

Exam : **[Cisco 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.

Answer: 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

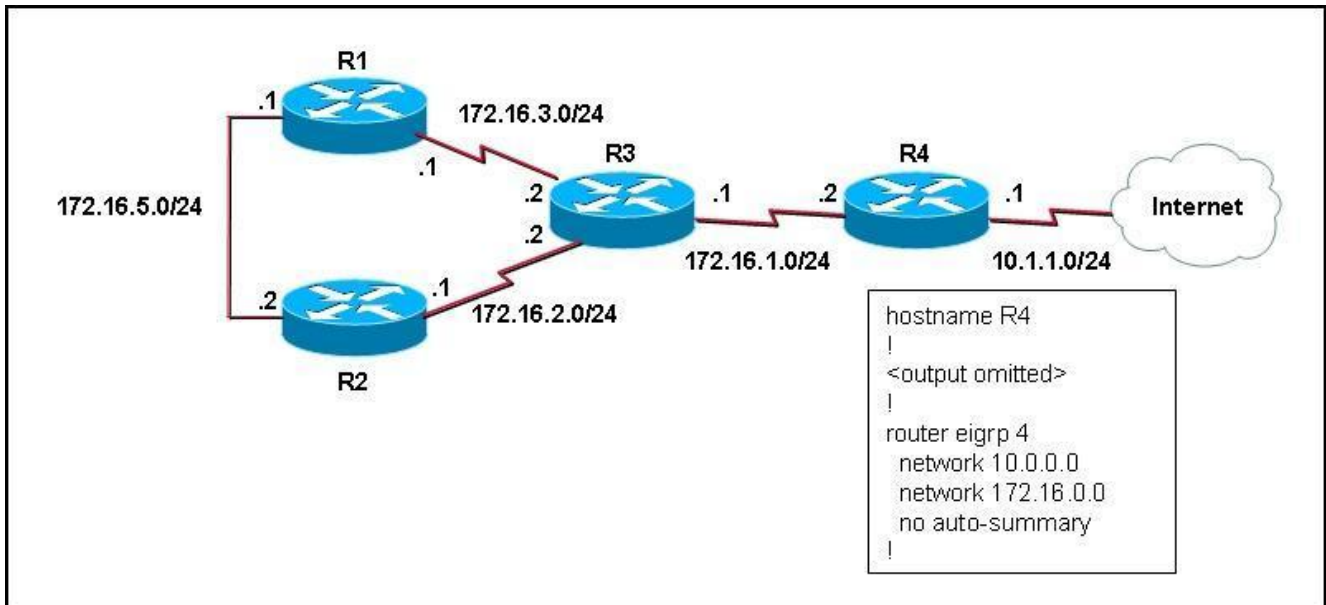
3. Refer to the exhibit. Which three statements accurately describe the result of applying the exhibited route map? (Choose three.)

```
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 values 40000, 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 not 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.

Answer: 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.

Answer: 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

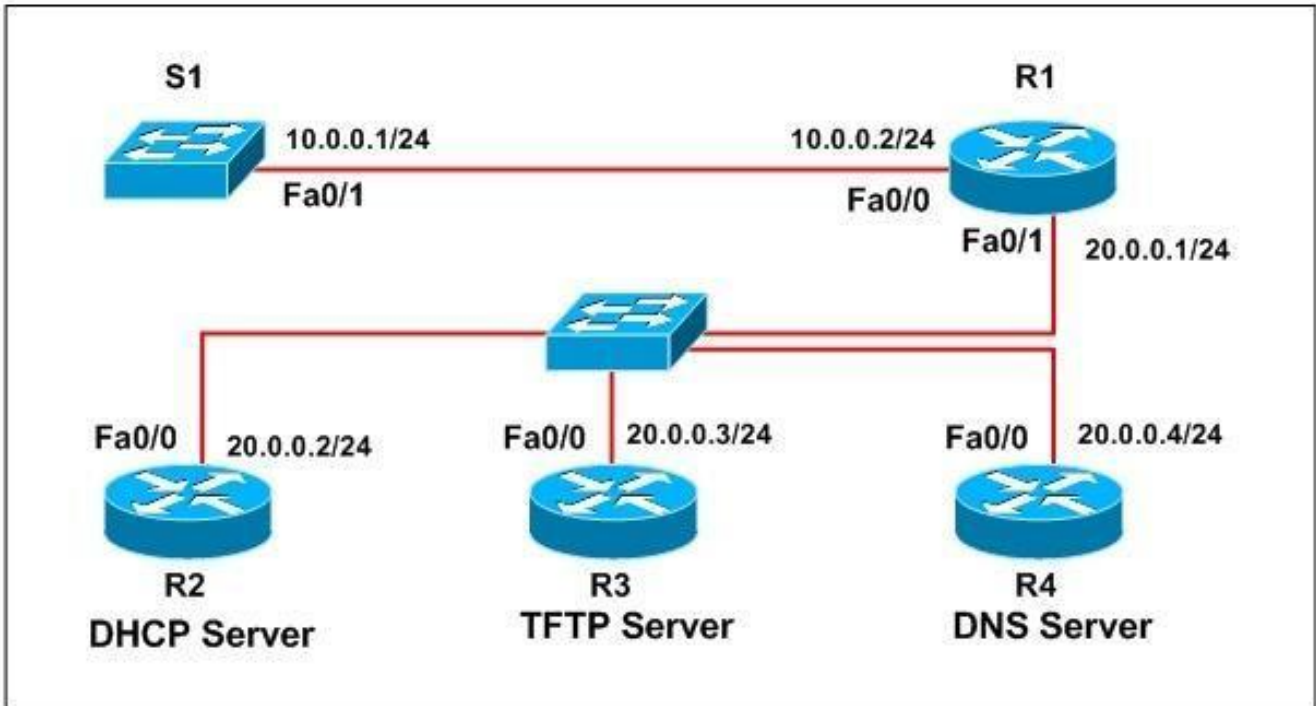
14. Refer to the output. What IOS command produces this output?

```
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 msec
  Retransmission pacing timer 66 msec
  Number of external LSA 1. Checksum Sum Ox218D
  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 Ox67581
      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

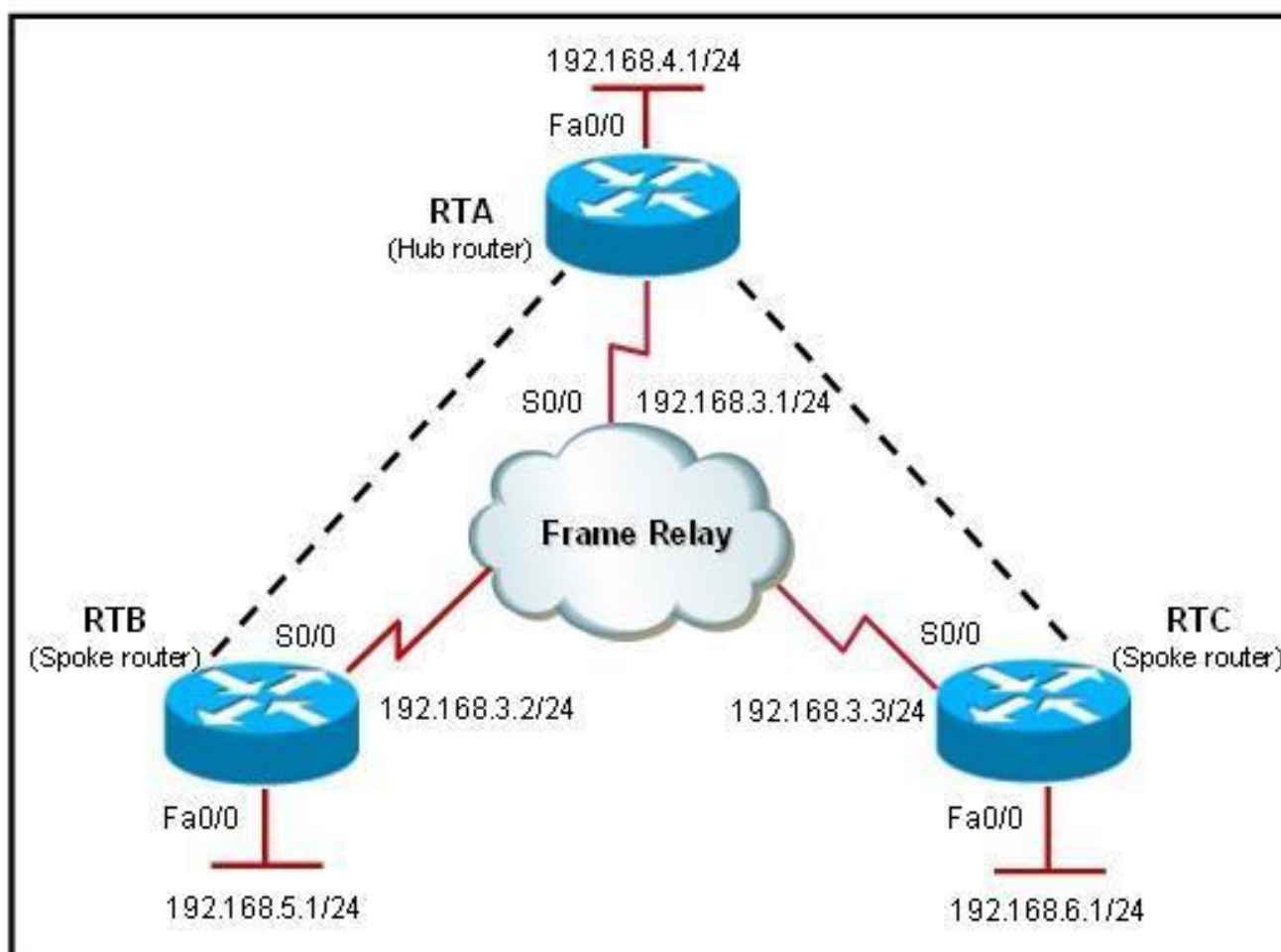
```

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

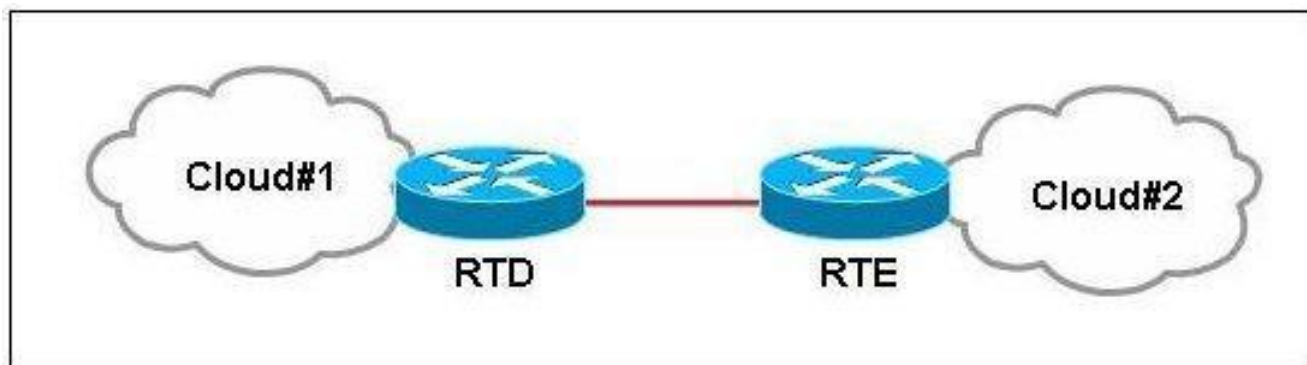
16. Refer to the exhibit. Router RTA is the hub router for routers RTB and RTC. The Frame Relay network is configured with EIGRP, and the entire network is in autonomous system 1. However, router RTB and RTC are not receiving each other's routes. What is the solution?



- 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.

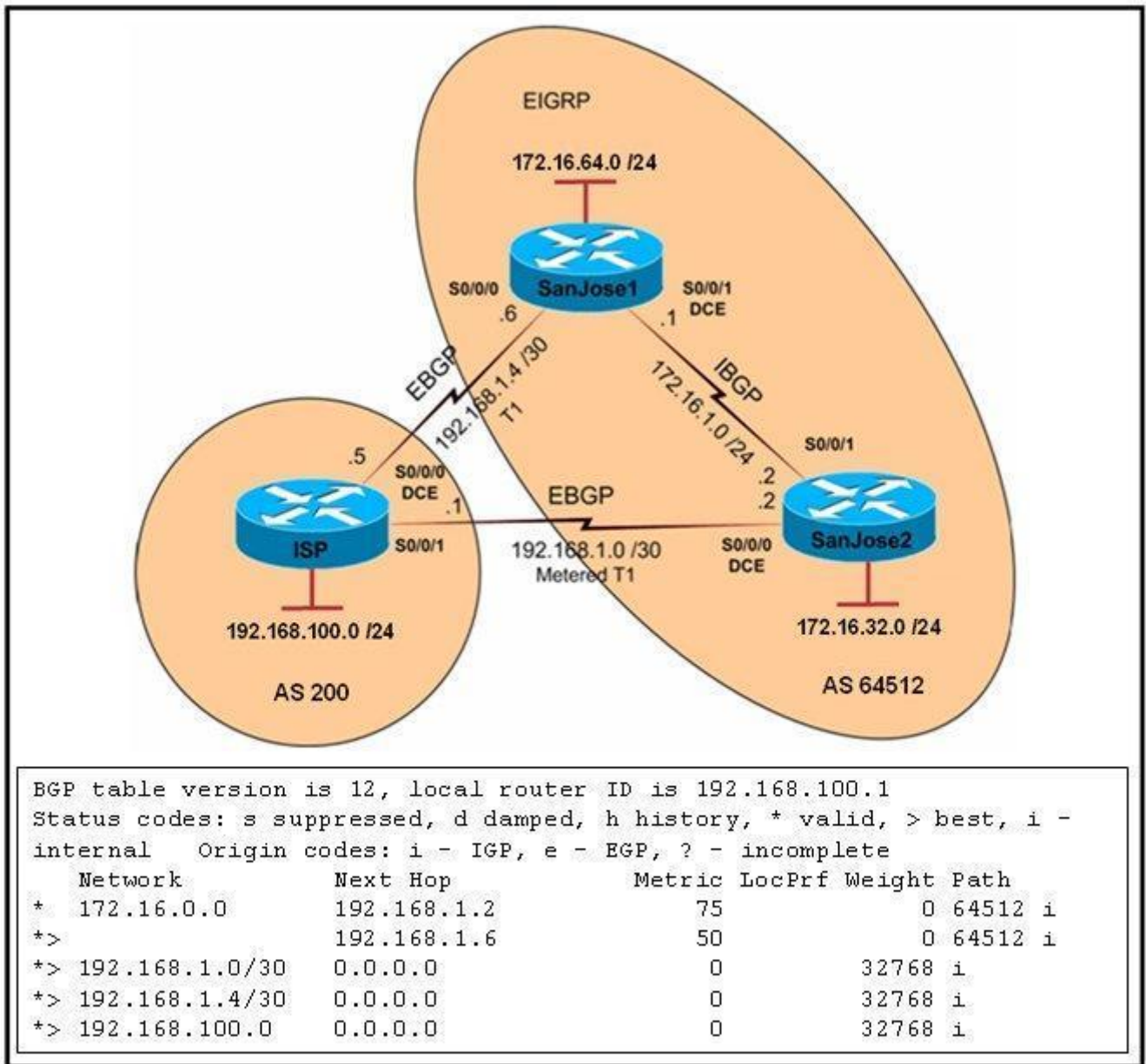
Answer: AD

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.

Answer: 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 (NSAP) byte has a value of 0.
- E. CLNS routing is enabled for the router.

Answer: CD