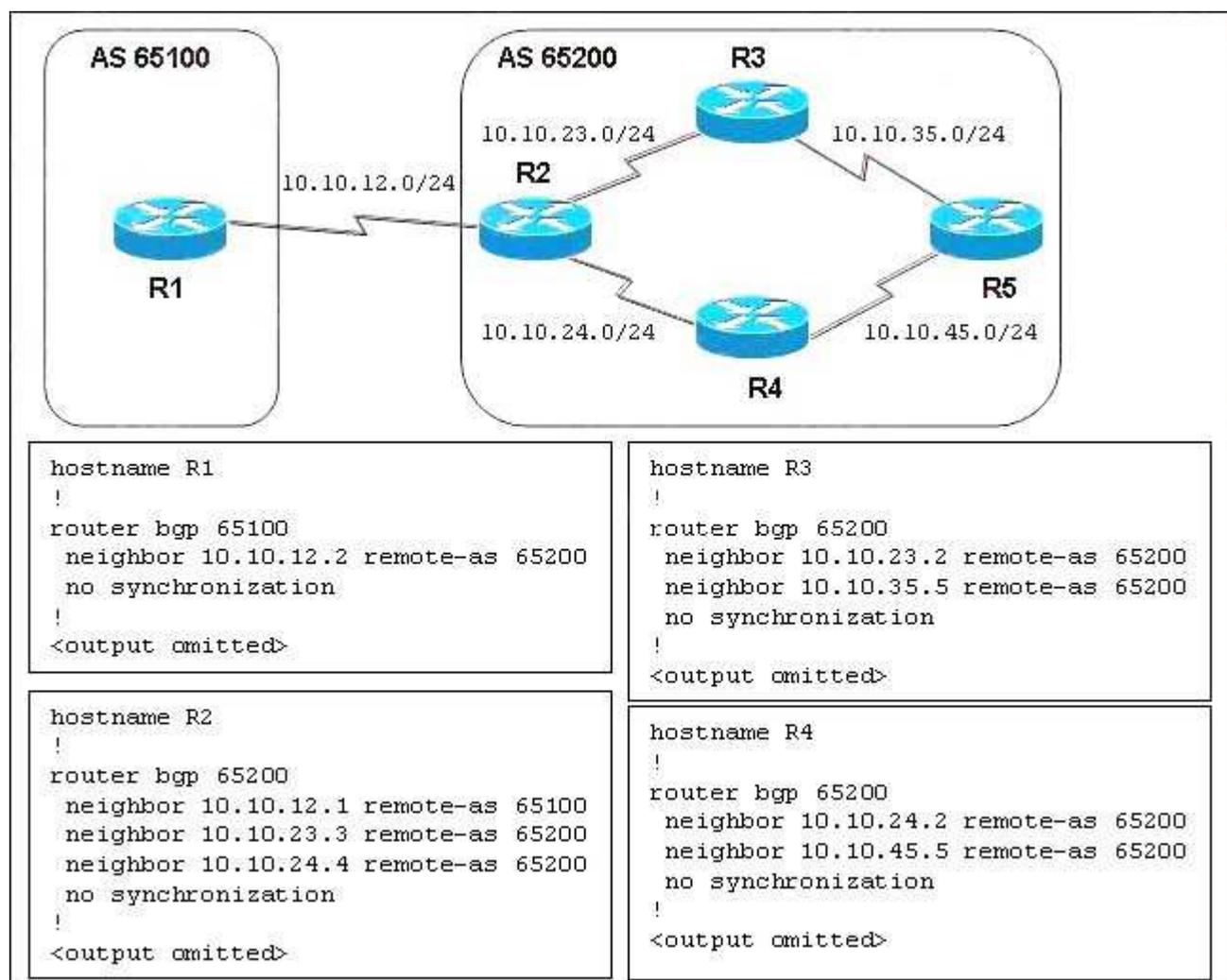
A. All BGP updates that are received on router R2 will be sent to routers R3 and R4. Routers R3 and R4 will then forward those BGP updates to router R5.

B. All BGP updates that are received on router R2 will not be sent to routers R3 and R4.

C. All BGP updates that are received on router R2 will be sent directly to router R5.

D. None of the BGP updates that are received on router R2 will ever be received by router R5.

Answer: D

24. How is authentication handled with OSPFv3?

A. OSPFv3 for IPv6 authentication is supported by SHA-1 authentication.

B. OSPFv3 for IPv6 authentication is supported by MD5 authentication.

C. OSPFv3 for IPv6 authentication is supported by IPv6 IPsec.

D. OSPFv3 for IPv6 authentication is supported by IPv4 IPsec.

Answe:C

25. Refer to the exhibit. Which statement is true about the configuration?
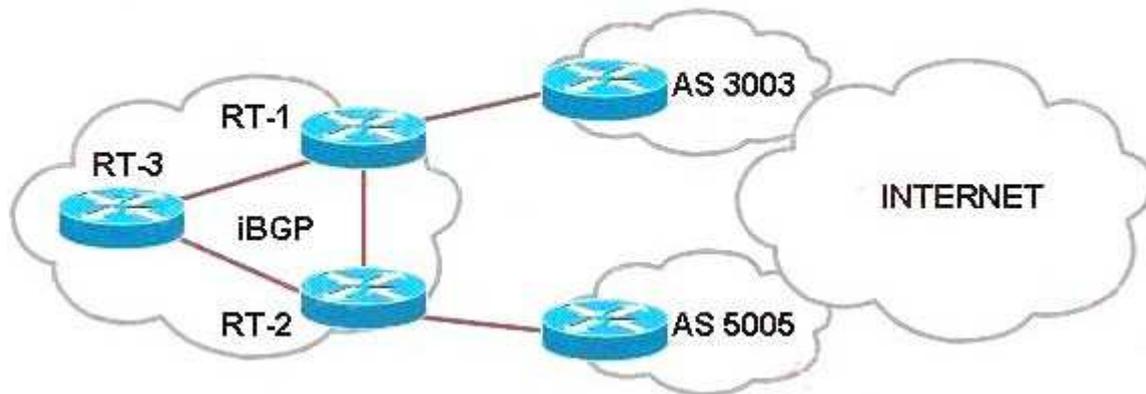
```
<output omitted>

ip dhcp pool 0
   network 10.10.0.0/16
   domain-name cisco.com
   dns-server 10.10.10.50 10.10.20.50
   netbios-name-server 10.10.10.51 10.10.20.51
!
ip dhcp pool 1
   network 10.10.10.0/24
   default-router 10.10.10.100 10.10.10.101
   lease 30
!
ip dhcp pool 2
   network 10.10.20.0/24
   default-router 10.10.20.100 10.10.20.101
   lease 30
```

A. Hosts will receive IP settings from pool 1 until the addresses run out, and then hosts will receive the settings from pool 2.

B. Hosts belonging to DHCP pool 1 and pool 2 will retain their IP settings for 30 hours before they must renew.

C. Hosts in the 10.10.20.0/24 subnet will use 10.10.20.50 as its DNS server.

D. DHCP pool 0 needs to have the ip dhcp excluded-address command to exclude the default router and DNS servers.

Answer: C

26. Refer to the exhibit. Router RT-1 chooses one path to network 198.133.219.0/24. Indicate the reason Router RT-1 chooses this "best" path.

```
RT-1# show ip bgp 198.133.219.0
BGP routing table entry for 198.133.219.0/24, version 75
Paths: (2 available, best #1, table Default-IP-Routing-Table)
  Advertised to update-groups:
    1
  5005 7007 31250
    128.107.254.2 (metric 782) from 128.107.2.2 (128.107.2.2)
      Origin IGP, metric 2100, localpref 100, valid, internal, best
  3003 6006 31250
    128.107.255.2 from 128.107.255.2 (128.107.0.3)
      Origin incomplete, metric 2500, localpref 100, valid, external
```

A. In making its decision about the best path, RT-1 gives precedence to the origin code.

B. In making its decision about the best path, RT-1 gives precedence to the BGP MED values.

C. IP address 128.107.2.2 is lower than 128.107.255.2.

D. In making its decision about the best path, RT-1 prefers the IGP metrics.

E. RT-1 prefers internal BGP routes.

F. IP address 128.107.254.2 is lower than 128.107.255.2.

Answe:A

27. Refer to the exhibit. Router RT-1 and router RT-2 both advertise network 131.25.0.0/16 to router RT-3 via internal BGP. What is the reason that router RT-3 chose router RT-1 as its best path to network 131.25.0.0/16.

RT-3# **show ip bgp 131.25.0.0**
BGP routing table entry for 131.25.0.0/16, version 14
Paths: (2 available, best #2, table Default-IP-Routing-Table)
  Not advertised to any peer
  5005 7007 31250
    165.105.254.2 (metric 782) from 165.105.3.2 (165.2.2.2)
      Origin incomplete, metric 0, localpref 100, valid, internal
  3003 6006 31250
    165.105.255.2 (metric 782) from 165.105.11.1 (165.1.1.1)
      Origin incomplete, metric 0, localpref 100, valid, internal, best

A. It advertises the best AS-path.
B. It advertises the best origin code.
C. It advertises the best MED.
D. It advertises the best local preference.
E. It has a better router ID.
F. It advertises a lower autonomous system.
Answe:E

28. Refer to the exhibit. Which statement is true about the router configuration that is shown?

```
ip dhcp pool 1
  netwcrk 172.16.1.0/24
  domain-name cisco.com
  dns-server 172.16.1.102
  netbios-name-server 172.16.1.103
  default-router 172.16.1.100 172.16.1.101
  lease 30
!
ip dhcp pool 2
  netwcrk 172.16.2.0/24
  domain-name cisco.com
  dns-server 172.16.2.102
  netbios-name-server 172.16.2.103
  default-router 172.16.2.100 172.16.2.101
  lease 30
```

A. Additional DHCP options will be imported from another DHCP server.

B. The DHCP server pools need to be bound to an interface to operate.

C. This configuration will provide IP configuration information to two different subnets.

D. Additional DCHP option information needs to be imported from another DHCP server.

E. If the router hands out all the addresses in pool 1, then it will supply addresses from pool 2.

Answe:C

29. Using the rules for IPv6 addressing, how can the address
2031:0000:240F:0000:0000:09C0:123A:121B be rewritten?

A. 2031:0:240F::09C0:123A:121B

B. 2031::240F::09C0:123A:121B

C. 2031::240F:9C0::123A:121B

D. 2031::240F:::09C0:123A:121B

Answer: A

30. Refer to the exhibit. Which configuration would correctly enable Host A to acquire an IP address from the DHCP server that is located at 10.1.2.10/24?
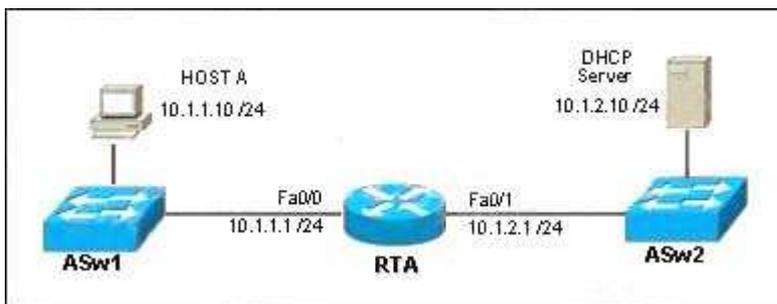
A. ASw1(config)# interface range FastEthernet 0/1 - 24
ASw1(config-if-range)# ip forward-protocol udp 67
ASw1(config-if-range)# ip forward-protocol udp 68

B. ASw1(config)# interface range FastEthernet 0/1 - 24
ASw1(config-if-range)# ip helper-address 10.1.2.10

C. RTA(config)# interface fastethernet0/0
RTA(config-if)# ip forward-protocol udp 67

RTA(config-if)# ip forward-protocol udp 68
D. RTA(config)# interface fastethernet0/1
RTA(config-if)# ip forward-protocol udp 67
RTA(config-if)# ip forward-protocol udp 68
E. RTA(config)# interface fastethernet0/0
RTA(config-if)# ip helper-address 10.1.2.10
F. RTA(config)# interface fastethernet0/1
RTA(config-if)# ip helper-address 10.1.2.10
Answe:E

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★ **100%** Money Back Guarantee

★ **365 Days** Free Update

★ **Instant Download** After Purchase

★ **24x7** Customer Support

★ Average **99.9%** Success Rate

★ More than **69,000** Satisfied Customers Worldwide

★ Multi-Platform capabilities - **Windows, Mac, Android, iPhone, iPod, iPad, Kindle**

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Please provide as much detail as possible so we can best assist you.
To update a previously submitted ticket:

Submit A Ticket

One Year Free Update

Free update is available within One Year after your purchase. After One Year, you will get 50% discounts for updating. And we are proud to boast a 24/7 efficient Customer Support system via Email.

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