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Building Scalable Cisco Internetworks

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Q1.
Given the following partial information from the output of a BGP command on a router A?

Network	Next HOP	Metric	Locprf	Weight	Patch		
172.20.0.0	10.10.10.2			100	65250	65000	I
	10.10.20.2	0		120	65200	65000	I
	10.10.30.2	0		130	65000	I	
	10.10.40.2	0		140	65000	I	
	10.10.50.2	0		150	65300	65000	I

Which next-hop address will router A use when it sends data to network 172.20.0.0?

    A.   10.10.10.2
    B.   10.10.20.2
    C.   10.10.30.2
    D.   10.10.40.2
    E.   10.10.50.2
    F.   There is not enough information available to determine the answer.
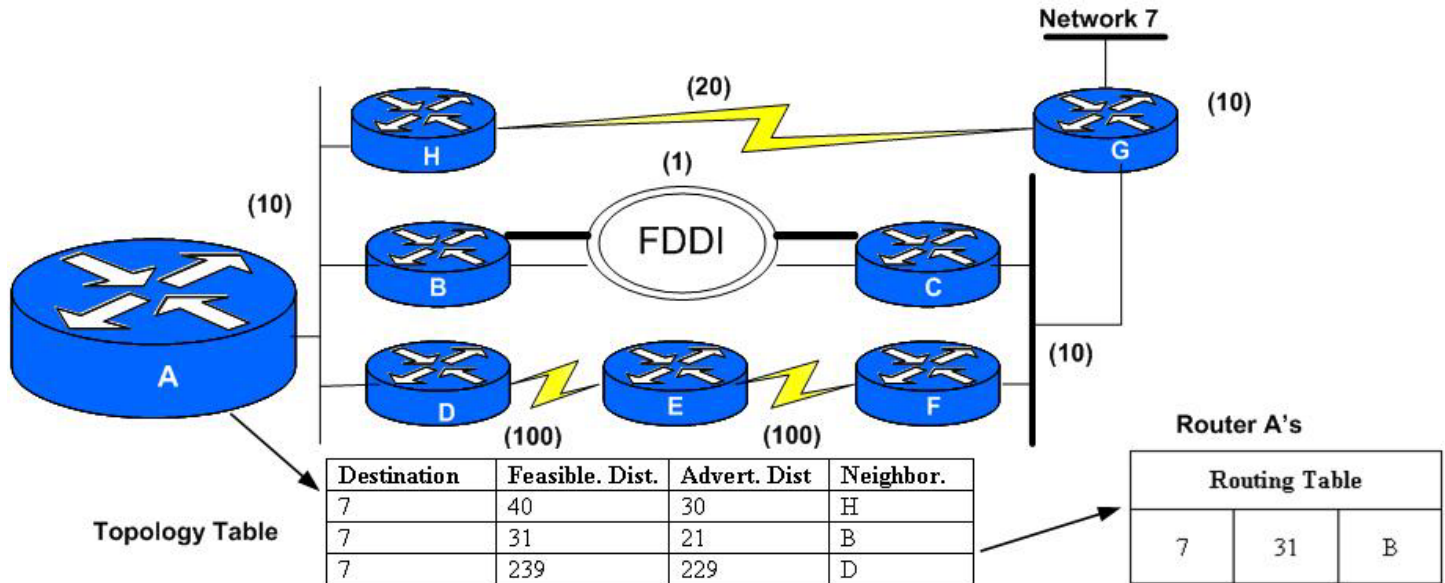
Answer: E.

Q2.
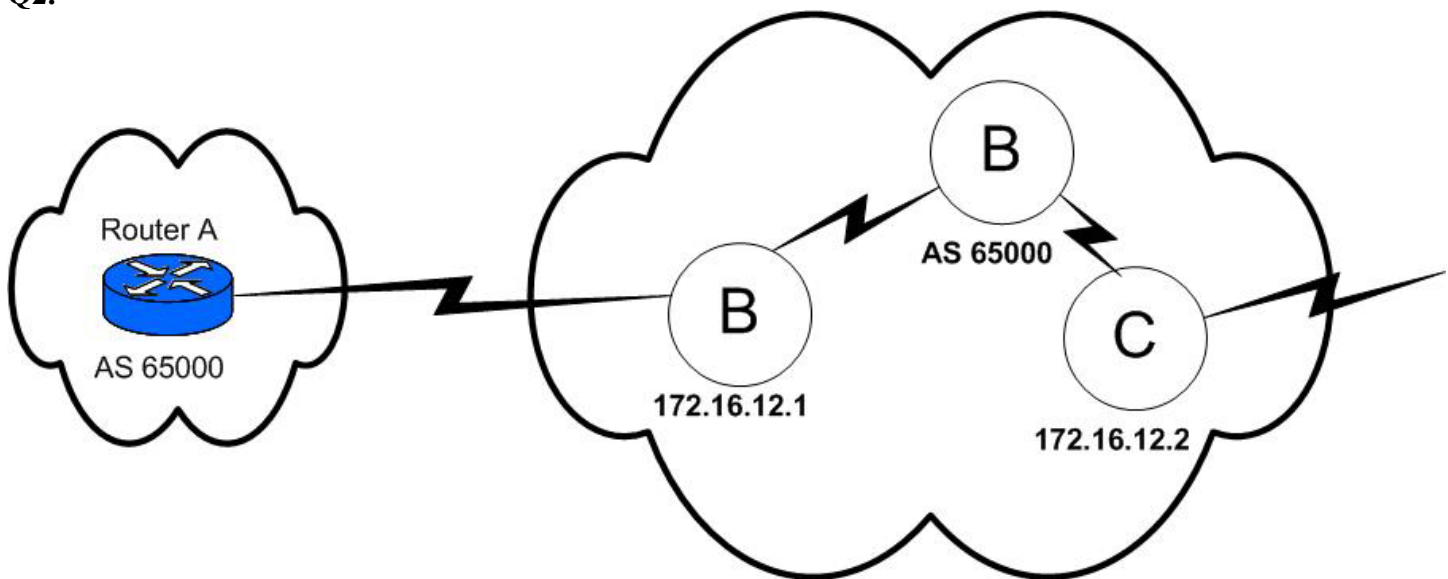
You want to configure router A as a BGP route reflector and router B as its client. Which three commands are necessary on router A? (Choose three)

A.   Router BGP 65000.
B.   Neighbour 172.16.12.1 as 65000.
C.   Route-reflector client 172.16.12.1.
D.   Neighbour 172.16.12.1 remote-as 65000.
E.   Neighbour 172.16.12.2 remote-as 65000.
F.   Neighbour 172.16.12.1 route-reflector-client.
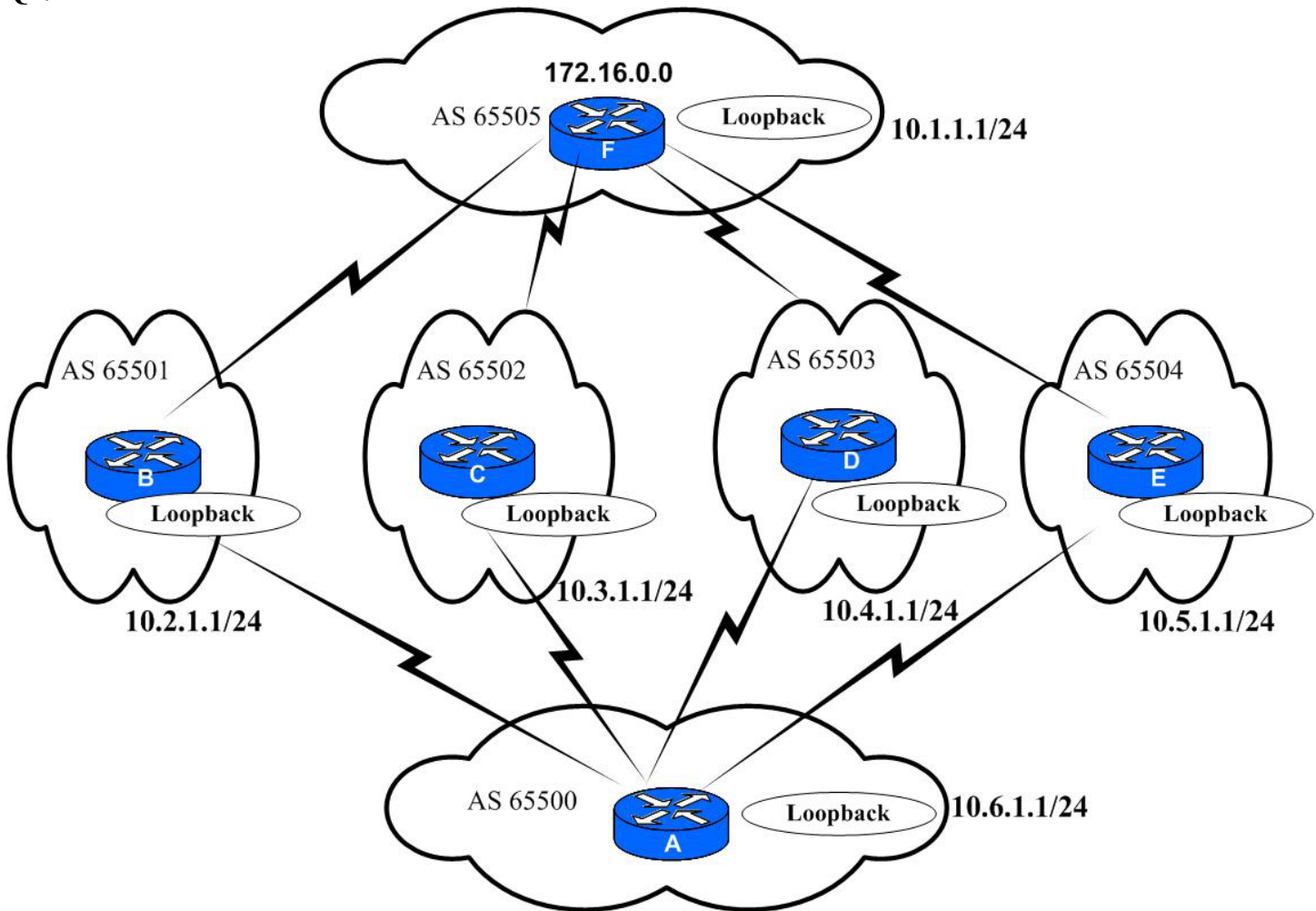G.   Neighbour 172.16.12.2 route-reflector-client.

Answer: A, D, F.

Q3.

Destination	Feasible. Dist.	Advert. Dist	Neighbor.
7	40	30	H
7	31	21	B
7	239	229	D

Router A's Routing Table

7	31	B

You are choosing routers with EIGRP route selection.

In the exhibit, which router is the successor from router A to network 7?

A.   C
B.   H.
C.   D.
D.   B.
E.   G.
F.   F.

Answer: D.

Q4.

172.16.0.0
AS 65505
Loopback 10.1.1.1/24
F

AS 65501
B
Loopback
10.2.1.1/24

AS 65502
C
Loopback
10.3.1.1/24

AS 65503
D
Loopback
10.4.1.1/24

AS 65504
E
Loopback
10.5.1.1/24

AS 65500
A
Loopback 10.6.1.1/24

All routers are in their own autonomous system and are running BGP on the connections shown. Each router has one loopback address configured.

If all policies are set to default, which path will router A take in order to get to 172.16.0.0?

- A. Through router C then to router F
- B. Through router E then to router F
- C. It will load balance over all four of the paths, through routers B, C, D and E, and then to router F
- D. Through router B then to router F
- E. Through router D then to router F

Answer: D.

Q5.
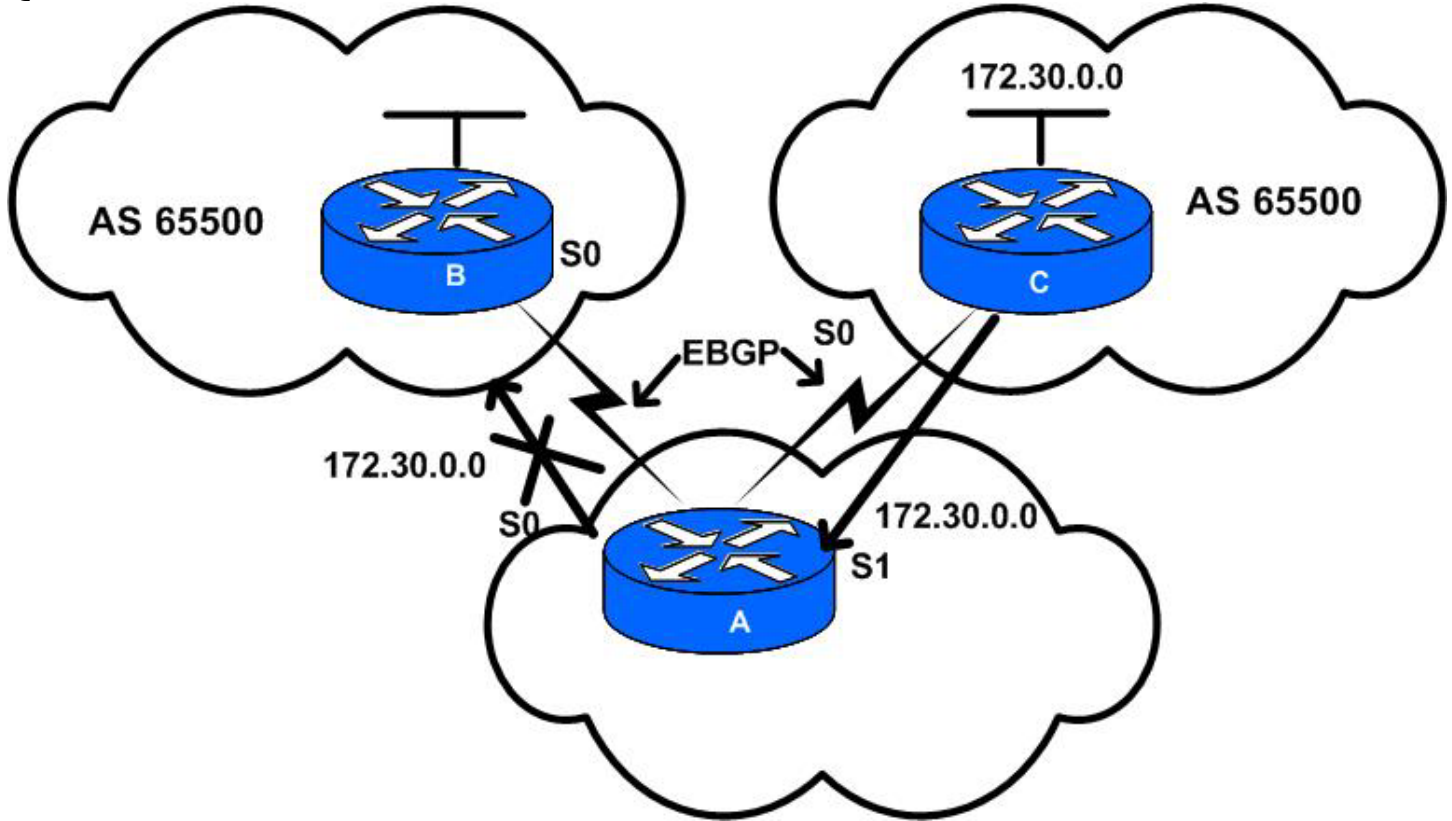
Router A is currently blocking the network 172.30 from propagating to Router B. In addition, what can be used to restrict updates from Router B propagating to Router A?

    A.   A prefix list configured on Serial 0 of Router A
    B.   A prefix list configured on Serial 0 of Router B
    C.   A prefix list configured under `router BGP` on router A
    D.   A prefix list configured under `router BGP` on router B

Answer: C.

Q6.
Command Line Exhibit.

```
01    show cdp neighbors
02    show cdp neighbors detail
03    show controllers serial
04    show interface
05    show interface serial
06    show ip interface
```

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```
07     show ip policy
08     show ip prefix-list
09     show ip prefix-list detail
10     show ip prefix-list summary
11     show ip protocols
12     show ip route
13     show path
14     show policy statistics
15     show prefix-list
16     show prefix-list detail
17     show prefix-list summary
18     show route-map
19     show route-reflector
20     show ip policy
21     show ip ospf
22     show ip ospf area
23     show ip ospf database
24     show ip ospf interface
25     show ip ospf neighbor
26     show ip ospf process-id
27     show ip ospf timers
28     show ospf process-id
29     show eigrp adjacencies
30     show eigrp neighbors
31     show eigrp route
32     show eigrp successors
33     show ip eigrp neighbors1
34     show ip eigrp route
35     show ip route eigrp
36     clear bgp *
37     clear bgp all
38     clear ip bgp *
39     clear ip bgp * soft
40     clear ip bgp sessions *
41     clear ip bgp sessions all
42     show ip bgp
43     show ip bgp attributes
44     show ip bgp neighbors
45     show ip bgp origin
46     show ip bgp route reflector
47     show ip bgp summary


       Configuration
================================
60     Router (config-router)# bgp neighbor address weight weight
61     Router (config)# bgp set neighbor address weight weight
```

```
62   Router (config)# interface loopback number
63   Router (config-router)# ip maximum-paths 0
64   Router (config)# ip prefix-list list-name
65   Router (config-router)# ip prefix-list list-name
66   Router (config-if)# ip prefix-list list-name
67   Router (config)# neighbor address prefix-list list-name
68   Router (config-router)# neighbor address prefix-list list-name
69   Router (config-if)# neighbor address prefix-list list-name
70   Router (config-router)# neighbor address weight weight
71   Router (config-router-map)# neighbor address weight weight
72   Router (config)# ip default route
73   Router (config-router)# default route
74   Router (config-router)# no auto-summary
75   Router (config-router)# no eigrp summary
76   Router (config-router)# no ip summary
77   Router (config)# ospf interface loopback number
78   Router (config) ospf loopback number
79   Router (config)# router loopback number
80   Router (config-route-map)# set ip default next-hop
81   Router (config-route-map)# set interface
82   Router (config-route-map)# set ip precedence
83   Router (config)# set neighbor address weight weight
84   Router (config-router)# set neighbor address weight weight
85   Router (config-route-map)# set ip next-hop address
86   Router (config)# set ip classless
87   Router (config-router)# ip classless

     Testing

==============================
88   debug eigrp adjacencies
89   debug eigrp neighbors
90   debug ip bgp origin
91   debug ip bgp summary
92   debug ip policy
93   ping (extended)
94   ping (record option)
95   ping (standard)
```

You want to turn off automatic summarization for EIGRP routes which command does this?

Enter the number that corresponds to the command.

Answer: no-auto summary (number 74)

Q7.
Which two tables does a router running BGP have? (Choose two)

    A.   A BGP topology table
    B.   An IP routing table
    C.   A table that contains BGP information received from and sent to other routers
    D.   A table that contains both IP routes and BGP information received fro and sent to other routers.

Answer: A, B.

Q8.
Given the following router A configuration:

Router BGP 6500
Network 10.0.0.0
Neighbor 172.17.1.1 remote-as 65000

What are two effects of above configuration on router A? (Choose two)

    A.   Line three identifies a peer router to router A.
    B.   The 65000 in line three identifies the AS that router A is in.
    C.   The 6500 in line one identifies the AS that router A is in.
    D.   Line 2 starts up the routing of BGP packets into network 10.10.0.0.
    E.   The line one starts up the routing BGP packets into networks 10.0.0.0.

Answer: A, C.

Q9.
Which table(s) does a router running BGP have?

    A.   The IP routing table.
    B.   One table that contains BGP information received from and sent to other routers.
    C.   One table that contains IP routes and BGP information received from and sent to other routers.
    D.   One table that contains BGP information received from and sent to other routers, and another table that contains IP routing information.
    E.   One table that contains BGP information receive from and sent to other routers, one table that contains IP routing information, and a third table that contains a mapping between the other two.

Answer: D.

Q10.
What are BGP peers also known as?

    A.   IBGP.
    B.   EBGP.
    C.   Clients.
    D.   Reflectors.
    E.   Neighbors.

Answer: E.

Q11.
You are configuring bi-directional redistribution between dissimilar routing protocols. There is more than one traffic path connecting the domains.

Which three techniques can be used to prevent routing feedback loops? (Choose three)

    A.   Passive null interface
    B.   Route filter
    C.   Change administrative distance
    D.   Static metric
    E.   Default loopback
    F.   Default metric

Answer: A, B, F.

Q12.
Which two statements are true about a router running BGP with all the default settings? (Choose two)

    A.   It will not run an IGP.
    B.   It will always use a route runned by IBGP.
    C.   It will not use a route runned by IBGP unless that route is learned by IGP.
    D.   It will not advertise a route learned by IBGP to an external neighbour unless that route is learned from an IGP.

E.   It will always advertise a route learned by IBGP to an external neighbour once connectivity to external neighbour has been established.

Answer: C, D.

Q13.
Which two statements about routers running IBGP are true? (Choose two)

A.   They are usually directly connected.
B.   They are not usually directly connected.
C.   They need to be able to reach each other.
D.   They do not need to be able to reach other.

Answer: B, C.

Q14.
An autonomous system is connected via BGP to more than one ISP. The ISPs sends only default routes into the autonomous system.

What path will non-BGP routers in the autonomous system use as the best path to any external address?

A.   The shortest AS path.
B.   The path with lowest weight.
C.   The path with the lowest IGP metric to the default.
D.   The path leading to the router with the lowest BGP router ID.

Answer: C.

Q15.
Which two events take place when a full mesh of BGP session is configured in an autonomous system? (Choose two)

A.   The configuration is not permitted by default.
B.   The configuration may be permitted if route reflectors are used.
C.   This may result in many BGP sessions being created.
D.   This may result in many switched virtual circuits (SVCs) being created.
E.   This may result in many permanent virtual circuits (PVCs) being created.

F.   This may result in significant amount of bandwidth on slow WAN links.

Answer: C, F.

Q16.
In which three instances is it appropriate to use BGP? (Choose three.)

   A.   When there are multiple connections to the Internet.
   B.   When there is low-bandwidth connection between autonomous systems.
   C.   When route selection to routes outside of your autonomous system is not a concern.
   D.   When the flow of traffic entering and leaving and autonomous system must be manipulated.
   E.   When an autonomous system allows packets to transit through it to reach other autonomous systems.

Answer: A, D, E.

Q17.
In which three situations is it NOT appropriate to use BGP? (Choose three)

   A.   When there is a single connection to the Internet.
   B.   When there is a low bandwidth connection between autonomous systems.
   C.   When a route selection to a route outside of your autonomous system is not a concern.
   D.   When the flow of traffic entering and leaving an autonomous system must be manipulated.
   E.   When an autonomous system allows packets to transit through it reach other autonomous systems.

Answer: A, B, C.

Q18.
Which two statements about BGP are true? (Choose two)

   A.   BGP policy based routing allows policy decisions at the AS level to be enforced.
   B.   BGP can only advertise routes that it allows to its peers in its other autonomous systems.
   C.   BGP can advertise routes that it does not use to its peers in other autonomous systems.
   D.   BGP allows an AS to sent traffic to a neighbouring AS intending that the traffic takes a different
            route from that taken by traffic originating in the neighbouring AS.

Answers: A, B.

Q19.
An autonomous system is connected via BGP to more than one ISP.

What is the results when the ISPs send only default routes to the autonomous system?

    A.   Low memory but high CPU usage.
    B.   High memory but low CPU usage.
    C.   Low memory and low CPU usage.
    D.   High memory and high CPU usage.

Answer: C.

Q20.
Which method of sending route information into the BGP routing protocol is NOT recommended?

    A.   Using the null zero interface.
    B.   Using the network command.
    C.   Redistributed static routes in to BGP.
    D.   Redistributing dynamic routes into the BGP.
    E.   Using the redistribute BGP command.
    F.   Changing the administrative distance of the route.

Answer: D.

Q21.
IP RIP routing is configured on a router but not on interfaces attached to RIP networks.

What should you use to prevent all RIP routing updates from being sent through selected interfaces without using access list?

    A.   Static routes.
    B.   Default routes.
    C.   Passive interface.
    D.   Route update filtering.

Answer C.

Q22.
You have configured a policy-based routing on a router running Cisco IOS release 11.2 or later.

By default, in which switching mode will the router forward packets that match the establish policy?

    A.   Fast.
    B.   Slow.
    C.   Process.
    D.   Packets will be routed, but not switched.

Answer: C.

Q23.
When all of the Frame Relay interfaces belong to area 0 in a multiarea OSPF network.
What will most likely occur?

    A.   Type-5 LSA's will not be delivered.
    B.   External summary routes can't be used.
    C.   Summary LSA's will be flooded throughout the area and all area 0 routers will recalculate their routing tables in response to a topology change in area 0.
    D.   This topology will never be implemented because the full time circuit tariffs are prohibited.

Answer: C.

Q24.
Which command is used to verify the status of an OSPF virtual link?

    A.   Show IP OSPF.
    B.   Show IP OSPF database.
    C.   Show IP OSPF interface.
    D.   Show IP OSPF vitual-links.

Answer: D.

Q25.
What does an OSPF ABR connect?

A. Multiple OSPF areas.
B. OSPF and RIP networks.
C. OSPF and EIGRP networks.
D. Multiple designated routers.

Answer: A.

Q26.

Q27.
Which three statements about BGP peer groups are true? (Choose three)

A. The peer group name is only local to the router on which it is configured
B. A peer group is a more efficient way to update BGP than configuring individual neighbors (outgoing updates are filtered only once per peer group, then replicated to each peer group member)
C. A peer group is a group of BGP neighbors with the same update policies
D. A peer group allows options that affect outbound updates to be overridden
E. The peer group name is passed to other routers in the peer group

Answer: A, B, C.

Q28.
You are configuring redistribution between dissimilar routing protocols. There is more than one traffic path connecting the domains.

Which two statements are true? (Choose two)

A. This approach can confuse the router in the network and should be avoided.
B. A combination of route filters and default routes could control the effects of feed back loops.
C. By directional distributions were both protocols provide, alternate routes for opposite paths could be configured.
D. Changing the default administrative distance and establishing large default metrics can establish large path through the Internetwork.

Answer: B, D.

Q29.
You are configuring redistribution to advertise RIP routes into EIGRP on a boundary router. You specify a speed metric with the default-metric command.

What is the format of the Metric being specified?

    A.   Hop-count.
    B.   Bandwidth delay hop-count load.
    C.   Load delay hop-count reliability mtu.
    D.   Bandwidth delay reliability loading mtu.

Answer: D.

Q30.
What are three characteristics of a distance vector routing? (Choose three)

    A.   It uses SPF algorithm.
    B.   It is utilized by RIP and IGRP.
    C.   It sends updates to all routers in an area.
    D.   It is a simplest routing protocol to configure.
    E.   It sends periodic updates even when no network change has occurred.

Answer: B, D, E.

Q31.
Which three elements are required for a router to forward packet? (Choose three)

    A.   The best route.
    B.   Possible routes.
    C.   Destination address.
    D.   Summarized routes entry.
    E.   Encryption key for routed data.

Answer: A, B, C.

Q32.
Which field is missing from the RIPv.1 routing update for supporting variable-length subnet masks (VLSMs)?

    A.   Cost metric.
    B.   Subnet mask.
    C.   Hop count limit.
    D.   Network layer address.

Answer: B.

Q33.
Which OSPF feature allows you to separate a single large area into smaller areas?

    A.   Link-state.
    B.   Hierarchical.
    C.   Interior area.
    D.   OSPF stub area.

Answer: B.

Q34.
Which two operational modes of OSPF over NBMA are considered to be RFC-compliant? (Choose two)

    A.   Hub and spoke
    B.   Point-to-multipoint nonbroadcast
    C.   Broadcast
    D.   Point-to-multipoint
    E.   Nonbroadcast multiaccess
    F.   Point-to-point

Answer: D, E.

Q35.
Which property identifies the OSPF designated router (DR)?

    A.   It has the lowest router ID
    B.   It is connected to more than one area

C.   It has the highest priority value
D.   It is the first order that attaches to the network

Answer: C.

Q36.
Which capability allows OSPF to support variable-length subnet mask (VLSM)?

A.   OSPF can perform route summarization.
B.   OSPF carry subnet mask confirmation in the link advertisements.
C.   OSPF is a link-state protocol and all link-state protocols support VSLMs.
D.   OSPF design requires addresses to be allocated in groups to support multiple areas.

Answer: B.

Q37.
Router R1 uses a subnet mask 255.255.255.0 and sits on the boundary of area 0 and area 1. Given the following router in configuration:

        Router OSPF 76
        Network 172.12.32.0 0.0.15.255 area 1.
        Network 172.12.96.0 0.0.15.255 area 0.
        Area 0 range 172.12.96.0 255.255.224.0
        Area 1 range 172.12.32.0 255.255.224.0

Which three statements are true? (Choose three)

A.   An interface on this router with IP address 172.12.32.124 is an area 1.
B.   An effect of the fourth line is to reduce the number of route table entries.
C.   All networks within a range of 172.12.64.0 to 172.12.95.0 will be summarized from area 0 into area 1.
D.   All networks within the range of 172.12.32.0 to 172.12.63.0 will be summarized from area 1 into area 0.
E.   Area 0 can act as a stub or transit area for routes including networks in the range 172.12.96.0 to 255.255.224.0.

Answers: A, B, D.

Q38.
A route map can be used to control and modify routing information. Which two statements about map routes are true? (Choose two)

    A.   Route maps can be defined either by name or by number.
    B.   Route maps can use standard or extended access list to define match conditions.
    C.   Route maps can change the attributes of a received route, but do not block the advertisement from reaching the routing table.
    D.   Once a match condition occurs, and the corresponding set condition has been applied, execution of the route map is terminated.

Answer: B, C.

Q39.
In a router that can learn the network topology using both RIP and IGRP, which routes will be placed in the routing table and why?

    A.   The RIP routes because they have a smaller metric value.
    B.   The IGRP routes because they have a larger metric value.
    C.   The RIP because they have a large administrative distance.
    D.   The IGRP routes because they have smaller administrative distance.

Answer: D.

Q40.
Which statement about route filtering is true?

    A.   Only outbound routes can be filtered.
    B.   Routes to be filtered are selected using standard-access list.
    C.   Routes to be filtered are selected using only extended access list.
    D.   Routes to be filtered or selected using the distribute-list command.

Answer: D.

Q41.
You have configured redistribution between RIP and OSPF on your network and want to verify that redistribution is operating correctly. Which command can provide the information necessary to verify proper operation?

A.   Ping.
B.   Show IP route.
C.   Show CDP neighbour.
D.   Show IP OSPF neighbour.

Answer: B.

Q42.
Route distribution is required for two routing domains with dissimilar metric structures to have complete topology awareness.

Which two statements about route distribution are true? (Choose two)

A.   It is a requirement of redistribution that route summarization occur at class A, B and C network boundaries.
B.   In good network design, the routing domains only interconnect at the routers where the distribution is configured.
C.   Routes from one domain are assigned a speed metric to indicate their reachability prior to being injected into other domain.
D.   If sufficient bandwidth is available to handle the routing updates associated with both protocols running concurrently, route redistribution may not have to be configured.

Answer: B, C.

Q43.
Which statement most accurately describes the difference between the classful and classless routing protocols?

A.   Classless routing protocols send event-trigger updates and classful routing protocols send routine, periodic router advertisement.
B.   Classful routing protocols use simple metrics, while classless routing protocols use more complex metrics in their best path selection process.
C.   Classful routing protocols do not carry the subnet mask within routing updates. Classless routing protocols use the subnet mask for each network in their routing updates.

D.   Classless routing protocols require route summarization to occur at class A, B and C network boundaries. Classful routing protocols allow route summarization to occur at any point within the network.

Answer: C.

Q44.
In addition to viewing routing table which command can you use to determine if a router is using the best bath to forward packets on a specific network?

A.   Ping.
B.   Show space path.
C.   Trace route.
D.   Ping with record option.

Answer: C.

Q45.
You want to modify the OSPF router ID to 10.3.3.11.

Which commands should you use to do this?

A.   Router loopback 0
        IP address 10.3.3.11 255.255.0.0
B.   OSPF interface loopback 0
        IP address 10.3.3.11 255.255.0.0
C.   interface loopback 0
        IP address 10.3.3.11 255.255.0.0
D.   OSPF loopback 0
        IP address 10.3.3.11 255.255.0.0

Answer: C.

Q46.
You are configuring redistribution to advertise EIGRP routes into OSPF on a boundary router.

Given the configuration:

        Router ospf7
        Redistribute EIGRP 300 metric 20 subnets.

What is the function of 20 parameter in the redistribute command?

    A.   It is the seed cause to be applied to the redistributed routes.
    B.   It places an administrative distance of 20 on the newly learned routes.
    C.   If the process-id for the PSEUDO processes that injects the EIGRP routes into OSPF.
    D.   It replaces a metric limit of 20 subnets to be included in each OSPF route advertisement.

Answer: A.

Q47.
Which LSA type is flooded by the DR listing all routers on the segment that it has neighbor relationships with?

    A. router link, type 1.
    B. network link, type 2.
    C. external link, type 5.
    D. network summary link, type 3.

Answer: B.

Q48.
How are neighbor relationships formed in an NBMA topology utilizing EIGRP as its routing protocol?

    A.   They are automatically formed when a hello packet is received
    B.   They are established when the router reaches the two-way state during router startup
    C.   They are manually configured with neighbor statements
    D.   Neighbor relationships are not established in EIGRP

Answer: A.

Q49.
Which EIGRP information is added to a routing table?

    A.   Feasible successor only
    B.   Successor only
    C.   All learned networks
    D.   Successor and feasible successor

Answer: B.

Q50.
Which statement about BGP route reflectors is true?

A. A cluster is a group of route reflectors
B. BGP route reflectors must be configured on all routers in the autonomous system at the same time
C. A route reflector propagates IBGP routes to other IBGP peers
D. There can be only one reflector within an autonomous system.

Answer: C.

Q51.
In a routing entry table, what does the time value represent?

A. The amount of time that has since the routing table was created.
B. Incrementing counter indicating when the next routing update is expected for this route.
C. The amount of time since a hello packet was received from a neighbour that advertised this route.
D. An incrementing router indicating how long the router has been in the table since the last update.

Answer: D.

Q52.
Which LSA type is generated by an ABR, summarizing that area's subnets?

A. Router link, type 1.
B. Router summary link, type 8.
C. Network summary link, type 3.
D. AS external summary link, type 4.

Answer: C

Q53.
Given the following router configuration:

Router OSPF 76
Network 172.22.23.34 0.0.0.0 area 1
Network 172.18.0.0 0.0.255.255 area 0

Which three statements are true? (Choose three)

    A.   The OSPF router ID is 76.
    B.   This is the Destination Router (DR).
    C.   This is an Area Border Router (ABR).
    D.   This area connects area 1 to backbone.
    E.   Any router interface with an address of 172.18.x.x are in area 0.

Answer: C, D, E.

Q54.
Given the router R3 configuration command:

Router OSPF 110
Network 192.168.32.0 0.0.0.255 area 2
Network 192.168.33.0 0.0.0.255 area 0
Area 2 stub no-summary
Area 2 default-cost 10

Which three statements are true? (Choose three)

    A.   Area 2 is a totally stubby area.
    B.   If the backbone becomes discontigous, traffic can be routed through area 2.
    C.   R3 add 10 to the internal cost when it injects the default route in to the stub area.
    D.   Redistribution of other routing protocols takes place at the area designated router.
    E.   Area 2 non-ABR routers will contain only intra-area routing information and a default route.

Answer: A, C, E.

Q55.
You are configuring the static route on a router. You want to configure it so that if the interface associated with route goes down it will still remain in the routing table.

Which IP route command parameter cause this to happen?

    A.   Keep.

B.   Backup.
C.   Permanent.
D.   Continuous.

Answer C.

Q56.
You have configured policy-based routing on interface serial 0. Given the configuration:

> Interface serial 0
> IP policy route-map demo
> Route-map demo permit 10
> Match IP address 4
> Set interface serial 2 serial 3
> Access list for permit 10.3.3.2 0.0.0.0.

Which statement about a packet arriving on serial 0 is MOST correct?

A.   If the packets were sourced from 10.3.3.2, it is a candidate for fast-switch policy routing.
B.   If the packet was sourced from 10.3.3.2, it will be routed out interface serial 2 and interface serial 3 in a load-sharing fashion.
C.   If the packet was destined for 10.3.3.2, it will be routed out interface serial 2 and interface serial 3 in a load-sharing fashion.
D.   If the packet was sourced from 10.3.3.2, it will be routed out interface serial 2. If interface serial 2 is not up, the packet will be routed out interface serial 3.

Answer: D.

Q57.
You are asked to interconnect networks that use different routing protocols. One network uses IGRP and the other network uses OSPF. You connect the networks using redistribution at the boundary routers.

If the routers were to receive route information for the same networks from IGRP and OSPF, from which protocol will they select the route and why?

A.   OSPF, because it is a link state protocol.
B.   OSPF, because it has a better seed matrix.
C.   IGRP, because it is a hybrid protocol.
D.   IGRP, because it has better administrative distance.

Answer: D.

Q58.
Which command must be redistributed if you want the route 10.1.1.0 advertised?

    A.   IP route 10.1.1.0 255.255.255.255 E 1.
    B.   IP route 10.1.1.0 255.255.255.0 10.2.1.1.
    C.   IP route 10.1.1.0 255.255.255.0 interface E 1.
    D.   IP route 10.1.1.0 255.255.255.0 access-scripts 1.

Answer: B.

Q59.
What is the purpose of route summarization?

    A.   To use hierarchical routing to allow one route update to represent many down stream networks.
    B.   To control route updates, to lower their frequency to leave more bandwidth for applications.
    C.   To use an addressing scheme that will assign networks sequentially allowing them not to fragment.
    D.   To use a compression logarithm on the routing table to lower memory constraints on the router.

Answer: A.

Q60.
Which three statements about BGP are true? (Choose three)

    A.   Periodic keepalive are sent to verify TCP connectivity.
    B.   Reliability comes from using TCP port 179 as its transport.
    C.   Topology awareness is kept current by routine, periodic update.
    D.   A rich set of metrics, called path vectors, enables BGP to support various routing policies.

Answers: A, B, D.

Q61.
What is the characteristic of variable-length subnet masking (VLSM)?

A.   It allows a 32B-bit subnet mask.
B.   It is supported by all routing protocols because they carry the subnet mask within their routing table
      updates.
C.   It allows a way of controlling the number of reliable hosts on the network by manipulating the mask
      in attempt to efficiently allocate IP addresses.
D.   It allows the concurrent use of several different subnets masks on a single interface, providing
      multiple networks on a single interface.

Answer: C.

Q62.
What is the primary benefit provided by EIGRP support of VLSM?

A.   Private addressing
B.   Secondary addressing
C.   Discontigous subnets
C.   Efficient address allocation

Answer: D.

Q63.
When does in an EIGRP discover its neighbours?

A.   When it receives a hello packet from its neighbour.
B.   When it receive a full routing table from its neighbour.
C.   When it receives an acknowledgement for one of the transmitted hello packets.
D.   Due to the reliable nature of EIGRP neighbour relationships are not required.

Answer: A.

Q64.
Why is EIGRP support of VLSM possible?

A.   The subnet mask is carried with the route advertisement.
B.   EIGRP supports hierarchical designs.
C.   Efficient address allocation requires flexibility to satisfy different host populations on each subnet.
D.   Point-to-point WAN links only require two host addresses.

Answer: A

Q65.
Which technique most effectively limits the EIGRP query range (also known as query scooping)?

    A.   Establishing separate autonomous systems.
    B.   A hierarchical scheme.
    C.   Route filters.
    D.   Automatic or manually created route summarization points.

Answer: D.

Q66.
By default what happens to the next hop attribute advertised by EBGP?

    A.   It is ignored by IBGP.
    B.   It is carried into IBGP.
    C.   It is a NDED with the subnet mask before being carried into IBGP.
    D.   It is modified by IBGP to be the address of the router that receives the update.

Answer: B.

Q67.
What is the purpose of 'default-information originate always' command?

    A.   It is used to create a default static route on a router running a RIP.
    B.   It is used to create a default static route on a router running OSPF.
    C.   It is used to create a default static route on a router running EIGRP.
    D.   It is required whenever you want propagate a default route into an RIP autonomous system.
    E.   It is required when ever whenever you want propagate a default route into an EIGRP autonomous system.
    F.   It is required whenever you want propagate a default route into an OSPF autonomous system.

Answer: F.

Q68.
Which two statements about BGP communities are true? (Choose two)

    A.   They are restricted to one AS.
    B.   They are restricted to one class A or B or C network.
    C.   They allow router to filter incoming or outgoing updates.
    D.   They are indicators used by a router to allow other routers to make decisions based upon these
           indicators.

Answers: C and D.

Q69.
Why is OSPF better than RIPv.1 in a large network? (Choose two)

    A.   OSPF requires less memory.
    B.   OSPF is a simpler protocol than RIPv.1
    C.   OSPF has virtually no reachability limits.
    D.   OSPF supports variable-length subnet masks (VLSMs).

Answer: C, D.

Q70.
Which OSPF configuration is correct?

    A.   Interface Ethernet 0
        IP address 10.1.3.2 255.255.255.0
        !
        Interface Ethernet 1
        IP address 10.1.2.2 255.255.255.0
        !
        Router ospf
        Network 10.1.2.2 0.0.0.0 area 0
        Network 10.2.3.2 0.0.0.0 area 0

    B. Interface Ethernet 0
        IP address 10.1.3.2 255.255.255.0
        !
        Interface Ethernet 1

IP address 10.1.2.2 255.255.255.0
!
Router ospf network 10.1.2.2 0.0.0.0 area 0
Router ospf network 10.2.3.2 0.0.0.0 area 0

D.   Interface Ethernet 0
        IP address 10.1.3.2 255.255.255.0
        Router ospf 100
        !
        Interface Ethernet 1
        IP address 10.1.2.2 255.255.255.0
        Router ospf 100

D.   Interface Ethernet 0
        IP address 10.1.3.2 255.255.255.0
        !
        Interface Ethernet 1
        IP address 10.1.2.2 255.255.255.0
        !
        Router ospf 100
        Network 10.1.2.2 0.0.0.0 area 0
        Network 10.2.3.2 0.0.0.0 area 0

Answer: D.

Q71.
Once the OSPF routing process is enabled, which command will select only the router's network 10.0.0.0
interfaces to participate in OSPF area 0?

    A.   Network 10.0.0.0   0.0.0.0 area 0
    B.   Area 0 range 10.0.0.0   255.0.0.0
    C.   Network 10.0.0.0   0.255.255.255 area 0
    D.   Network 10.0.0.0   255.255.255.255 area 0

Answer: C.

Q72.
Which statement about distance vector protocols is true?

    A.   An adjacency is established with each directly connected neighbor

B. The periodic routing update interval ranges from one to five seconds
C. They detect when a neighbor is unavailable because the neighbor does not respond to the watchdog packet
D. Each router creates a routing table that includes its directly connected networks and sends the routing table to its directly connected neighbors

Answer: D.

Q73.
Which two statements about RIPv.1 networks are true? (Choose two)

A. RIPv.1 networks are referred to as classful networks
B. RIPv.1 route updates have a subnet mask field
C. RIPv.1 networks are referred to as classless networks
D. RIPv.1 route updates do not have a subnet mask field

Answer: A, D.

Q74.
Which statement about OSPF support of route summarization is true?

A. Summarization prevents type-1 link LSAs from being propagated into the backbone area 0
B. Route summarization can be performed at any point in the network where enough contiguous addresses are present
C. Route summarization reduces the amount of bandwidth, CPU, and memory resources consumed by the OSPF process
D. Type-3 and type-4 LSAs carry external summarized routes

Answer: C.

Q75.
What are the two characteristics of an autonomous system? (Choose two)

A. It uses only Interior Gateway Protocols (IGPs).
B. It uses only Exterior Gateway Protocols (EGPs).
C. It is a set of routers under a single technical administration.

D.   It uses IGPs to route packets to other autonomous systems and EGPs to route packets within the
        autonomous system.
E.   It uses EGPs to route packets to another autonomous system and IGPs to route packets within the
        autonomous system.

Answers: C, E.

Q76.
Which 2 statements about routers running EBGP are true? (Choose two)

A.   They are usually directly connected.
B.   They are not usually directly connected.
C.   They need to be able to reach each other.
D.   They do not need to be able to reach other.

Answer: A, C.

Q77.
Which two statements about BGP are true? (Choose two)

A.   BGP policy-based routing allows policy decisions at the AS level to be enforced.
B.   BGP can only advertise routers that it uses to be its peers in other autonomous system.
C.   BGP can advertise routers that it can't use to its peers other autonomous systems.
D.   BGP allows an AS to send traffic to a neighboring AS, intending that the traffic take a different route
        than from the traffic originating in the neighboring AS.

Answers: A, B.

Q78.
Which statement about EBGP is true?

A.   Routers run EBGP in order to exchange BGP information with routers in other autonomous systems.
B.   Routers run EBGP in order to exchange IGP information with routers in other autonomous systems.
C.   Routers run EBGP in order to exchange EGP information with routers in other autonomous systems.
D.   Routers run EBGP in order to exchange BGP information with routers within autonomous systems.
E.   Routers run EBGP in order to exchange EGP information with routers within autonomous systems.

Answer: A.

Q79.
You have one site in your multiple-area OSPF network that cannot connect to resources outside their area. Which Cisco IOS command should you use on this site's router to verify the router has a path to its ABR and ASBR, and that SPF route calculation is working?

    A. show ip protocols
    B. show running-config
    C. show ip ospf neighbor
    D. show ip ospf border-routers

Answer: D.

Q80.
What are two Cisco recommendations when creating multiple OSPF areas? (Choose two)

    A. There should not be more than three areas per route.
    B. Area 0 must be larger than any subsequent OSPF area.
    C. A router cannot be a DR or BDR for more than one LAN.
    D. You should not run more than one instance of the OSPF process on an ABR.

Answer: C, D.

Q81.
Which command is used to change the BGP wait attribute of updates coming from a neighbour router?

Enter the number that corresponds to the command?

Answer: neighbor {ip-address/peer-group-name} weight {weight}

Q82.
What are two advantages of using subinterfaces in an NBMA topology? (choose two)

A.   IP addressing space is conserved.
B.   Routing protocols avoid split horizon.
C.   Logical interfaces are more reliable than physical interfaces.
D.   When a sub interfaces states changes to down the physical interface remains up.

Answer: B, D.

Q83.
OSPF routers can route when they are in which state?

A.   Full state.
B.   Two-way state.
C.   Exchange state.
D.   Forwarding state.

Answer: A.

Q84.
When configuring serial 0 for OSPF in a point-to-point mode using sub interfaces.

Which is the correct combination of commands?

A.   Interface serial 0.1 point-to-point
        Router OSPF process-ID
        Network number wildcard-mask area number
B.   Interface serial0
        IP OSPF network point-to-point
        Router OSPF process-ID
        Network number wildcard-mask area number.
C.   interface serial 0.1 point-to-point
        Router OSPF process-ID
        Network number wild cards-mask area number
        Neighbour address
D.   Interface serial router 0.1 point-to-point
        Router OSPF process-ID
        Neighbour ID

Answer: A.

Q85.
What is the effect of configuring a static route to 172.16.0.0 to the null 0 interface?

    A.   It results in all traffic for all subnets of 172.16.0.0 being dropped
    B.   It can be used to fool BGP into believing that a route for 172.16.0.0 actually exists
    C.   It will have no effect it the router does not have any routes to any of the subnets of 172.16.0.0
    D.   It is preferable to configure the aggregate-address command

Answer: B.

Q86.
By default, which information does an OSPF summary line Type 3 entry includes?

    A.   Network addresses for an area that are summarized at their classful boundary
    B.   Summarized entries for network addresses in an area
    C.   Network addresses for all networks in an area
    D.   Network addresses for all networks in the OSPF autonomous system

Answer: B.

Q87.
Which three statements about prefix list sequence numbers is true? (Choose Three)

    A.   They start at 10 by default
    B.   They are displayed in the show IP prefix-list
    C.   They automatically increment by five by default
    D.   They are used to indicate the order in which the statements in the prefix list will be processed
    E.   They must be configured manually

Answer: B, C, D.

Q88.
Which command displays only the current EIGRP entries in the routing table?

Answer: show ip route eigrp

Q89.
You want to turn off automatic summarization for EIGRP routes which command does this?

Enter the number that corresponds to the command.

Answer: no-auto summary

Q90.
Which command enables RIP or IGRP routers to select a default route when the default path is used for non-connected subnet for the same classful network?

Enter the number that corresponds to the command.

Answer: ip default-network

Q91.
An EIGRP router has not established an adjacency with a neighbor.

Which debug command would help most to troubleshoot this problem?

Answer: debug eigrp neigbor

Q92.
Which command can be used to determine the origin code for BGP routes learned from other routers?

Answer: show ip bgp command

Q93.
Which command verifies that OSPF interfaces are configured in the proper area, and displays neighbour adjacencies?

Answer: show ip ospf neighbor

Q94.
You have the subnet/mask of 172.29.100.0/26 set aside for use by some small branch offices. You want to use VLSM to further subnet this block addresses so that you will have six usable host addresses in each branch subnet. Which VLSM mask should you use?

    A. /24
    B. /28
    C. /29
    D. /30
    E. /31

Answer: C.

Q95.
What do you call an autonomous system connected via BGP to more than one ISP?

    A.   Multihop
    B.   Multihomed
    C.   Multisource
    D.   Multiassessed

Answer: B.

Q96.
Which three IP protocols support variable length subnet masks (VLSM)? (Choose three)

A.   RIPv.1.
B.   RIPv.2.
C.   IGRP.
D.   OSPF.
E.   EIGRP.

Answer: B, D, E.

Q97.
Which is the most effective technique to contain EIGRP queries?

    A. Route summarization.
    B. Configuring route filters.
    C. Using a hierarchical addressing scheme.
    D. Establishing separate autonomous systems.

Answer: A.

Q98.
In a routing table entry which value indicates the best route to reach a destination network?

    A.   Cost.
    B.   Metric.
    C.   Bandwidth.
    D.   Hop count.

Answer: B.

Q99.
Which show command should you use to verify that a particular router was selected as the designated router and which timer intervals were configured.

Enter the number that corresponds to the command?

Answer: show ip ospf interface

Q100.
What are two characteristics of link-state routing? (Choose two.)

    A.   It is utilized by OSPF and IGRP.
    B.   It determines path by bandwidth-based value.
    C.   It sends updates to directly attached routers only.
    D.   It sends updates rather than complete routing tables when a network change occurs.

Answer: C. D.

Q101.
Which two statements about variable-length subnet mask (VLSMs) are true? (Choose two)

    A.   VLSMs is a characteristic of classful network.
    B.   They have a greater capability to use route summarization.
    C.   RIP 1 network supports multiple subnets per network address.
    D.   VLSMs allow for more hierarchical levels within an addressing plan.

Answer: B, D.

Q102.
Given the route summarization entry 192.168.16.0/20. How many class C addresses can be summarized?

    A.   4.
    B.   8.
    C.   16.
    D.   20.
    E.   32.
    F.   64.

Answer: C.

Q103.
Given the configuration

       Interface Ethernet 0
       IP address 172.16.80.77 255.255.255.0
       IP helper-address 172.16.90.255

Which two statements are true? (Choose two)

    A.   172.16.90.255 is an alternate address from 172.16.80.77.
    B.   Host 172.16.90.255 is the backup router for 172.16.80.70.
    C.   All non-routable protocols will be forwarded to 172.16.90.255.
    D.   Host 172.16.90.255 will provide IP tunnelling for non-IP protocols.

E.   BOOTP request on the interface Ethernet 0 will be forwarded to network 172.16.90.0.
F.   NetBIOS broadcast from 172.16.80.0 will be sent as directed broadcast to network 172.16.90.0.

Answer: E, F.

Q104.
In a multi point WAN topology using EIGRP, which guideline is used for configuring bandwidth on a serial interface?

A.   Configure the bandwidth to be the sum of all virtual circuits.
B.   Configure the bandwidth to be equal to the lowest CIR in the topology.
C.   Configure the bandwidth equal to the link capacity divided by the number of virtual circuits.
D.   Configure the bandwidth to be the product of the number of circuits multiplied by the CIR
         provisioned for each circuit in the topology.

Answer: C.

Q105.
When trying to determine whether a serial interface is connected to a DTE or DCE cable, with IOS command. Which IOS command should you use?
Enter the number that corresponds to the command.

Answer: show controllers

Q106.
The quantity of information contained in a routing update can be changed by implementing a route filter (distribute list). Which two statements about distribute list are true? (Choose two)

A.   Distribute list are applied to interfaces or to routing processes.
B.   If no match is found in the access list, the routing update is dropped.
C.   Distribute list are capable of changing the attributes of a received route.
D.   A distribute list consist of a standard or extended access list that has an "implicit deny any" statement
         at the end.

Answer: A, B.

Q107.
Routers run EBGP in order to exchange _____ information with routers _____ autonomous systems.

    A.   BGP; in other
    B.   IGP; in other
    C.   EGP; in other
    D.   BGP; within
    E.   EGP; within

Answer: A.

Q108.
Which entries are kept in EIGRP routing table?

    A.   All learned routers.
    B.   Successor routers only.
    C.   Feasible successor routes only.
    D.   Successor and feasible successor routers.

Answer: B.

Q109.
A multi area OSPF network places which restriction on the use of an NBMA topology?

    A.   The NBMA portion of the network must be in area 0.
    B.   The NBMA portion of the network must NOT be in area 0.
    C.   There are no restrictions of NBMA topologies.
    D.   All areas that incorporate NBMA topology must be full-mesh, but can not be configured as stub areas.

Answer: D.

Q152.
Which two statements about OSPF support of VLSM are true? (Choose two)

    A.   The use of VLSM enables a truly hierarchical addressing scheme to be developed.
    B.   A multiple area design ensures that addresses are allocated in an efficient manner.

C.   Summarization can be performed with different prefix length throughout the network.
D.   OSPF's support for VLSM does not compensate for OSPF's inability to handle discontigous subnets.

Answer: A, C.

Q110.
What are two possible problems that can occur when a large number of routers operate in a single OSPF area? (Choose two)

A.   Excess LSA traffic.
B.   More reachability errors.
C.   Frequent routing table recalculation.
D.   Frequent adjacencies table recalculation.

Answer: A, C.

Q111.
Which two statements about variable length subnet masking VLSM are true? (Choose two)

A.   It supports hierarchical addressing.
B.   It is specifically used in the IP environment.
C.   It is specifically used in the IPX environment.
D.   It is specifically used in both the IP and IPX environments.

Answer: A, B.

Q112.
Which command is used to verify the status of an OSPF virtual link?

A.   Show IP OSPF.
B.   Show IP OSPF database.
C.   Show IP OSPF interface.
D.   Show IP OSPF virtual-link.

Answer: D.

Q113.

In a multipoint WAN topology using EIGRP, which guideline is used for configuring bandwidth on a serial interface?

    A.   Configure the bandwidth to be the sum of all virtual circuits.
    B.   Configure the bandwidth to be equal to the lowest CIR in the topology.
    C.   Configure the bandwidth equal to the link capacity divided by the number of its shared circuits.
    D.   Configure the bandwidth to be the product of a number of circuits multiplied by CIR provisioned for each circuit in the topology.

Answer: C.

Q114.

Which two statements about route maps are true? (Choose two)

    A.   The order of the route map statements is optimized by the parser
    B.   Route maps must check for multiple criteria and pattern themselves after extended access lists (not after simple access list)
    C.   Statements can be added and deleted once a route map is created
    D.   They can modify the next-hop address and outgoing interface (the route a packet takes) based upon a match condition

Answer: C, D.

Q115.

You are using routes with EIGRP route section. Which is a feasible distance? (Choose two)

    A   The next-hop router for the backup path.
    B.   The next-hop router selected as the best path.
    C.   The cost between the local router and the destination.
    D.   The cost between the next hop router and the destination.

Answer: C, D.

Q116.

When does in an EIGRP router discover its neighbors?

A.   When it receives a hello packet from its neighbour.
B.   When it receive a full routing table from its neighbour.
C.   When it receives an acknowledgement for one of the transmitted hello packets.
D.   Due to the reliable nature of EIGRP, neighbour relationships are not required.

Answer: A.

Q117.
How can route summarization be performed in a EIGRP network?

A.   Manually at any interface within the network.
B.   Only at autonomous system boundary routers.
C.   Automatically by the master router in each area.
D.   Route summarization is not required because of EIGRP support of VLSM.

Answer: A.

Q118.
An EIGRP router has not established an adjancy with the neighbour.

Which debug command would help most to trouble shoot this problem?

Answer: debug eigrp neigbor

Q119.
When a match occurs which set command will forward the packet only if there is no explicit route for the packet destination address in the routing table.

Enter the number that corresponds to the command answer.

Answer: set default interface

Q120.
When a static route is configured on a router, that router must advertise it to the other routers in the network.

How is the static route advertised?

A.   Automatically by the configured routing protocol
B.   Using the redistribute command
C.   Using the static route advertise command
D.   Using the distribute-list command

Answer: B.

Q121.
When policy-based routing is configured on a router, which interfaces participate in the implementation of policy?

A.   All interfaces
B.   An incoming and outgoing pair defined in the configuration
C.   Only incoming interfaces
D.   Only outgoing interfaces

Answer: C.

Q122.
Which feature in EIGRP enables it to reduce the size of the routing table?

A.   Query scooping.
B.   Hierarchical designs.
C.   Route summarization.
D.   Variable-length subnet mask (VLSM).

Answer: C.

Q123.
When a route is set to stuck in active which EIGRP condition has occurred?

A.   The feasible successor route is not responding to update packets.
B.   The route compilation process is taking longer than usual to complete.
C.   The whole time has expired and a neighbouring router has been marked as inactive.

D.   A neighbouring router has failed to response to a query about the route within three minutes.

Answer: D.

Q124.
Given the configuration commands:

1. Router EIGRP 110.
2. Network 172.16.0.0.
3. Network 3.0.0.0.

Which two statements are true? (Choose two)

A.   Line 1 defines EIGRP as an IP routing process.
B.   Network 172.16.0.0 becomes the path to the default gateway.
C.   The number at the end of line 1 indicated the routing process ID.
D.   Line 2 causes all interfaces connected to network 172.16.0.0 to send EIGRP updates to other EIGRP routers.

Answer: A, D.

Q125.
You are configuring EIGRP for NBMA operation.

What is the purpose of the IP bandwidth-percentage EIGRP command?

A.   It adjusts the percentage of bandwidth that EIGRP packets can use on all of the router's interfaces.
B.   It adjusts the percentage of bandwidth that EIGRP packets can use on an individual router interface.
C.   It overrides the bandwidth setting on an interface to ensure that EIGRP packets receive 50% of the available bandwidth on the router's interface.
D.   It limits the percentage of bandwidth that EIGRP packets can use. That percentage cannot exceed 50% of the configured bandwidth on all of the router's interface.

Answer: C.

Q126.
For purpose of participating in an OSPF DR/BDR election, what is the default router priority?

A.   1.
B.   0.
C.   255.
D.   32768.

Answer: A.

Q127.
What are two advantages for using subinterfaces in an NBMA topology? (Choose two)

A.   IP addressing space is conserved.
B.   Routing protocols avoid split-horizon issues.
C.   Logical interfaces are more reliable than physical interfaces.
D.   When a subinterfaces state changes to down, the physical interface remains up.

Answer: B, D.

Q128.
How does an EIGRP router determine when a neighbour is unavailable?

A.   When the hold time is exceeded.
B.   When the queue value exceeds zero.
C.   When the queue value is constantly at zero.
D.   When the round trip time exceeds 500 milliseconds.

Answer: A.

Q129.
Which routing protocol supports multiple link network-layer routed protocols?

A.   OSPF.
B.   EIGRP.
C.   RIPv.1
D.   RIPv.2

Answer: B.

Q130.
You want to configure EIGRP for IP.

Which command enables EIGRP and defines the autonomous system?

    A. `ip eigrp routing`
    B. `router eigrp` *process-id*
    C. `ip eigrp` *autonomous-system-number*
    D. `router eigrp` *autonomous-system-number*

Answer: D

Q131.
Which command enables RIP or IGRP routers to select default route when the default path is used for non-connected subnets for the same classful network?

Answer: ip classless

Q132.
Which command is used to display information on a prefixed list, including the number of times a prefixed list entry has matched a route?

Answer: show ip prefix-list detail

Q133.
Which command version the OSPF interfaces are configured in the proper area and displays neighbour adjacencies.

Enter the correct number?

Answer: show ip ospf interface

Q134.
When configuring serial 1 for OSPF in NDMA mode, what is the correct combination of commands?

   A.   Interface serial 0
           IP OSPF network non-broadcast
           Neighbour address.

   B.   Interface serial 0
           IP OSPF network non-broadcast
           OSPF process-ID
           Neighbour address.

   C   Interface serial 0
           IP OSPF network NBMA route
           Router OSPF process-ID
           Network number wildcard-mask area number.
           Neighbour address.

   D.   Interface serial 0
           IP OSPF network non-broadcast
           Router OSPF process ID
           Network number Wildcard-mask area number
           Neighbour address.

Answer: D.

Q135.
You have a branch office that is attached to a central office. You want the central office to learn all routes in the branch office. However, you do not want the branch office to learn about all routes from the central office.

What is the most scalable option you should use on the branch office router?

   A.   Static routes
   B.   Route update filtering
   C.   Passive interface
   D.   Default route

Answer: A.

Q136.

Why is OSPF better the RIPV 1.1 in a large network? (Choose two)

    A.   OSPF has fewer tables to manage.
    B.   OSPF is a simpler protocol than RIP V.
    C.   OSPF has virtually no reachability limits.
    D.   OSPF selects the best path using a metric that is based on bandwidth.

Answer: C, D.

Q137.
What happens when a router on an Ethernet learns of a link-state change?

    A.   It floods the change to all other routers in the Internetworks.
    B.   Broadcast the link-state change through each of its interfaces.
    C.   It multicasts the links-state change to the designated router (DR) and BDR.
    D.   It updates its routing table and floods the updated table to all other routers in the Internetworks.

Answer: C.

Q138.
Which are mandatory to configure OSPF?

    A.   Router OSPF network address.
    B.   Router OSPF area ID, network address wildcard-mask.
    C.   Router OSPF process ID, network address wildcard mask area ID.
    D.   Router OSPF process ID, interface address wildcard-mask area-ID.

Answer: C.

Q139.
Given the network/subnet work: 172.22.44.16/30
How many valid host IP addresses are available?

    A.   2
    B.   4
    C.   16
    D.   30

E.   122

Answer: A.

Q140.
What is the primary benefit provided by EIGRP support of VLSM?

A.   Private addressing.
B.   Secondary addressing.
C.   Discontigous subnets.
D.   Efficient address allocation.

Answer: D.

Q141.
When a route is said to be stuck in active, which EIGRP condition has occurred?

A.   The feasible successor is not responding to update packets.
B.   The route compilation process is taking longer than usual to complete.
C.   The hold time has expired and a neighbouring router has been marked as inactive.
D.   A neighbouring router has failed to respond to a query about the route within three minutes.

Answer: D.

Q142.
You are configuring EIGRP for NBMA operation.

What is the purpose of IP bandwidth-percentage EIGRP command?

A.   It adjusts the percentage of bandwidth that EIGRP packets can use on all of the routers interfaces.
B.   It adjusts the percentage of bandwidths that EIGRP packets can use on an individual router interface.
C.   It over write the bandwidth settings on an interface to ensure that EIGRP packets receive 50% of the available bandwidth on the routers interface.
D.   It limits the percentage of bandwidth that EIGRP packets can use. That percentage can not exceed 50% of configured bandwidth on all the router's interfaces.

Answer: C.

Q143.
You have decided to make an OSPF area 2 a stub area. All routers in the area exchange routing information. However, once you configure the ABR as stub. It no longer exchanges information with other routers in the area.

What is the most likely problem?

    A.   There is an ASBR in area 2.
    B.   The area 2 is a transit area for virtual links.
    C.   The router in area 2 also needs to be configured for stub.
    D.   The area 2 has multiple exit points ABR's and only one is configured for stub.

Answer: C.

Q144.
To reset all BGP sessions on a router, which command should you use?

Answer: clear ip bgp

Q145.
The 172.20.0.0 had an 8-bit subnet mask extension applied to create all of its subnets. One unused subnet is being used to create several additional subnets in support of a WAN deployment effort. Which subnet mask should be used to support two host addresses on each WAN segment?

    A. 255.255.252.0
    B. 255.255.255.30
    C. 255.255.255.192
    D. 255.255.255.252

Answer: D.

Q146

When a helper address has been configured on a router, which command is used to prevent TACACS UDP port 49 requests from being forwarded by the router?

    A.   No IP forward-protocol UDP 49
    B.   IP forward-protocol UDP NEQ 49
    C.   No IP helper-address UDP TACACS.
    D.   Access-list 101 UDFP or deny any EQ TACACS.

Answer: A.

Q147.
Which two addresses can be summarized by the address 172.30.16.0/20? (Choose two)

    A.   172.30.15.0/24
    B.   172.30.17.0/24
    C.   172.30.31,0/24
    D.   172.30.32.0/24

Answer: B, C.

Q148.
Drag and Drop. Place each label in its place

Place here

Place here

Place here

Place here

Place here

| Non Client | Client | Cluster | Route Reflector |
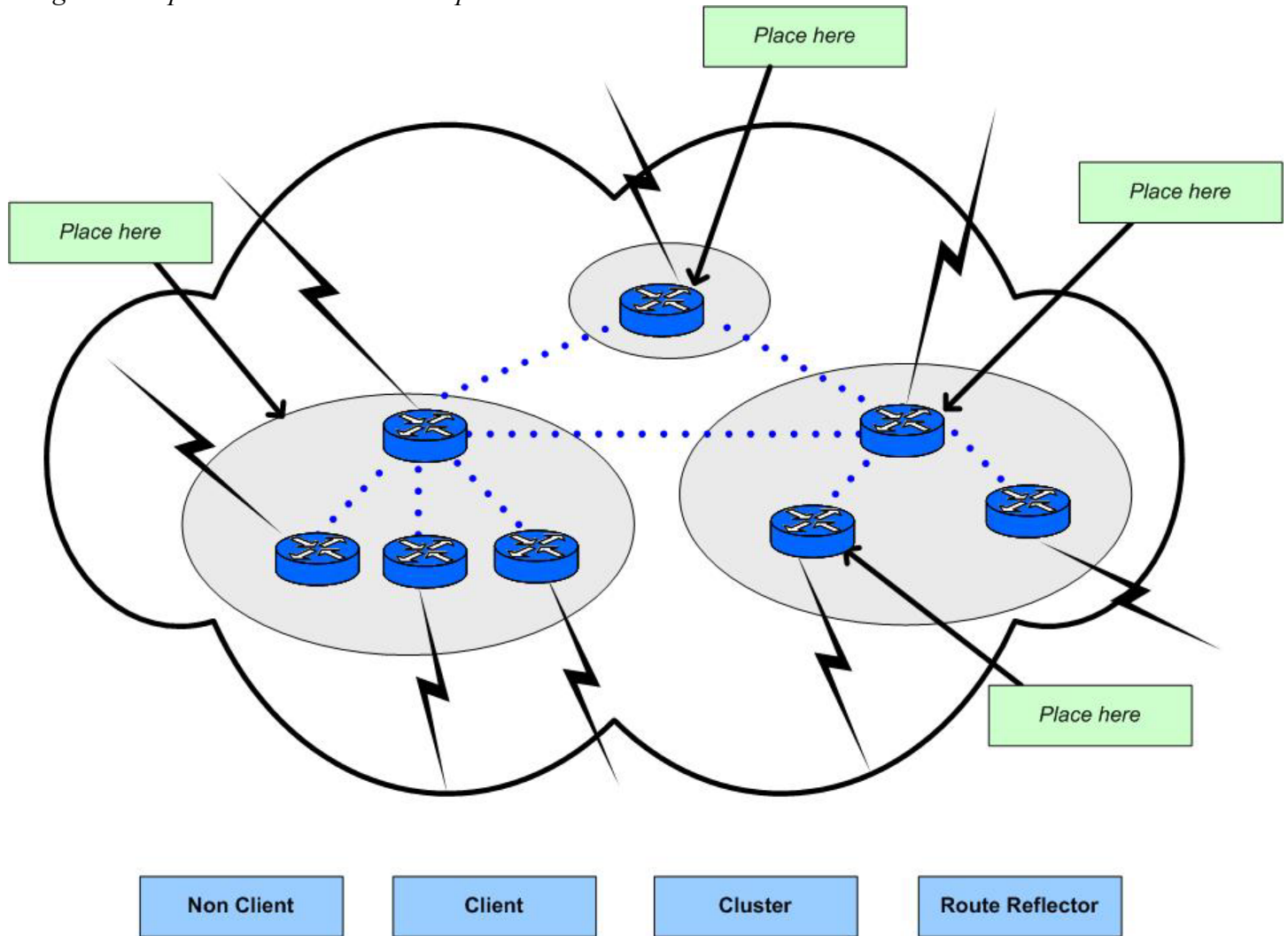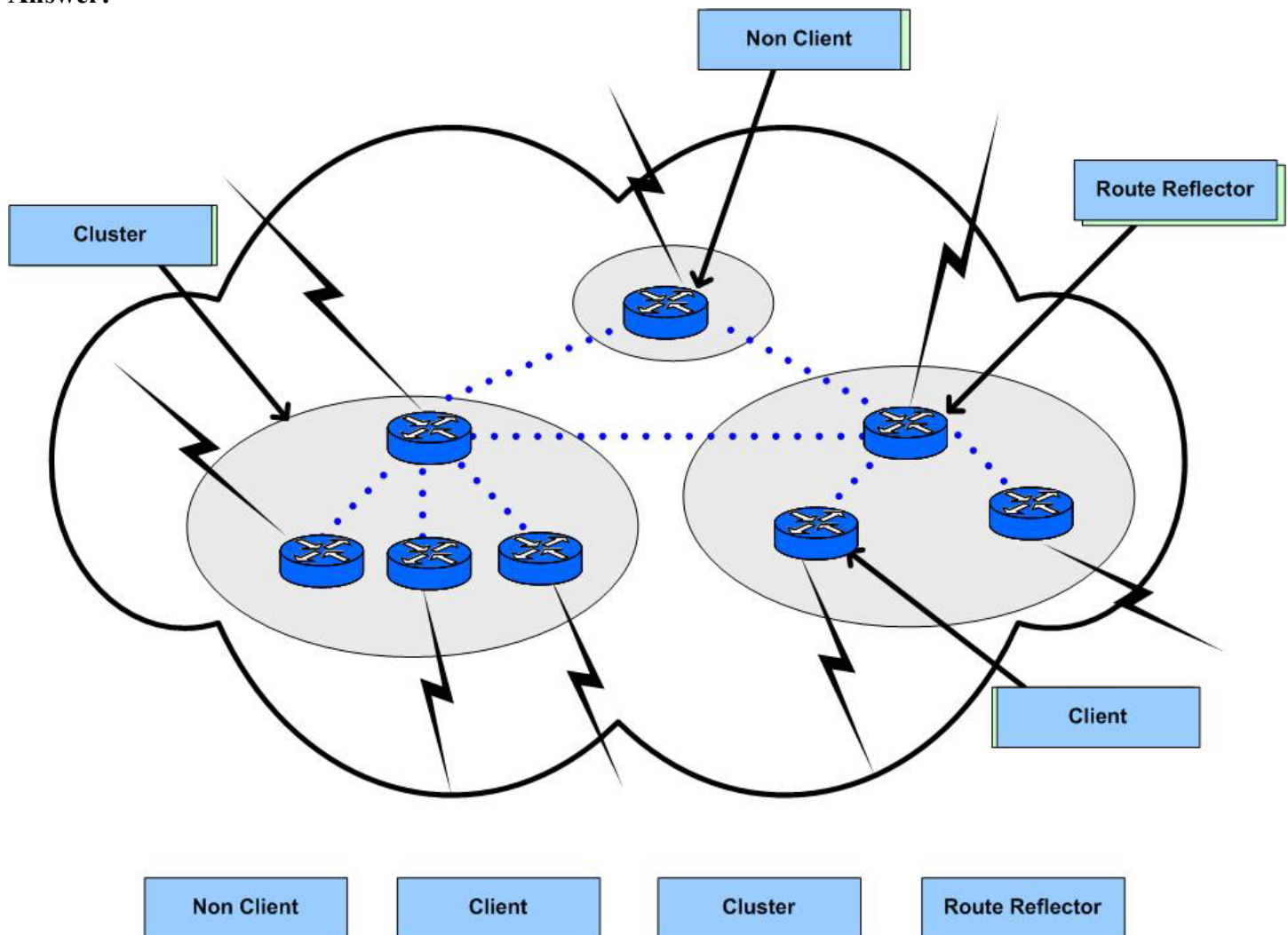
Answer:

Q148.
Which two Cisco IOS commands are used to view the state of the link, such as exstart, exchange, or full?
(Choose two.)

    A. show ip ospf
    B. show ip protocols
    C. show ip ospf neighbor
    D. show ip ospf interface

Answer: C, D.

Q149.
Which command should you use to verify what networks are being routed by a given OSPF process?

    A. show ospf
    B. show ip route
    C. show ip protocols
    D. show ip ospf database

Answer: B.

Q150.
Why would you configure subinterfaces in an OSPF NBMA topology?

    A. to conserve IP addressing space
    B. to avoid split-horizon issued with the routing protocol
    C. because logical interfaces are more reliable than physical interfaces
    D. because the subinterfaces remains up when the physical interface changes

Answer: B.

Q151.
Which two characteristics does the `network` command define? (Choose two.)

    A. the OSPF area ID
    B. the OSPF router ID
    C. the OSPF process ID
    D. which interface is in which OSPF area

Answer: A, D.

Q152.
What must a router determine in order to route data?

    A. the route age of the next-hop device
    B. the subnet mask of the source network
    C. the cost metric of the path of the destination
    D. the outbound interface of the best path to the destination

Answer: D.

Q153.
Which kind of router has an interface in two or more OSPF areas?

    A. ABR
    B. ASBR
    C. internal router
    D. backbone router

Answer: A.

Q154.
You would like to configure a route map that will modify the metric for the network in the following access list:

access-list 5 permit 176.234.5.0

Drag the commands in the proper order to configure the route map. You are not required to apply the route map at this time.

Set distance 30

Set administrative- distance 30

Set metric 30

Match network 5

Match ip-class 5

Match ip address 5

Route-map permit ip 10 **lance**

Route-map **lance** permit 10

Router(config)#   Place here

Router(config-route-map)#   Place here

Router(config-route-map)#   Place here

Answer:

Set distance 30

Set administrative- distance 30

Match network 5

Match ip-class 5

Route-map permit ip 10 **lance**

Router(config)# — Route-map **lance** permit 10

Router(config-route-map)# — Match ip address 5

Router(config-route-map)# — Set metric 30
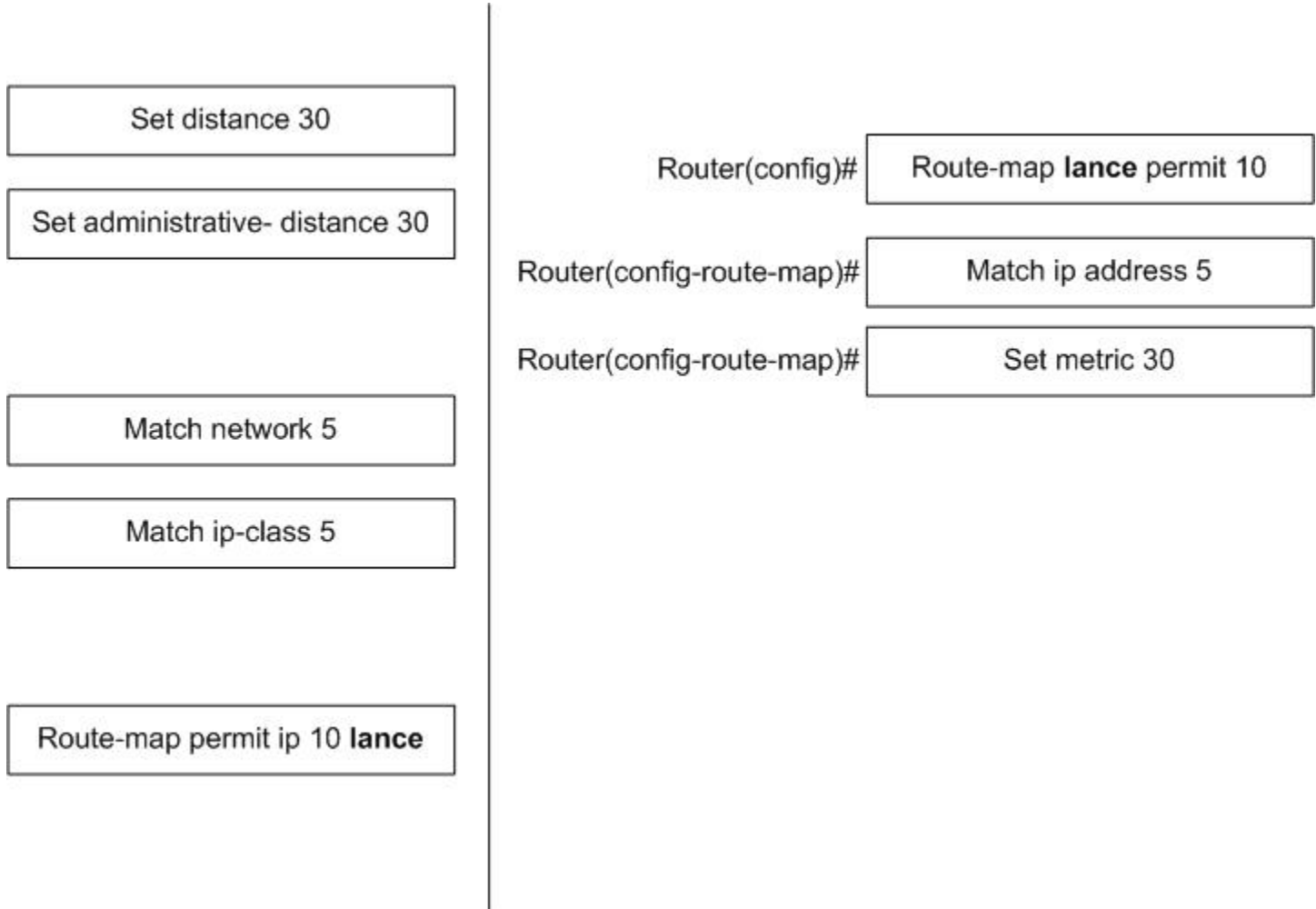
Q155.
A fast food chain is planning to provide network connectivity for two of its restaurants: Sydney and Perth. Each restaurant will have a single LAN. You have been asked to configure the first router at the Berlin location. The Sydney router has been configured completely except the routing protocol. Configure OSPF as the routing protocol in a single area to allow a host on the LAN on the Sydney router to communicate with a host on the LAN for the Perth router. Due to the fact that adjacent subnets are in use or are planned for the future growth on other routers in the AS, make sure you use specific subnet information in your configuration. Please note, the Perth router will be installed at a later time. The Sydney router has been configured with the following specifications:

- The router is named Sydney.
- The clocking is provided on the Sydney router's serial 0/0 interface.
- The secret password in the Sydney router is "honor".
- Area 0 should be used for the routing protocol.
- Use 1 for the process ID of the routing protocol.
- The IP addresses and subnet masks are listed in the chart.

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Sydney
FA0/0 10.60.2.1/23
S0/0 10.60.4.1/30
Lo 0 10.90.20.10/32

Perth
FA0/0 10.60.6.1/24
S0/0 10.60.4.2/30
Lo 0 10.90.20.20/32
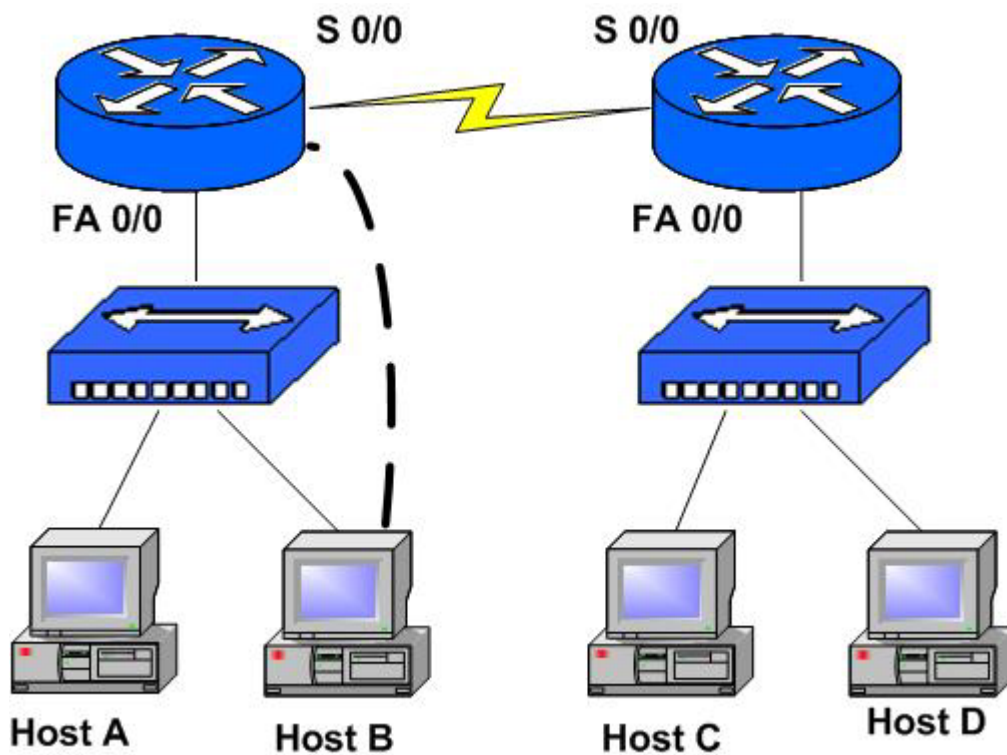
Please provide the complete configuration and also the prompt where the configuration is to be done.

Lab A
Sydney
FA0/0 10.60.2.1/23
S0/0 10.60.4.1/30
Lo 0 10.90.20.10/32

Secret Password: honor

Lab B
Perth

FA0/0 10.60.6.1/24
S0/0 10.60.4.2/30
Lo 0 10.90.20.20/32

Answer:
Sydney#config terminal
Sydney(config)#router ospf 1
Sydney(config-router)#network 10.60.6.1 0.0.0.0 area 0
Sydney(config-router)#network 10.60.4.2 0.0.0.0 area 0
Sydney(config-router)#network 10.90.20.20 0.0.0.0 area 0
Sydney(config-router)#exit
Sydney(config)#exit
Sydney#copy run start

Q156.
Which three protocols support variable-length subnet masks (VLSM)? (Choose three.)

   A. IS-IS
   B. IGRP
   C. OSPF
   D. EIGRP
   E. RIP v1

Answer: A, C, D.

Q157.
Which statement about route summarization in OSPF is true?

   A. Type 3 and type 4 LSAs carry external summarized routes.
   B. Summarization prevents type 1 link LSAs from being propagated into the backbone area0.
   C. Route summarization can be performed at any point in the network where enough contiguous addresses are present.
   D. Route summarization reduces the amount of bandwidth, CPU, and memory resources consumed by the OSPF process.

Answer: D.

Q158.
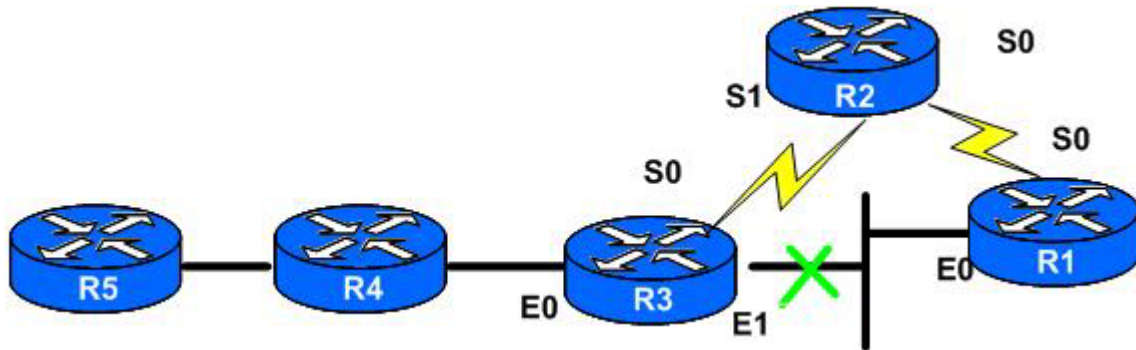
Your network uses the EIGRP routing protocol. Which two actions does R3 take when the link between Router R3 and Router R1 goes down? (Choose two)

    A. It elects a new designated router.
    B. It sends a flash update with poison reverse.
    C. It checks its topology table for an alternate route.
    D. It re-broadcasts its routing table to all other neighboring routers.
    E. It sends a query to neighboring routers for other routers to the failed link.

Answer: B, C.

Q159.
What does an ABR connect in an OSPF network?

    A. multiple OSPF areas
    B. OSPF and RIP networks
    C. multiple designated routers
    D. multiple OSPF autonomous systems

Answer: A.

Q160.
The following example is a configuration on a 256kbps HDLC interface.

    interface serial 0/0
    bandwidth 56
    ip bandwidth-percent eigrp 1 200

Based on this example, how much bandwidth is allocated for EIGRP traffic?

A. 56 kbps
B. 112 kbps
C. 128 kbps
D. 200 kbps
E. 256 kbps

Answer: B.

Q161.
Which two routing protocols support load balancing over unequal cost paths? (Choose two.)

A. IGRP
B. OSPF
C. EIGRP
D. RIP v2
E. RIP v1

Answer: A, C.-

Q162.
What state must an OSPF router be in to route traffic?

A. full state
B. active state
C. two-way state
D. forwarding state

Answer: A.

Q163.

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
```

The exhibit shows a partial display of the show ip route command on a Cisco router. What is the administrative disctance of the external EIGRP routes?

    A. 24
    B. 32
    C. 90
    D. 170
    E. 27316

Answer: D.

Q165.
You have configured multiple IP routing protocols on a single router and need to check the filtering of protocols. Which command lists the filters applied to inbound and outbound routing updates on a routing protocol basis?

    A. show ip
    B. show ip route
    C. show ip protocols
    D. show ip interface

Answer: C.

Q166.
When a static route is configured on a router and that router must advertise it to the other routers in the network, which statement is true?

    A. The router automatically advertises static routes to RIP routers.

B. You should configure redistribution using the **redistribute** command.
C. You should enable static advertisment using the **static routes advertise** command.
D. You should include the static route in a distribution list using the **distribute-list** command.

Answer: A.

Q167.
Your company uses the RIP v2 routing protocol. Your core router detects a flapping link to a neighboring router.

How does the core router react?

A. It recalculates the network topology.
B. It purges that link from its routing table.
C. It places a hold-down on the routes from that link.
D. It sends a LSA to other router requesting an RIP update.

Answer: C.

Q168.
Which three UDP ports are enabled automatically when the `ip helper-address` commands is used on a router? (Choose three.)

A. 53 (DNS)
B. 69 (TFTP)
C. 515 (LPR)
D. 161 (SNMP)
E. 49 (TACACS)

Answer: A, B, E.

Q169.
Which command ensures that permanently created route entries are injected into the routing process?

A. inject static
B. inject permanent
C. redistribute all

D. redistribute static

Answer: D.

Q170.
Which configuration requirement to summarize routes does an ASBR have that ABRs do not?

A. **area range** command
B. **ospf summarize** command
C. **aggregate-route** command
D. **summary-address** command

Answer: D.

Q171.
Which command displays the IBGP and EBGP neighbors that are configured?

A. show ip bgp
B. show ip bgp paths
C. show ip bgp peers
D. show ip bgp summary

Answer: D.

Q172.
What two are benefits of hierarchical IP addressing? (Choose two.)

A. smaller routing tables
B. efficient address allocation
C. translation of private addresses
D. support for link-state routing protocols

Answer: A, B.

Q173.
Why is stability of routes a consideration when designing OSPF areas?

    A. Instability causes more LSAs to be sent, requiring more CPU to recalculate routes.
    B. Convergence cannot happen until holddown timers expire, so routing loops can occur.
    C. Flooding the area topological database instances consumes excessive bandwidth.
    D. Summary link LSAs cannot be sent until all routers in the OSPF area have the same topological database.

Answer: A.

Q174.
You have limited router memory. What does Cisco suggest as the best way to connect to multiple ISPs using BGP?

    A. receive only default routes.
    B. receive only partial BGP routes.
    C. receive only internal BGP routes.
    D. receive only redistributed routes.

Answer: A.

Q175.
Router Smolensk:

    router bgp 65300
    network 27.0.0.0
    neighbor 192.23.1.1 remote-as 65300

What type of relationship is neighbor 192.23.1.1 to Router Smolensk?

    A. a peer router running IBGP
    B. a peer router running EBGP
    C. a community member running IBGP
    D. a peer group member running IBGP
    E. a peer group member running EBGP

Answer: A.

Q176.
Router R1 is the main office router in a hub and spoke topology supporting 24 regional offices. Point-to-point Frame Relay EIGRP network is deployed between the main office and the regional offices. The CIR for each Frame Relay PVC is different and that there is no **bandwidth** command configured under either the major serial interface nor the subinterfaces on Router R1.

What is a possible fix for the potential EIGRP packet pacing problem because of the different CIR and PVC has?

   A. convert each Frame Relay PVC to point-to-multipoint connection
   B. manually configure the bandwidth of the major interface to the lowest CIR x 24
   C. manually configure the bandwidth of the major interface to the highest CIR x 24
   D. manually configure the bandwidth of each of these PVCs to equal to their respective CIR.

Answer: D.

Q177.
```
CTV#show ip route

Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, * - candidate default


<Some output deleted>

 Gateway of last resort is 30.64.0.2 to network 0.0.0.0

    30.0.0.0/8 is variably subnetted, 9 subnets, 2 masks
O IA   30.2.0.0/16 [110/74] via 30.64.0.2, 00:09:13, Ethernet0
C      30.1.3.0/24 is directly connected, Serial0
O IA   30.3.0.0/16 [110/148] via 30.64.0.2, 00:05:22, Ethernet0
C      30.1.2.0/24 is directly connected, Serial1
```

Given the output of a show ip route command shown in the exhibit, which two statements about the routing table are true? (Choose two.)

   A. The area is a stub area.
   B. The area is totally stubby.
   C. Network 30 is using VLSM

D. The routing table is for an ABR

Answer: A, C.

Q178.
There are four paths to Network A, and the Feasible Distance is 3. Which link will become a feasible successor?

A. Link A, Feasible Distance 3 and Advertise Distance 1
B. Link B, Feasible Distance 5 and Advertise Distance 4
C. Link C, Feasible Distance 4 and Advertise Distance 2
D. Link D, Feasible Distance 4 and Advertise Distance 4

Answer: C.

Q179.
You have the subnet/mask of 186.37.100.0/26 set aside for use by some small branch offices. You want to use VLSM to further subnet this block of addresses so that you will have six usable host addresses in each branch subnet.

Which VLSM mask should you use?

A. /24
B. /28
C. /29
D. /30
E. /31

Answer: C.

Q180.
Which two statements about VLSM support in OSPF are true? (Choose two.)

A. A multiple area OSPF design dictates that VLSM be used throughout the AS.
B. Summarization can be performed with different prefix lengths throughout the network.
C. The use of VLSM enables a truly hierarchical addressing scheme to be developed.
D. OSPF's support for VLSM does not compensate for its inability to handle discontiguous subnets.

Answer: B, C.

Q181.
On a slow NBMA media, what is the default hold time for EIGRP hellos?

    A. 30 seconds
    B. 60 seconds
    C. 90 seconds
    D. 180 seconds

Answer: D.

Q182.
Subnets 172.16.94.0/24 through 172.16.118.0/24 are used in your network. A correctly configured summary statement with a network value of 172.16.96.0 and mask of 255.255.240.0 has summarized some of the subnets.

Which subnet is the last subnet to be included by the summary element?

Answer: 172.16.111.0

Q183.
What are two classes routing protocol features supported by EIGRP? (Choose two,)

    A. Djikstra's algorithm
    B. discontiguous subnets
    C. variable length subnet masks
    D. periodic update announcements
    E. unequal path-cost load balancing

Answer: B, C.

Q184.

Which redistribution method can be used to prevent routing loops between two autonomous systems from running different routing protocols and having redundant paths?

A. static redistribution
B. passive redistribution
C. two-way redistribution
D. one-way redistribution

Answer: A.

Q185.
Which two statements about BGP peer groups are true? (Choose two.)

A. The peer group name is passed to other routers in the peer group.
B. A peer group is a group of BGP neighbors with different update policies.
C. The peer group name is only local to the router on which it is configured.
D. A peer group allows options that affect outbound updates to be overridden.
E. A peer group is a more efficient way to update BGP than configuration individual neighbors.

Answer: C, E.

Q186.
What appear in a routing table after EIGRP route summarization is configured on a router's Serial0 interface summarizing routes learned from Ethernet0 interface?

A. a summary route pointing to the Null0 interface.
B. a summary route pointing to the Serial0 interface.
C. a summary route pointing to the Ethernet0 interface.
D. a summary route pointing to the Loopback0 interface.

Answer: C.

Q187.
Router Dallas is the main office router in a hub and spoke topology supporting 24 regional offices. Point-to-multipoint Frame Relay EIGRP network is deployed between the main office and the regional offices. There is no bandwidth command configured under either the major or the subinterfaces on router Dallas.

What is the bandwidth of each Frame Relay connection perceived by the EIGRP process?

A. 64 kbps
B. 128 kbps
C. 1 544 Mbps
D. 1 536 Mbps

Answer: A.

Q188.
Which three commands can be used to verify route redistribution? (Choose three.)

A. debug
B. traceroute
C. show summary
D. show ip route

Answer: A, B, D.

Q189.

```
interface serial 0
      ip address 185.64.1.1 255.255.255.0
!
interface ethernet 0
      ip address 15.10.10.1 255.255.255.0
!
router rip
      network 15.10.10.0
!
ip route 0.0.0.0 0.0.0.0 serial0
```

What would happen with the configuration as in the exhibit above?

A. RIP updates are sent and received on interface serial0 of the router.
B. A default route is sent to neighbors on interface serial0 of the router.
C. A default route is sent to neighbors on interface ethernet0 of the router.
D. RIP updates are sent and received on interfaces serial0 and ethernet0 of the router.

Answer: D.

Q190.
Which three statements about BGP attributes are true? (Choose three.)

    A. MED is an optional attribute.
    B. Origin is an optional attribute.
    C. Next-hop is an optional attribute.
    D. Local Preference is an optional attribute.
    E. AS-Path is an well-known mandatory attribute.
    F. Community is a well-known mandatory attribute.

Answer: A, D, E.

Q191.
You are configuring redistribution to advertise EIGRP routes into OSPF on a boundary router. Given the configuration:

```
router ospf 1
redistribute eigrp 1 metric 33 subnets
```

What is the function of the 33 parameter in the `redistrute` command?

    A. It specifies the seed cost to be applied to the redistributed routes.
    B. It specifies the administrative distance on the redistributed routes.
    C. It specifies the metric limit to 33 subnets in each OSPF route advertisement.
    D. It specifies the process-id for the pseudo process that injects the EIGRP routes into OSPF.

Answer: B.

Q192.
Now IGP is running as AS 64700. Which router(s) in AS 64700 will advertise a route to 183.32.0.0 if synchronization is OFF?
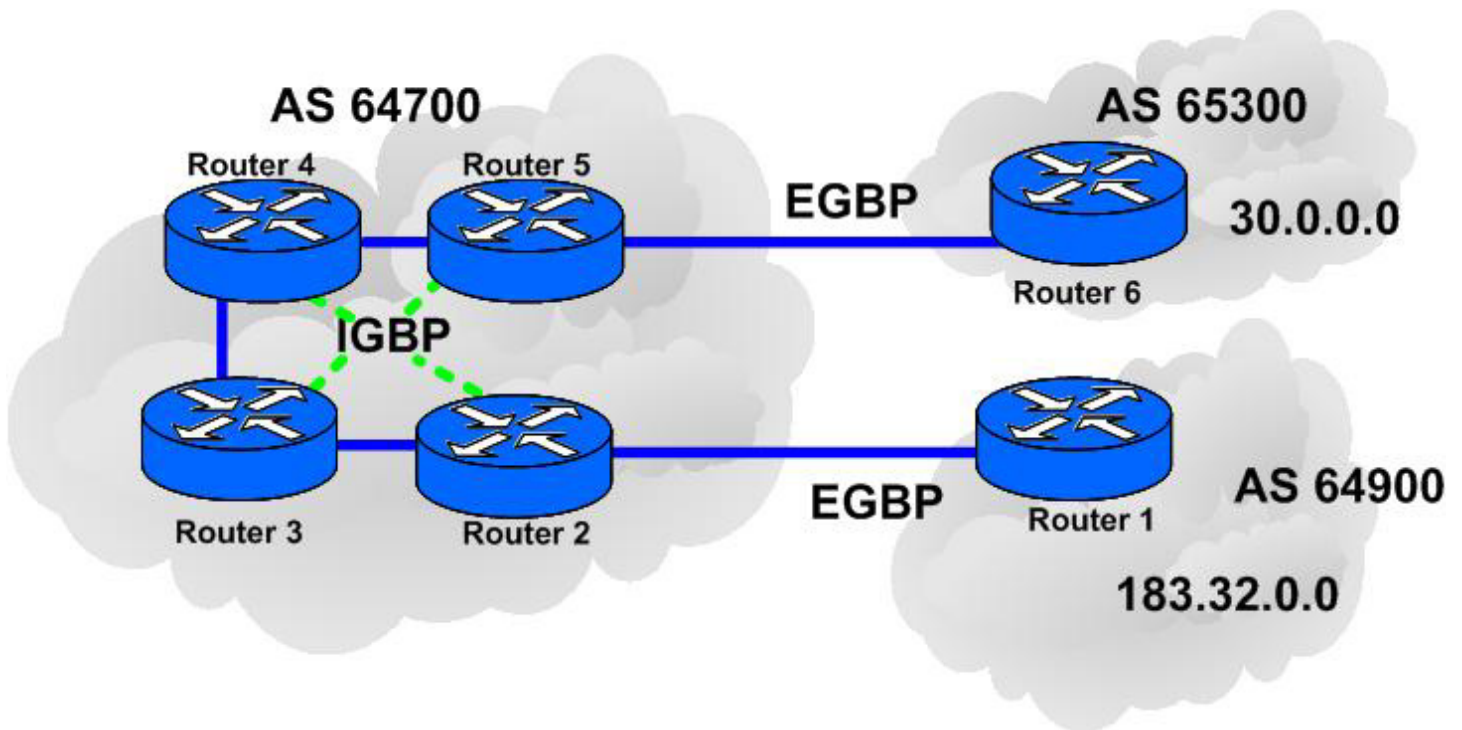
A. 2 only
B. 5 only
C. 2 and 5 only
D. 2, 3, and 4 only
E. 2, 3, 4, and 5

Answer: C.

Q193.
Which three statements are true regarding the information of EIGRP peer relationships? (Choose three.)

A. EIGRP will form neighbors if the routers are not adjacent
B. EIGRP will not form neighbors if the metric K-values do not match.
C. EIGRP will not form neighbors if the router AS numbers do not match.
D. EIGRP will form neighbors over primary and secondary interface addressing.
E. EIGRP will form neighbors even though hello and hold timers do not match on the peering interfaces.

Answer: B, C, E.

Q194.

Which two statements are true about BGP peering? (Choose two.)

    A. Periodic keepalives are used to verify connectivity.
    B. Incremental keepalives are used to verify connectivity.
    C. It provides a reliable connection between two BGP routers.
    D. It provides a "best effort" connection between two BGP routers.

Answer: A, C.

Q195.
You are using multiple routing protocols in different Autonomous Systems (AS). You need to redistribute between the systems. You are using two-way redistribution.

Which action should help you avoid routing loop issues?

    A. manually configuring route filters
    B. manually configuring static routes
    C. manually configuring passive interfaces
    D. manually configuring the default gateway

Answer: A.

Q196.
What are two valid reasons that require an IBGP router to be peered with all IBGP routers within an AS? (Choose two.)

    A. IBGP routes are not propagated to other EBGP peers.
    B. IBGP routes that a router originates are propagated to other IBGP peers.
    C. IBGP routes are propagated to other IBGP speakers in the AS that are not peers.
    D. IBGP routes that are learned from an IBGP neighbor are propagated to only EBGP peers.

Answer: A, B.

Q197.
What happens if a BGP route reflector receives updates from a peer in another autonomous system?

    A. It discards the update.

B. It sends the update to all IBGP peers.
C. It sends update only to nonclients.
D. It sends the update only to route reflector clients.
E. It sends the update to all routers in the autonomous system.

Answer: E.

Q198.
How should you configure a BGP prefix list to permit all prefixes between /10 and /18 for the 207.0.0.0 network?

A. ip prefix-list 207.0.0.0/8 ge 10 le 18
B. ip prefix-list 207.0.0.0/8 ge 18 le 10
C. ip prefix-list 207.0.0.0/24 ge 10 le 18
D. ip prefix-list 207.0.0.0/24 ge 18 le 10

Answer: A.

Q199.
```
        RTR Rom1
            router bgp 200
            neighbor 183.215.22.1 remote-as 200
            neighbor 183.215.22.1 update-source loopback 1
        RTR Rom2
            router bgp 200
            neighbor 147.229.1.1 remote-as 200
```

Which tree statements are correct about the configuration in the exhibit above? (Choose three.)

A. RTR Rom1 and RTR Rom2 are running IBGP inside AS 200
B. The IP address of RTR Rom1's Loopback 1 interface is 147.229.1.1.
C. The IP address of RTR Rom1's Loopback 1 interface is 183.215.22.1.
D. RTR Rom1 and RTR Rom2 are running EBGP between the autonomous systems.
E. RTR Rom1 has forced BGP to use the loopback IP address as the source in the TCP neighbor connection.

Answer: A, B, E.

Q200.
Why is it necessary to redistribute or advertise IGP (such as OSPF and EIGRP) routes into BGP?

    A. so BGP can propagate this information to other IGP neighbors.
    B. so BGP can propagate this information to other IBGP neighbors.
    C. so BGP can propagate this information to other EBGP neighbors.
    D. so BGP can propagate this information to other OSPF neighbors.

Answer: C.

Q201.
Which three statements about EIGRP routing are true? (Choose three)

    A. It sends periodic updates every 60 seconds.
    B. EIGRP uses DUAL to achieve rapid convergence.
    C. Adjacencies exist between master routers (MRs) in each domain.
    D. It uses multicast to discover other EIGRP routers on an internetwork.
    E. EIGRP provides support for multiple network layer protocols: IPX, AppleTalk, and IP.

Answer: B, D, E.

Q202.
How does Cisco recommend you populate the BGP table with IGP routes?

    A. Use the `network` command.
    B. Redistribute EBGP routes into BGP.
    C. Redistribute dynamic routes into BGP.
    D. Redistribute static routes into the IGP.

Answer: C.

Q203.
Diagram
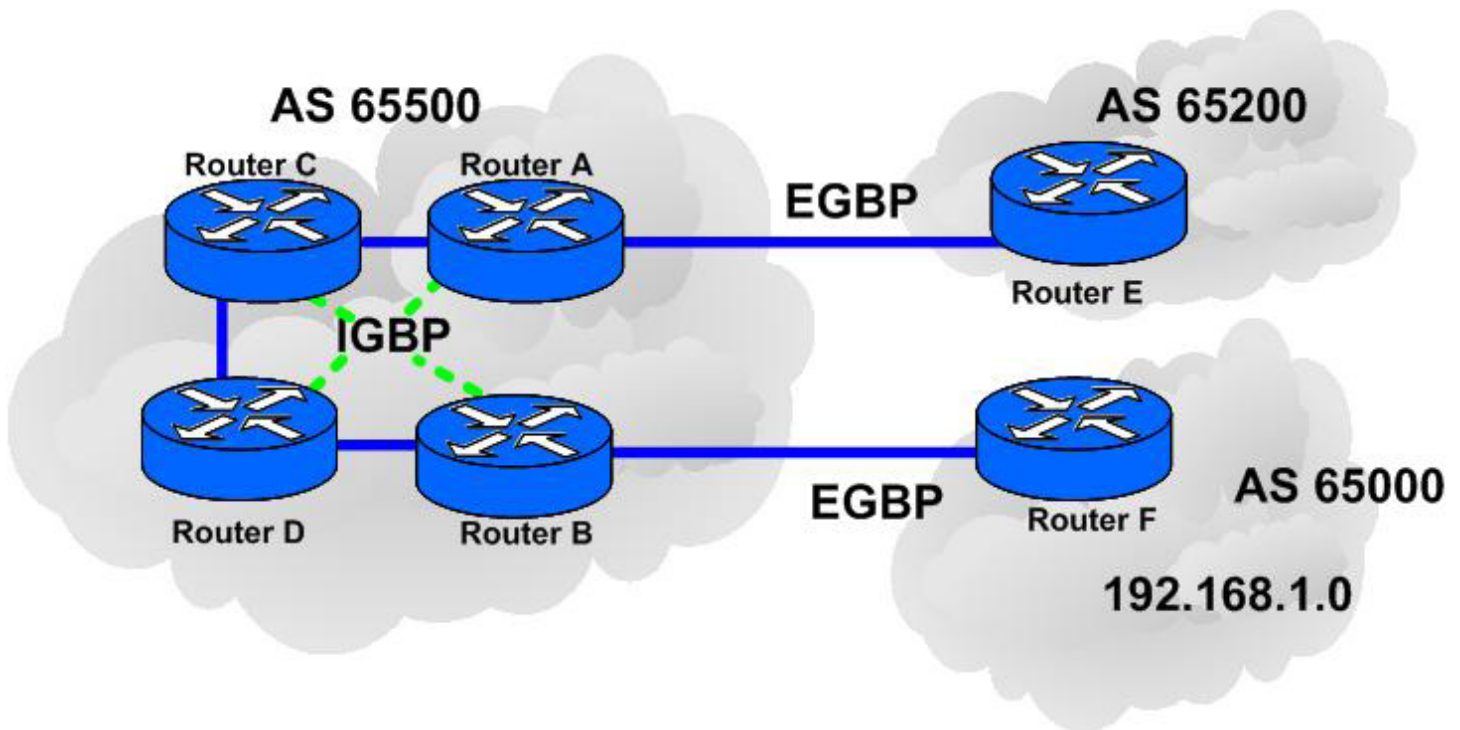
All routers are running BGP only. BGP synchronization is OFF in AS 65500.
In which routing table(s) will a route to 192.168.1.0 be found?

    A. Router F
    B. Routers B and F
    C. Routers B, D, and F
    D. Routers B, C, D, and F
    E. Routers A, B, C, D, and F
    F. Routers A, B, C, D, E, and F

Answer: F.

Q204.
Which BGP prefix list should you use to deny the default route 0.0.0.0/0?

    A. `ip prefix-list abc deny 0.0.0.0/0`
    B. `ip prefix-list abc permit 0.0.0.0/32`
    C. `ip prefix-list abc deny 255.255.255.255/0`
    D. `ip prefix-list abc permit 255.255.255.255/32`

Answer: A.

Q205.
Which statement about classless routing protocols is true?

    A. A default gateway is required.
    B. Variable-length subnet masks are not supported.
    C. Routers are automatically summarized to class boundaries.
    D. Networks with different subnet masks can exist in the same address class.

Answer: D.

Q206.
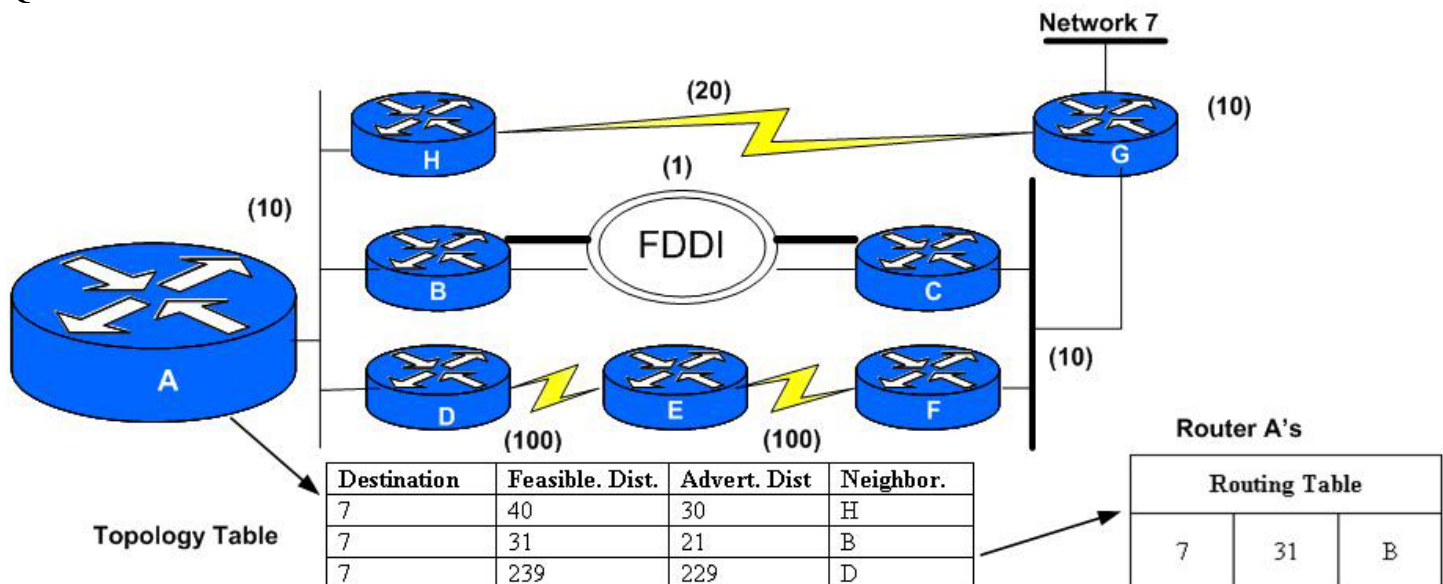
In the exhibit, after the FDDI interface on Router B is shutdown, which router becomes the EIGRP feasible successor to network 7 for Router A?

    A. B
    B. D
    C. H
    D. There is no feasible successor

Answer: D.

Q207.
Given the output of the `show ip bgp` command:

```
router>sh ip bgp
BGP table version is 1046033, local router ID is 198.32.162.100
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
* >    128.213.0.0 128.214.63.2   0    400     0    200 1
*      128.213.0.0 192.208.10.5   0    300     0    300 1
*      128.213.0.0 128.213.63.5   0    100     0    200 1
*      128.213.0.0 203.250.13.41  0    100     0    500 1
```

What is the preferred path out of the AS that will be taken for the 128.213.0.0 network?

    A. 128.214.63.2
    B. 192.208.10.5
    C. 128.213.63.5
    D. 203.250.13.41

Answer: A.

Q208.
Which statement about the routing tables on Cisco routers is true?

    A. Entries are listed in the order of the route cost metric.
    B. Only the active link is shown for load-balanced routers.
    C. Privileged EXEC mode is required to view the routing table.
    D. The `clear ip route *` command refreshes the entire routing table.

Answer: C.

Q209.
There are five paths from router A to a given destination. The local EIGRP metrics (on router A) for these paths are as follows:

```
        Local
---------------------------
Path 1:  1500
```

```
Path 2:  1500
Path 3:  2000
Path 4:  4000
Path 5:  4000
```

Which variance 3 configured on Router A, which paths are included in A's routing table to get the destination?

    A. path 1, 2, and 4
    B. path 1, 2, and 3
    C. path 1, 2, and 5
    D. path 1, 2, 4, and 5
    E. path 1, 2, 3, 4, and 5

Answer: E.

Q210.
Which two events take place when a full mesh of BGP sessions is configured within an autonomous system?

    A. Many UDP session will be created.
    B. More memory and CPU are consumed.
    C. The configuration is not permitted by default.
    D. A significant amount of bandwidth for BGP updates and retransmissions can be used.
    E. Permanent Virtual Circuits (PVCs) must be created to link the fully meshed BGP sessions.

Answer: B, D.

Q211.
```
S    62.99.153.0/24 [1/0] via 209.177.64.130
     172.209.12.0/32 is subnetted, 1 subnets
D EX   172.209.12.1
          [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     62.113.17.0/29 [90/30208] via 62.113.20.10, 07:35:24, ATMO/1/0.130
S     62.113.17.0/24 [1/0] via 62.113.1.25
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
D    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
        [90/24823552] via 209.180.96.45, 07:35:24, FastEthernet1/0/0
        [90/24823552] via 209.180.96.44, 07:35:24, FastEthernet1/0/0
S*   0.0.0.0/0 [1/0] via 209.180.96.14
```

The exhibit shows a partial display of the `show ip route` command on a Cisco router. Which network address is a static route entry?

A. 99.3.215.0
B. 62.99.153.0
C. 172.209.12.1
D. 62.113.1.227

Answer: B.

Q212.
In which two ways do link-state protocols benefits from their hierarchical design? (Choose two)

A. It allows link-state protocols to support VLSM.
B. It allows them to support address summarization.
C. It reduces the need to flood LSAs to all devices in the internetwork.
D. Routers are no longer required to keep track of the topology of the entire area.

Answer: B, C.

Q213.
Given the configuration on Router A:

```
router bgp 65000
network 10.0.0.0
neighbor 172.17.1.1 remote-as 65000
neighbor 192.168.1.2 remote-as 65100
```

Which two are outcomes? (Choose two)

A. The router will address 172.17.1.1 runs IBGP with Router A.
B. The router with address 172.17.1.1 runs EBGP with Router A.
C. The router with address 192.168.1.2 runs EBGP with Router A.
D. The router with address 172.17.1.1 runs as a community member with Router A.

E. The router with address 192.168.1.2 runs as a peer group member with Router A.

Answer: A, C.

Q214.
Which two routing protocols use hop count as a distance metric? (Choose two)

    A. IGRP
    B. OSPF
    C. EIGRP
    D. RIP v.2
    E. RIP v.1

Answer: D, E.

Q215.
Which routing protocol uses the Diffusing Update Algorithm (DUAL) for route calculation?

    A. IGRP
    B. OSPF
    C. EIGRP
    D. RIP v.2
    E. RIP v.1

Answer: C.

Q216.
Your internal network is configured to use OSPF: Two gateway routers, GW1 and GW2 are injecting external routes learned through BGP into OSPF via redistrution. Router GW1 is injecting subnets in the range 128.213.64.0 through 128.213.95.0. Router GW2 is injecting subnets 128.213.96.0 through 128.213.127.0. Configure router GW1 to summarize the subnets into one range before injecting them into OSPF. The router has already been configured as follows:

GW1(config)#router ospf 100
GW1(config-router)#redistribute bgp 50 metric 1000 subnets

GW1(config-router)# | Drop here | | Drop here | | Drop here |

| auto-summary | | summary-address |

| 128.213.0.0 | | 255.255.224.0 |

| network | | 128.213.64.0 |

| 0.0.31.255 |

Answer:

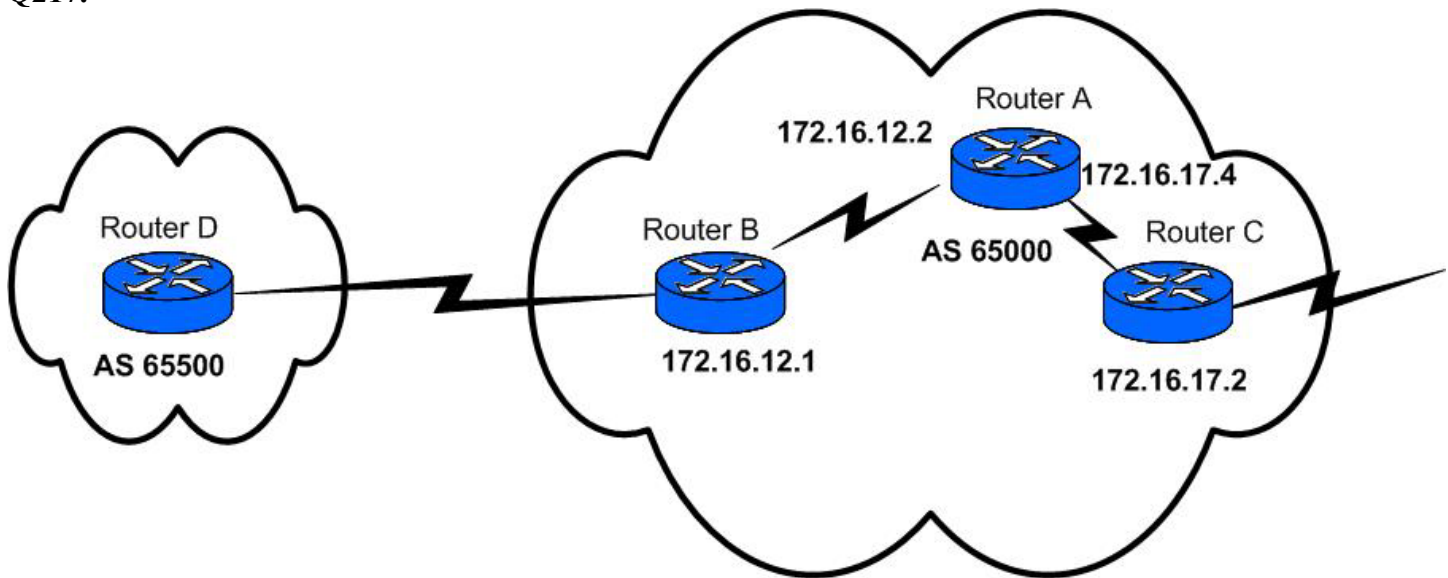GW1(config-router)# | summary-address | | 128.213.64.0 | | 255.255.224.0 |

auto-summary

128.213.0.0

network

0.0.31.255

Q217.

You want to configure Router B as a BGP route reflector and Router A as its client. Router C is not running BGP.
Which two commands are necessary on Router B? (Choose two)

    A. neighbor 172.16.12.1 remote-as 65500
    B. neighbor 172.16.12.2 remote-as 65000
    C. neighbor 172.16.12.1 route-reflector-client
    D. neighbor 172.16.12.2 route reflector-client

Answer: B, D.

Q218.
Which two routing protocols are limited in scalability to relatively small networks? (Choose two)

    A. IGRP
    B. OSPF
    C. EIGRP
    D. RIP v.2
    E. RIP v.1

Answer: D, E.

Q219.
Which statement is true about the communication between BGP peers?

    A. It runs over RIP.
    B. It runs over TCP.
    C. It runs over UDP.
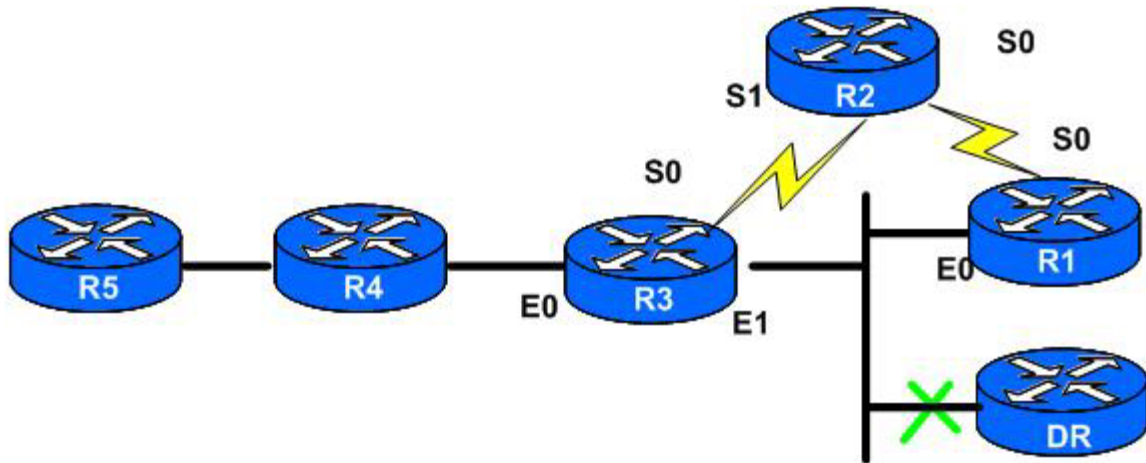   D. It runs over ICMP.

Answer: B.

Q220.
Which is the correct command to configure EIGRP summary route?

    A. `ip auto-summary` *as-number address mask*
    B. `ip summary-address` *as-number address mask*
    C. `ip auto-summary eigrp` *as-number address mask*
    D. `ip summary-route eigrp` *as-number address mask*
    E. `ip summary-address eigrp` *as-number address mask*

Answer: E.

Q221.
Diagram

Your network uses the OSPF routing protocol. Which action to Routers R1 and R3 take when the link to the DR (designated router) goes down?

    A. They send a flash update with poison reverse.
    B. They perform the designated router election process.
    C. They re-broadcast their routing tables to all other neighboring routers.
    D. They send a query to neighboring routers for other routers to the failed link.

Answer: B.

Q222.
There is one connection to another AS. What does Cisco suggest as the best way to establish routing to the Internet through that AS?

    A. IGP routing
    B. BGP routing
    C. Create a default route
    D. Configure `ip default-gateway ip address`

Answer: B.

Q223.
Your OSPF network is experiencing trouble with convergence. Which three factors affect convergence on your network? (Choose three)

    A. Hold-down timers.

B. The size of the network.
C. The number of routing areas.
D. Maximum allowed hop count.
E. The route calculation algorithm.

Answer: B, C, E.

Q224.
Which three statements about redistribution and EIGRP are true? (Choose three)

A. IPX RIP redistribution with IPX EIGRP is enabled by default.
B. AppleTalk EIGRP and RTMP redistribution is enabled by default.
C. EIGRP automatically redistributes route information with Novell RIP.
D. Redistribution between EIGRP and IGRP is always enabled by default regardless of the AS number used.

Answer: A, B, C.

Q225.
Given the following Area Border Router configuration:

```
router ospf 110
   network 192.168.32.0 0.0.0.255 area 2
   network 192.168.33.0 0.0.0.255 area 0
   area 2 stub no-summary
   area 2 default-cost 10
```

Which two statements about the `area 2 stub no-summary` command are true? (Choose two)

A. Area 2 is a totally stubby area.
B. If the backbone becomes discontiguous, traffic can be routed through area 2.
C. Redistribution of other routing protocols takes place at the area designated router.
D. Area 2 non-ABR routers contain only intra-area routing information and a default route.

Answer: A, D.

Q226.

What is a characteristic of link-state protocols?

A. Link-state protocols do not support summarization.
B. Static routes must be used to accommodate link redundancy.
C. All routers in the area known when another router joins the area.
D. Link-state protocols utilize spanning tree to propagate routing changes.

Answer: C.

Q227.
You are using multiple protocols in different Autonomous Systems (AS). You need to redistribute between the systems. You are using two-way redistribution.

Which action should help you avoid routing loop issues?

A. Manually configuring the default metric.
B. Manually configuring the default network.
C. Manually configuring the default gateway.
D. Manually configuring the gateway of last resort.

Answer: A

Q228.
Which Cisco IOS command shows the status of the LSAs that have been sent and received, and how long it has been since the last LSA was received?

A. `show ip ospf database`
B. `show ip ospf neighbors`
C. `show ip ospf protocols`
D. `show ip ospf interfaces`

Answer: A.

Q229.
What is the term for the activity associated with synchronizing the routing tables after a topology change occur?

A. flooding

B. broadcasting
C. convergence
D. summarization

Answer: C.

Q230.
You are using policy-based routing. How should you prevent packets with no match in the route map from being returned to the normal forwarding process?

A. Set the next-hop metric to 255 for packets without a match.
B. Use a `set` statement to route packets to the null0 interface.
C. Use a `deny all` statement as the last statement in the route map.
D. Use a `logical OR` in the `match` statement to send packets to the null0 interface.

Answer: B.

Q231.
Your company has just acquired a smaller company with a small network, and you need to connect them to your corporate OSPF, multi-area network. Due to addressing concerns, you decide to make them a new OSPF area, but must physically attach them to existing area 4 until the infrastructure is in place to attach them to the backbone area.

What are three configuration requirements to enable this configuration? (Choose three)

A. There must be a virtual link.
B. Area 4 must be a stub area.
C. Area 4 cannot be a stub area.
D. Area 4 must attach directly to area 0.
E. Network summary link LSAs must be disabled.

Answer: A, C, D.

Q232.
What are two parameters that the `show ip ospf interface` command provide? (Choose two)

A. router ID

B. summary link counts
C. neighbor adjacencies
D. link-state update interval

Answer: C, D.

Q233.
A company is migrating their network from RIP to OSPF. The private address 10.0.0 is used internally for routing. In the boxes below construct the correct command sequence to redistribute all RIP routes into OSPF and assign them the metric 60.

Select from these

router ospf 13

router rip

redistribute ospf 13

redistribute rip

redistribute rip network

redistribute rip subsets

metric 60

default-metric 60

Router(config)#   Drop here

Router(config-router)#   Drop here

Router(config-router)#   Drop here

Answer:

Select from these

router rip	
redistribute ospf 13	
redistribute rip	
redistribute rip network	
metric 60	

Router(config)# — router ospf 13

Router(config-router)# — redistribute rip subsets

Router(config-router)# — default-metric 60
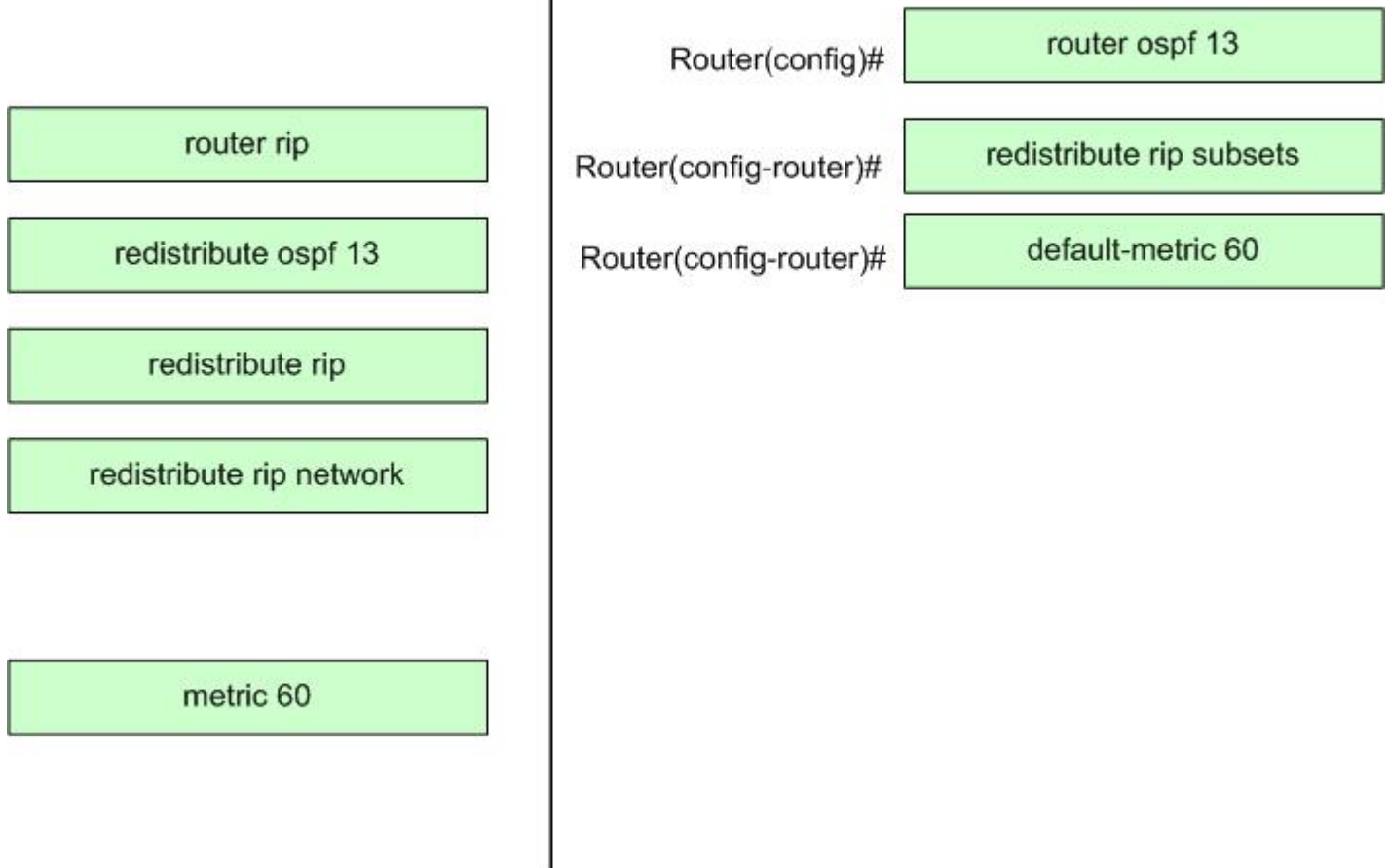
Q234.
Which three rules apply to subnetting an address with VLSM? (Choose three)

    A. A subnet is made up of all aggregated routes.
    B. A subnet can address hosts, or be further subnetted.
    C. A routing protocol must carry the subnet mask in updates.
    D. Summarized networks must have the same high-order bits.

Answer: B, C, D.

Q235.
To maintain route consistency, what happens when a router sees a change to an existing OSPF network?

A. It enters the exstart state with its neighbors.
B. It floods the area with new routing information.
C. It generates a routing exchange using the hello protocol.
D. It waits for the holddown timers to expire, then sends the update.

Answer: B.

Q236.
Which three are EIGRP reliable packets? (Choose three)

A. hello
B. ACK
C. reply
D. query
E. update

Answer: C, D, E.

Q237.
What are two reasons to configure multiple areas in OSPF? (Choose two)

A. It eliminates the need for a DR or BDR in the OSPF network.
B. It eliminates security concerns by segregating portions of the network.
C. Type 1 and 2 LSAs are confined to a single area, reducing routing overhead.
D. Area members have smaller topological databases than if the network was one large area, requiring less CPU to derive routes.

Answer: C, D.

Q238.
Which statement is true about BGP policy-based routing?

A. If the next-hop router goes down and no alternative path is in place, policy routing will route to null 0.
B. If the next-hop router goes down and no alternative path is in place, policy routing will default to another BGP path.

C. If the next-hop router goes down and no alternative path is in place, policy routing will deny all traffic to that destination.
D. If the next-hop router goes down and no alternative path is in place, policy routing will default to dynamic routing decisions.

Answer: C.

Q239.
By default, when using VLSM in an EIGRP network, where is route summarization accomplished?

A. At WAN interfaces.
B. Manually at major network boundaries.
C. Dynamically at discontiguous interfaces.
D. Dynamically at major network boundaries.

Answer: D.

Q240.
What information is found in a type 3, network summary link LSA?

A. Summary of routes in the AS.
B. Summary of link states in an OSPF area.
C. Summary of IP subnets in an OSPF area.
D. Summary of metric costs from ABR to ASBR.

Answer: A.

Q241.
Which statement is true about IBGP routers?

A. They must be fully meshed.
B. They can be in a different AS.
C. They must be directly connected.
D. They do not need to be directly connected.

Answer: D.

Q242.
What is the recommended solution for configuring interface bandwidth for a point-to-point NBMA network using EIGRP?

    A. The DLCI assigns the bandwidth for the interface.
    B. The sliding window size determines interface bandwidth.
    C. You use the default bandwidth assigned to the interface.
    D. You manually configure bandwidth as the CIR of the PVC.

Answer: D.

Q243.
What are two design constraints that must be met when planning for a multiple OSPF area network? (Choose two)

    A. Each area must connect to area 0.
    B. Each area must have a unique AS number.
    C. Remote areas must be configured as stub or NSSA areas.
    D. Traffic between two areas must travel across the backbone area.

Answer: A, B.

Q244.
Which two statements about BGP peer groups are true? (Choose two)

    A. Peer members inherit all options of the peer group.
    B. Peer groups can be used to simplify BGP configurations.
    C. Peer groups are optional non-transitive attributes for BGP.
    D. A peer group allows options that affect outbound updates to be overridden.

Answer: B, C.

Q245.
What are two possible causes for EIGRP Stuck-In-Active routes? (Choose two)

A. Some query or reply packets are lost between the routers.
B. The neighboring router stops receiving ACK packets from this router.
C. The neighboring router starts receiving route updates from this router.
D. A failure causes traffic on a link between two neighboring routers to flow in only one direction (unidirectional link).

Answer: A, D.

Q246.
You need to advertise the 170.1.2.0/24 network to two different ISPs connected to your router.

Your AS number is 501.
The As number for ISP 1 is 1001.
The As number for ISP 2 is 1002.

Which configuration is correct?

```
A. router bgp 1001
   network 170.1.2.0 mask 255.255.255.0
   neighbor 10.1.1.1 remote-as 1001
   neighbor 20.1.1.1 remote-as 1002
B. router bgp 501
   network 170.1.2.0 mask 255.255.255.0
   neighbor 10.1.1.1 remote-as 1001
   neighbor 20.1.1.1 remote-as 1002
C. router bgp 501
   network 170.1.2.0
   neighbor 10.1.1.1 remote-as 1001
   neighbor 10.1.1.1 remote-as 1002
D. router bgp 1002
   network 170.1.2.0
   neighbor 10.1.1.1 remote-as 1001
   neighbor 20.1.1.1 remote-as 1002
```

Answer: B.

Q247.
Which command displays statistics on EIGRP hello, updates, queries, replies, and acknowledgments?

```
A. debug eigrp packets
B. show ip eigrp traffic
C. show ip eigrp topology
D. show ip eigrp neighbors
```

Answer: B.

Q248.
What is the function of the *parameter* in the EIGRP `variance` *parameter* command?

  A. It acts as a multiplier.
  B. It defines the limit for how far the metrics can be separated.
  C. It indicates how many paths can be used for load balancing.
  D. It indicates how many paths can be used for unequal load balancing.

Answer: B.

Q249.
Which two events occur when redistributing dynamically learned routes from an IGP (such as OSPF and EIGRP) into BGP? (Choose two)

  A. Routing loops can occur.
  B. The IGP routing table is reduced.
  C. External IGP learned routes might not necessarily have originated in this AS.
  D. Route processing is done using process switching instead of cache switching.

Answer: A, C

Q250.
How should you configure a BGP prefix list to permit all prefixes between /8 and /24 for the 192.0.0.0. network?

```
A. ip prefix-list 192.0.0.0/8 ge 8 le 24
B. ip prefix-list 192.0.0.0/8 ge 24 le 8
C. ip prefix-list 192.0.0.0/24 ge 24 le 8
D. ip prefix-list 192.0.0.0/24 ge 8 le 24
```

Answer: A.

Q251.
What are two reasons that OSPF scales better than RIPv1 in a large network environment? (Choose two)

    A. Has faster convergence.
    B. Requires less router memory.
    C. Has fewer internal tables to manage.
    D. Has low bandwidth consumption using incremental updates.

Answer: A, D.

Q252.
Which statement about BGP prefix lists is true?

    A. They start at 10 by default.
    B. They automatically increment by ten by default.
    C. They are displayed using the `show ip prefix-list` command.
    D. They are displayed using the `show bgp prefix-list` command.

Answer: C

Q253.
Which kind of OSPF router floods an area with type 2, network link LSAs?

    A. DR
    B. ABR
    C. BDR
    D. ASBR

Answer: A.

Q254.
What are three ways to influence the election of the DR on an OSPF segment? (Choose three)

A. Use of the `priority` command.
B. Use of the `router-id` command.
C. Assignment of the loopback address.
D. The IP addresses assigned to internal interfaces.
E. By adding additional memory to the desired router.

Answer: A, C, D.

Q255.
Which BGP router can advertise IBGP learned routes to other IBGP neighbors?

A. client
B. EBGP peer
C. route reflector
D. cluster of clients

Answer: C.

Q256.
How is bandwidth information per neighbor determined on a multipoint Frame Relay interface?

A. Bandwidth command per neighbor.
B. The configured CIR per subinterface.
C. The configured CIR divided by the number of neighbors on that interface.
D. Bandwidth of the main interface divided by the number of neighbors on that interface.

Answer: C.

Q257.
Given the following configuration for Router A:

```
interface serial 0
      ip address 172.14.12.1 255.255.255.224
      encapsulation frame-relay
      ip ospf network non-broadcast
!
router ospf 1
      network 172.14.12.0 31.255.255.255
```

```
neighbor 172.14.12.2
neighbor 172.14.12.3
```

Which two statements about this configuration are true? (Choose two)

    A. There can be no DR or BDR in this configuration.
    B. This is a point-to-point configuration over Frame Relay.
    C. The network mode is nonbroadcast multiaccess (NBMA).
    D. The DR and BDR need a static list of neighbors due to non-broadcast.

Answer: A, C.

Q258.
Which two statements about Variable Length Subnet Masking (VLSM) are true? (Choose two)

    A. It supports IP version 4 and 6.
    B. It accommodates overlapping address ranges.
    C. It allows for better route summarization within routing tables.
    D. It allows subnetworks to be further divided into smaller subnets.

Answer: C, D.

Q259.
Cisco routers perform route summarization automatically for which three routing protocols? (Choose three)

    A. IS-IS
    B. IGRP
    C. OSPF
    D. EIGRP
    E. RIP v.1

Answer: B, D, E.

Q260.
Which is the most effective technique to contain EIGRP queries?

A. Route summarization.
B. Configuring route filters.
C. Using a hierarchical addressing scheme.
D. Establishing separate autonomous systems.

Answer: A.

Q261.
Route summarization is also known as ____. (Choose two)

A. supernetting
B. route aggregation
C. address translation
D. Classful interdomain routing

Answer: A, B.

Q262.
An EIGRP router has not established adjacency with a neighbor. What are two possible causes for this? (Choose two)

A. K-values do not match.
B. Hold times do not match.
C. Hello times do not match.
D. As numbers do not match.

Answer: A, D.

Q263.
Which command is used to specify that SNMP broadcast packets should be directed to a specific server?

A. `ip server udp 161`
B. `ip helper-protocol 161`
C. `ip forward-protocol 161`
D. `ip directed-broadcast 161`

Answer: C.

Q264.
You have the subnet/mask of 172.29.100.0/26 set aside for use by some small branch offices. You want to use VLSM to further subnet this block addresses so that you will have six usable host addresses in each branch subnet.

Which VLSM mask should you use?

    A. /24
    B. /28
    C. /29
    D. /30
    E. /31

Answer: C.

Q265.
What are two possible causes for EIGRP Stuck-In-Active routes? (Choose two)

    A. The neighboring router stops receiving ACK packets from this router.
    B. The neighboring router starts receiving route updates from this router.
    C. The neighboring router is too busy to answer the query (generally high CPU utilization).
    D. The neighboring router is having memory problems and cannot allocate the memory to process the query or build the reply packet.

Answer: C, D.

Q266.
You have an address space of 172.28.100.0/24. You want to use this address space for your WAN links by dividing the address space using a VLSM mask of 30 as follows: 172.28.100.0/30

How many subnets will this provide for WAN links?

    A. 14
    B. 30
    C. 62
    D. 126

E. 254

Answer: C.

Q267.
A router in your network is configured for EIGRP. You want to suppress the router from sending routing updates out of the Serial 0/0 interface. It is necessary for the router to form and maintain neighbor adjacencies on the interface. The router has already been configured as follows:

Router(config)#access-list 20 deny any
Router(config)#access-list 100 permit ip any any
Router(config)#router eigrp 1

Router(config-router)# | Drop answer here | | Drop answer here | | Drop answer here |

Select from these

out	distribute-list 30
interface	in
serial 0/0	distribute-list 40
passive interface	

Answer:

Router(config-router)# | distribute-list 20 | out | serial 0/0

Select from these

interface | in

distribute-list 100

passive interface

Q268.
What is the purpose of the IP Helper feature?

    A. To direct BOOTP clients to a BOOTP server.
    B. To prevent the router form forwarding IP broadcasts.
    C. To allow IPX clients to communicate with IP-based servers.
    D. To accommodate compatibility routers using different IP routing protocols.

Answer: A.

Q269.
You have subnetted your class B addresses and have set aside the network of 172.29.100.0/28 for Frame Relay WAN links. Which address represents a valid WAN subnet address derived from that VLSM subnet?

    A. 172.29.100.8
    B. 172.29.100.32
    C. 172.29.100.60
    D. 172.29.100.104

Answer: B.

Q270.
How should you configure a BGP prefix list to permit all prefixes between /8 and /24 for the 192.0.0.0.
network?

```
A. ip prefix-list 192.0.0.0/8 ge 8 le 24
B. ip prefix-list 192.0.0.0/8 ge 24 le 8
C. ip prefix-list 192.0.0.0/24 ge 24 le 8
D. ip prefix-list 192.0.0.0/24 ge 8 le 24
```

Answer: A.

Q271.
Where does inter-area summarization take place, resulting in type 3 and type 4 LSAs being sent in a multi-area
OSPF internetwork?

A. At the ABR.
B. At the ASBR.
C. At the backbone DR.
D. Each internal router calculates and sends network updates.

Answer: A.

Q272.
Which command alters EIGRP parameters when redistributed to another routing protocol?

A. default-metric eigrp *metric*
B. distance eigrp *administrative-weight*
C. distance eigrp *internal-distance external-distance*
D. distance eigrp *external-distance internal-distance*

Answer: C.

Q273.
Which kind of OSPF router floods an area with type 2, network link LSAs?

A. DR
B. ABR
C. BDR
D. ASBR

Answer: A.

Q274.
What helps you avoid routing loops in a redistributed network?

A. Using multiple default gateways for redundancy.
B. Using one-way redistribution for greater stability.
C. Using two-way redistribution for greater stability.
D. Using overlapped routing protocols for redundancy.

Answer: B.

Q275.
Which router is responsible for redistribution of other protocols into an OSPF network?

A. ABR
B. ASBR
C. Internal router
D. Backbone router

Answer: B.

Q276.
How is bandwidth information per neighbor determined on a multipoint Frame Relay interface?

A. Bandwidth command per neighbor.
B. The configured CIR per subinterface.
C. The configured CIR divided by the number of neighbors on that interface.
D. Bandwidth of the main interface divided by the number of neighbors on that interface.

Answer: C.

Q277.
Which command is executed last when the route-map command is used?

  A. set
  B. match
  C. map-list
  D. ip policy

Answer: A.

Q278.
An EIGRP router has not established adjacency with a neighbor. What are two possible causes for this? (Choose two)

  A. K-values do not match.
  B. Hold times do not match.
  C. Hello times do not match.
 D. As numbers do not match.

Answer: A, D.

Q279.
What are two possible causes for EIGRP Stuck-In-Active routes? (Choose two)

  A. The neighboring router stops receiving ACK packets from this router.
  B. The neighboring router starts receiving route updates from this router.
  C. The neighboring router is too busy to answer the query (generally high CPU utilization).
  D. The neighboring router is having memory problems and cannot allocate the memory to process the query or build the reply packet.

Answer: C, D.

Q280.
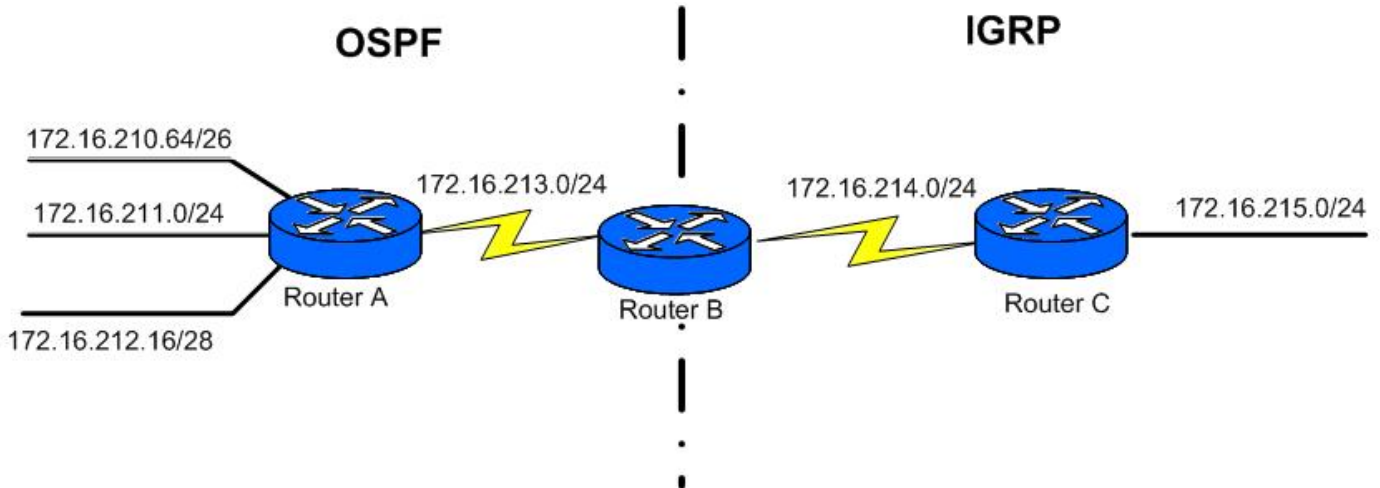
Router B is correctly configured for mutual redistribution. Which four routes are known on Router C? (Choose four)

A. 172.16.211.0/24
B. 172.16.213.0/24
C. 172.16.214.0/24
D. 172.16.215.0/24
E. 172.16.210.64/26
F. 172.16.212.16/28

Answer: A, B, C, D.

Q281.
Given the following configuration for Router A:
```
interface serial 0
        ip address 10.1.1.1 255.255.255.0
        encapsulation frame-relay
        ip ospf network point-to-multipoint
router ospf 7
        network 10.1.1.0 0.0.0.255 area 0
```

Which two statements are correct? (Choose two)

A. DR/BDR elections do not take place.
B. It is restricted to a hub and spoke topology-
C. Neighbor statements are not necessary.
D. The area 0 NBMA cloud is configured as more than one subnet.

Answer: A, C.

Q282.
Which Cisco IOS command can be used to see how many times SPF calculations have been performed to calculate routes on an OSPF router?

    A. show ip ospf
    B. show ip route
    C. show ip ospf interface
    D. show ip ospf protocols

Answer: A.

Q283.
Which are two Cisco IOS command that can be used to view neighbor adjacencies? (Choose two)

    A. show ip ospf database
    B. show ip ospf neighbors
    C. show ip ospf protocols
    D. show ip ospf interfaces

Answer: B, D.

Q284.
Given the configuration:
```
router igrp 300
   network 192.168.20.0
   network 192.168.24.0
   network 192.168.27.0
   redistribute rip
   default-metric 10 100 255 1 1500
   distance 140 0.0.0.0 255.255.255.255 9


access-list 9 permit 192.168.20.0
access-list 9 permit 192.168.24.0
access-list 9 permit 192.168.27.0
```

Which two statements are true? (Choose two)

A. Networks 192.168.20.0, 192.168.24.0, and 192.168.27.0 are allowed into the routing table.
B. The RIP learned routes to networks 192.168.20.0, 192.168.24.0, and 192.168.27.0 will be assigned an administrative distance of 140.
C. The IGRP learned routes to networks 192.168.20.0, 192.168.24.0, and 192.168.27.0 will be assigned an administrative distance of 140.
D. Changing the administrative distance to a number larger than the default value makes networks 192.168.20.0, 192.168.24.0, and 192.168.27.0 unreachable.

Answer: B, D.

Q285.
What are two reasons that having neighbor relationship in OSPF allows the network topology to scale? (Choose two)

A. Neighbor adjacencies control distribution of routing protocol updates.
B. Routing table information does not flood the network until holddown timers have expired.
C. The hello protocol is a more efficient means of sending routing updates than table exchange used in RIPv1.
D. Topological database is maintained with incremental updates, with full exchange occurring only every 30 minutes.

Answer: A, C.

Q286.
You have an address range of 172.16.20.192 to 172.16.20.223. Which two configuration commands are used in configuring the area 3 border router for network summarization? (Choose two)

A. `network 172.16.20.192 0.0.0.31 area 3`
B. `area 3 range 172.16.20.192 172.16.20.223`
C. `area 3 range 172.16.20.192 255.255.255.224`
D. `network 172.16.20.192 255.255.255.224 area 3`

Answer: A, C.

Q287.

A router has one serial interface and one Ethernet interface. Given the serial interface to a WAN configuration:
```
interface serial 0.122 point-to-point
  ip address 192.168.1.1 255.255.255.0
  encapsulation frame-relay
  frame-relay interface-dlci 122
```

Which command permits the hosts on a LAN to send and receive all normal traffic but not receive routing update traffic?

```
    A. interface serial 0.122 point-to-point
          passive-interface ethernet 0
    B. interface ethernet 0
          ip address 192.168.12.1 255.255.255.0
          passive-interface
    C. router ospf 172
          area 1 nssa
          network 192.168.1.0 0.0.0.255 area 0
          network 192.168.12.0 0.0.0.255 area 1
    D. router ospf 172
          passive-interface ethernet 0
          network 192.168.1.0 0.0.0.255 area 0
          network 192.168.12.0 0.0.0.255 area 1
```

Answer: D.

Q288.
Given these subnet addresses:
172.18.129.0/24
172.18.130.0/24
172.18.132.0/24
172.18.133.0/24

Which route summarization applies to all of these subnet addresses?

    A. 172.18.128.0/21
    B. 172.18.128.0/22
    C. 172.18.130.0/22
    D. 172.18.132.0/20

Answer: A.

Q289.
What kind of router is used to connect a new OSPF area to the backbone area?

    A. ABR
    B. stub
    C. internal router
    D. backbone router

Answer: A.

Q290.
To configure Integrated IS-IS to route IP, where is the command **ip router isis** applied?

    A. Line configuration mode
    B. Router configuration mode
    C. Global configuration mode
    D. Interface configuration mode

Answer: D.

Q291.
Which statement about BGP communities is true?

    A. Communities are tagged by default in outgoing updates.
    B. Communities can only be used within one autonomous system.
    C. Communities are a means of tagging routes to ensure consistent filtering.
    D. Communities perform summarization of blocks of contiguous network prefixes.

Answer: C.

Q292.
View the command line exhibit (end of document).
Given the prefix list is currently configured, which command is used to apply a specific BGP prefix list?

Answer : Router(config-router)# neighbor address prefix-list list-name

Q293.
What is the proper command to display the Level-2 routing table in Integrated IS-IS?

    A. `show isis route`
    B. `show clns route`
    C. `show isis database`
    D. `show clns neighbors`

Answer: B.

Q294.
What is the default maximum percentage of bandwidth that EIGRP packets can utilize on an interface?

    A. 10%
    B. 25%
    C. 50%
    D. 75%

Answer: C.

Q295.
You use BGP to connect to multiple ISPs. Which method could you use to have outbound Internet traffic prefer one ISP over the other ISP?

    A. Configure weight
    B. Enable route reflector
    C. Create a distribute list
    D. Enable the Longer Autonomous System path option.

Answer: A.

Q296.
Why is Level-3 area routing an unsupported feature of integrated IS-is on Cisco routers?

    A. The System ID on a Cisco router is limited to 6 bytes.

B. The NET on a Cisco router is restricted to a maximum of 8 bytes.
C. The lack of Domain portion of the NSAP only accommodates for 2 levels of routing hierarchy.
D. Cisco routers cannot route CLNS data that use the ISO/IEC 10589 standard of NSAP addressing.
E. Since the NSAP service identifier (N-SEL) must always be set to 00, no other service types are available.

Answer: C.

Q297.
Which configuration line advertise the subnet 154.2.1.0 255.255.255.0 to EBGP neighbors, in BGP?

```
A. Router (config-router)#network 154.2.1.0
B. Router (config-router)#network 164.2.1.0
C. Router (config-router)#network-advertise 154.2.1.0
D. Router (config-router)#network 154.2.1.0 mask 255.255.255.0
```

Answer: D.

Q298.
Given the following configuration:
```
router bgp 6500
    redistribute static

ip route 164.20.0.0 255.255.0.0 null 0
```

Which statement is true?

A. It allows BGP to advertise the 164.20.0.0 /16 network.
B. It results in all traffic for all subnets of 172.16.0.0 being dropped at this router.
C. Cisco prefers that you use the `aggregate-address` command to distribute IGP routes into BGP.
D. Cisco prefers this method of distributing IGP routes into BGP over using the `network` command.

Answer: C.

Q299.
What representation is used in IS-IS to identify LAN interfaces?

A. broadcast
B. point-to-point
C. pseudo-node
D. non-broadcast
E. point-to-multipoint

Answer: A.

Q300.
Which method makes it possible to receive BGP routes from multiple ISPs?

A. Accept full routes from the ISPs.
B. Accept only IGP routes from the ISPs
C. Accept an external route from the ISPs.
D. Accept only redistributed routes from the ISPs.

Answer: A.

Q301.
In OSI terminology, what is a domain?

A. A set of non-routing network nodes.
B. A contiguously connected area that can reach all other areas.
C. All devices configured for OSI protocols within an internetwork.
D. A contiguous set of routers and hosts and the data links that connect them.
E. Any portion of an OSI network that is under a common administrative authority.

Answer: B.

Q302.
Which two provide intra-area routing services? (Choose two)

A. L1 IS
B. L1 ES
C. L2 IS
D. L2 ES
E. L1/L2 IS

Answer: A, E.

Q303.
Which three are examples of classless routing protocols? (Choose three)

    A. IS-IS
    B. IGRP
    C. RIPv1
    D. OSPF
    E. EIGRP

Answer: A. D, E.

Q304.
In Integrated IS-IS, configuring mesh groups helps to_____.

    A. Optimize LSP flooding.
    B. Keep the routers more secure.
    C. Help the routers from adjacencies.
    D. Speed the flow of data across WAN links.

Answer: A.

Q305.
All IS-IS areas must have a connection to _____.

    A. Area 0
    B. Area 1
    C. Level-1 backbone
    D. Level-2 backbone
    E. External IS-IS areas

Answer: D.

Q306.
Which statement about the **network** command on a BGP router is true?

    A. Local routers matching the `network` command are filtered from the BGP routing table.
    B. Local routers matching the `network` command can be installed into BGP's routing table.
    C. Sending and receiving BGP updates is controlled by using a number of different filtering methods.
    D. The route to a neighbor autonomous system must have the correct MED applied to be installed into BGP's routing table.

Answer: B.

Q307.
What is the proper command to display adjacencies in Integrated IS-IS?

    A. `show isis route`
    B. `show clns route`
    C. `show isis database`
    D. `show clns neighbors`

Answer: D.

Q308.
A Level-1 IS can establish an adjacency with which two types of routers? (Choose two)

    A. Any Level-1 IS in any area.
    B. Any Level-2 IS in any area.
    C. Any Level-1 IS in the same area.
    D. Any Level-2 IS in the same area.
    E. Any Level-1/Level-2 IS in the same area.

Answer: C, E.

Q309.
Which properties does a BGP community attribute have?

    A. Optional and transitive.

B. Optional and non-transitive.
C. Well-known and mandatory.
D. Well-known and discretionary.

Answer: A.

Q310.
Which four characteristics are common to IS-IS and OSPF? (Choose four)

A. link-state database
B. backbone area design
C. Shortest Path First (SPF) algorithm
D. Update, Decision, and Flooding Process
E. Hello protocol to establish and maintain adjacencies

Answer: A, C, D, E.

Q311.
On a point-to-point network connection, what do PSNPs do?

A. Acknowledge LSPs.
B. Replace IIH packets.
C. Establish adjacencies.
D. Send link-state changes.

Answer: A.

Q312.
Which Cisco-specific configuration allows routers on each end of a Frame Relay connection to create adjacencies to operate in an NBMA OSPF environment?

A. Point-to-point over sub-interfaces.
B. Point-to-multipoint star configuration.
C. Point-to-multipoint using a single subnet.
D. Point-to-multipoint nonbroadcast using a single subnet.

Answer: A.

Q313.
What are two advantages of OSPF over RIPv1? (Choose two)

    A. It maintains smaller routing tables.
    B. Cost metric is based on number of hops.
    C. It only sends routing updates when necessary.
    D. VLSM allows more efficient use of IP addresses.

Answer: C, D.

Q314.
What is the area number assigned to an IS-IS backbone?

    A. Area 0
    B. Area 1
    C. Any legal area number.
    D. There is no backbone area number.

Answer: D.

Q315.
Which command should you issue first to configure EIGRP for IP?

    E. `ip eigrp routing`
    F. `router eigrp process-id`
    G. `ip eigrp autonomous-system-number`
    H. `router eigrp autonomous-system-number`

Answer: D.

Q316.
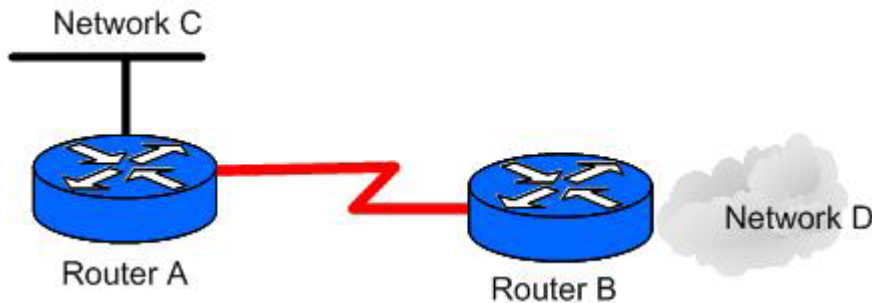How does OSPF support variable-length subnet mask (VLSM)?

A. Uses route summarization.
B. Maintains a topological database.
C. Carries subnet mask information in the route updates.
D. Allocates addresses in groups to support multiple areas.

Answer: C.

Q317.
Examine the exhibit:

RIP is running on all networks. The command **ip default-network Network C** is configured on Router A. Network C will appear as the default network on ____.

A. Router A only-
B. Router B only.
C. Both routers.
D. Neither routers.

Answer: B.

Q318.
Which three enable EIGRP to be scalable for large networks? (Choose three)

A. A tiered network design model.
B. Sufficient memory on the router.
C. Multiple EIGRP autonomous systems.
D. Good address space allocation schema.

Answer: A, B, D.

Q319.
When configuring to totally stubby area in OSPF, what configuration requirement does the ABR have that internal area routes do not?

   A. A virtual link to area 0.
   B. OSPF `summarization` command.
   C. `default-cost` extension to the `area` command.
   D. `no-summary` extension to the `area stub` command.

Answer: A.

Q320.
Which three statements are true about Cisco IS-IS NSAP address System IDs? (Choose three)

   A. System IDs can vary in size within a domain.
   B. The System ID identifies a node in an IS-IS network.
   C. The System ID must be unique within a Level-1 area.
   D. The System ID must be unique within a Level-2 area.
   E. The System ID must be the MAC address of the router,

Answer: B, C, D.

Q321.
Which IOS features can be used to prevent routing loops between two autonomous systems from running different routing protocols and having redundant paths?

   A. Route filtering.
   B. Passive interfaces.
   C. Static redistribution.
   D. Two-way redistribution.

Answer: A.

Q322.
With which four routers can a Level-1/Level-2 IS establish an adjacency? (Choose four)

A. Any Level-1 IS in any area.
B. Any Level-2 IS in any area.
C. Any Level-1 IS in the same area.
D. Any Level-1/Level-2 IS in any area.
E. Any Level-1/Level-2 IS in the same area.

Answer: B, C, D, E.

Q323.
Which subnet address is included in the route summarization: 172.17.200.0/21?

A. 172.17.198.0
B. 172.17.206.0
C. 172.17.217.0
D. 172.17.224.0

Answer: B.

Q324.
What is the consequence of the implicit *deny any* of a route map?

A. Packets that reach the end of the route map are discarded.
B. Packets are forwarded to the null interface for special handling.
C. Packets that reach the end of the route map are routed in a normal fashion.
D. Packets that each the end of the route map are returned in the originating interface.

Answer: A.

Q325.
How is network layer addressing accomplished in the OSI protocol suite?

A.   Internet Protocol address
B.   Media Access Control address
C.   Packet Layer Protocol address
D.   Network Service Access Point address
E.   Authority and Format Identifier address

Answer: D.

Q326.
Which command should you use to verify what networks are being routed by a given OSPF process?

A.   show ospf
B.   show ip route
C.   show ip protocols
D.   show ip ospf database

Answer: D.

Q327.
Given the following OSI IS-IS NSAP address:

     47.040C.0061.040C.0056.0D12.00

What is the Area ID?

A.   00
B.   47
C.   47.040C
D.   47.040C.0061
E.   040C.0056.0D12

Answer: D.

Q328.
When configuring Integrated IS-IS, why is it important to manually configure the link costs?

A.   By default, all links have a cost of 10.
B.   It is not important because the default provides for optimal routing.
C.   There is no default link cost, link cost must be configured on each interface.
D.   By default, all LAN interfaces have a cost of 10 and all WAN interfaces have a cost of 50.
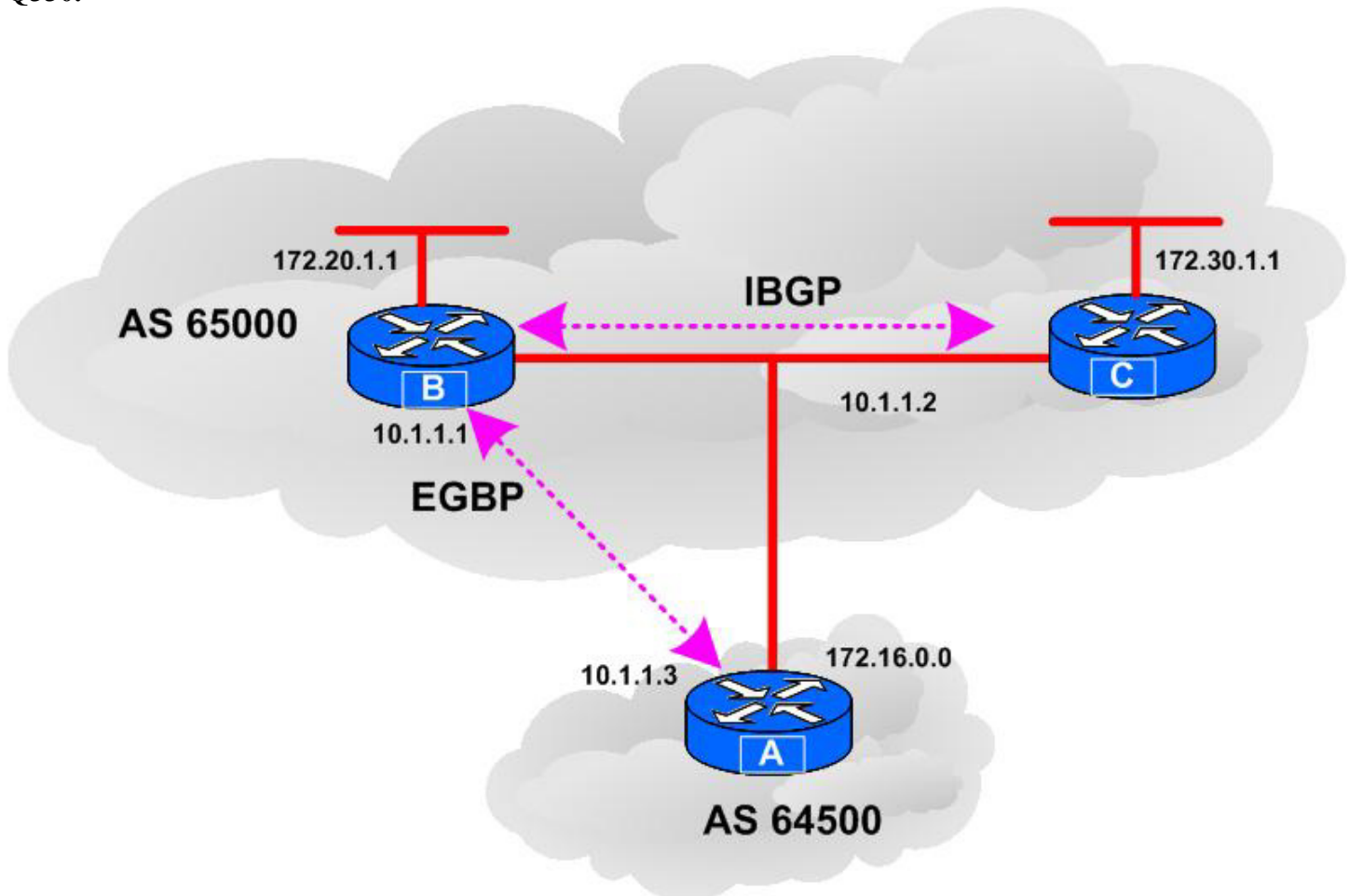
Answer: A.

Q329.
Which configuration command is used to summarize networks advertised out of an OSPF area by an ABR?

A.   summary-address *address mask*
B.   area area-id range *address mask*
C.   auto-summary *address mask* area *area-id*
D.   network *network-number wildcard mask area area-id*

Answer: B.

Q330.
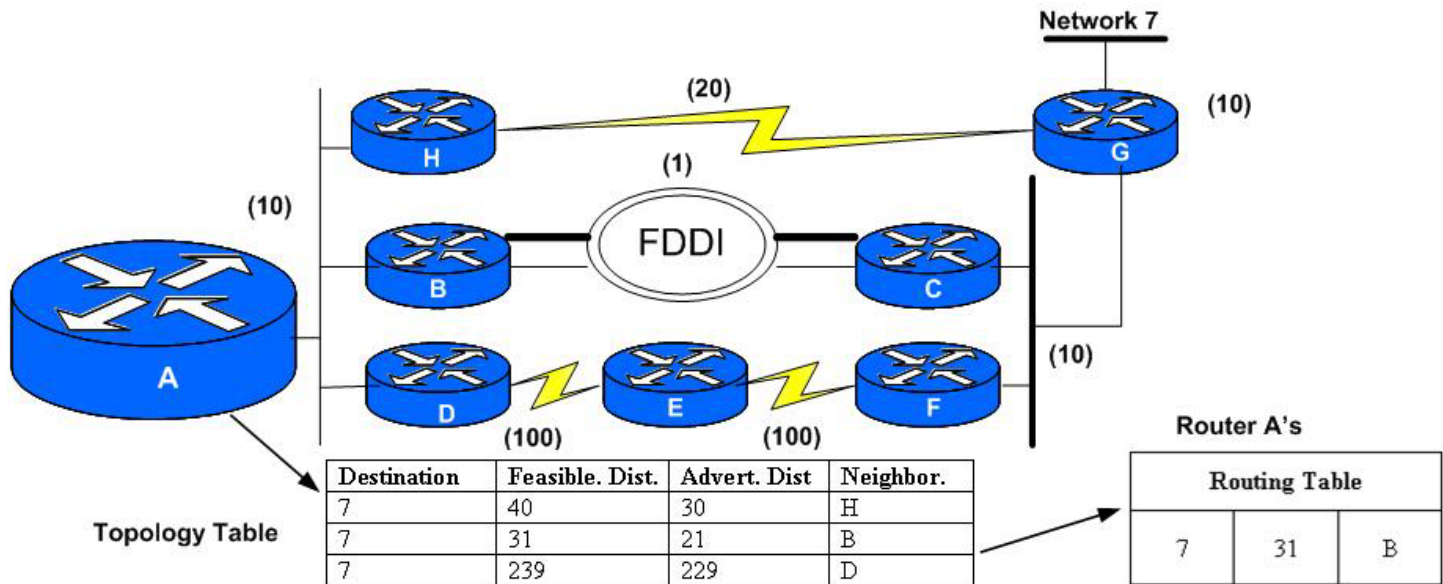

Router B advertises network 172.30.0.0 to Router A using BGP. What is the value of the next-hop attribute, by default?

A.   10.1.1.1
B.   10.1.1.2
C.   10.1.1.3
D.   Router A does not accept the advertisement from Router B because Router A is not peering
      with Router C via BGP.
E.   Router B does not advertise network 172.30.0.0 to Router A because the network is not
      directly connected to Router B.

Answer: B.

Q331.

Destination	Feasible. Dist.	Advert. Dist	Neighbor.
7	40	30	H
7	31	21	B
7	239	229	D

Router A's Routing Table

7	31	B

In the exhibit, after the FDDI interface on Router B is shut down, which router(s) become(s) the EIGRP next-hop to Network 7 for Router A?

A.   B
B.   D only
C.   H only
D.   D and H

Answer: C.

Q332.
Which two attributes of EIGRP allow it to support VLSM? (Choose two.)

A. It advertises a routing mask
B. It is a classful routing protocol
C. It is a classless routing protocol
D. It does not advertise a routing mask.

Answer: A, C.

Q333.
Which two statements about BGP policy-based routing are true? (Choose two.)

A. Policy routing is configure on the inbound interface.
B. Policy routing can be used to alter the final destination of the packet.
C. Policy routing can be used to alter the next hop in the path to the destination.
D. Policy routing does not allow traffic to be directed based on the source address.

Answer: B, C.

Q334.
Your internal network is configured to use OSPF. Two gateway routers, GW1 and GW2 are injecting external routes learned through BGP into OSPF via redistribution. Router GW1 is injecting subnets in the range 128.213.64.0 through 128.213.95.0. Router GW2 is injecting subnets 128.213.96.0 through 128.213.127.0. Configure router GW1 to summarize the subnets into one range before injecting them into OSPF. The router has already been configured as follows.
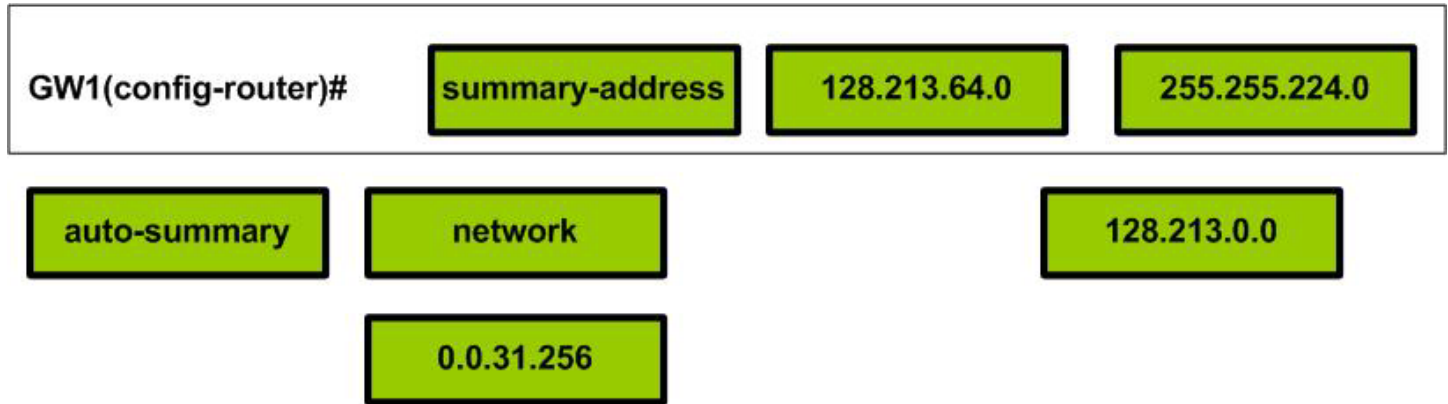
GW1(config)#router ospf 100
GW1(config-router)#redistribute bgp 50 metric 1000 subnets

GW1(config-router)#	drop answer here	drop answer here	drop answer here

auto-summary	network	summary-address	128.213.0.0
128.213.64.0	0.0.31.256	255.255.224.0	

Answer:

```
GW1(config-router)#    summary-address    128.213.64.0    255.255.224.0
```

```
auto-summary    network                                    128.213.0.0
```

```
0.0.31.256
```

Q335.
What is a characteristic of an IS-IS backbone?

A.   a router in all areas
B.   all routers in one area
C.   a chain of L2 and L1/L2 IS-IS routers
D.   an unbroken string of L1 and L2 IS-IS routers
E.   a central area to which all other areas are attached.

Answer: C.

Q336.
Given the configuration on Router A.

router bgp 65000
    neighbor 172.16.1.1 remote-as 65000
    neighbor 10.1.1.2 remote-as 64550
    network 192.168.1.192 mask 255.255.255.224
    no synchronization
    aggregate-address 192.168.1.0 255.255.255.0

If interfaces 192.168.1.193, 172.16.1.1 and 10.1.1.2 are active, which statement is correct?

A.   Router A has an IBGP connection with neighbor 10.1.1.2.
B.   Router A has an EBGP connection with the neighbor 172.16.1.1.
C.   Router A advertises only a route 192.168.1.0 255.255.255.0 in BGP.
D.   Router A advertises only a route 192.168.1.192 255.255.255.224 in BGP.
E.   Router A advertises routes to 192.168.1.0 255.255.255.0 and 192.168.192 255.255.255.224 in BGP.

Answer: E.

Q337.
What is the term for separating a single large area into smaller areas in OSPF?

A.   interior areas
B.   OSPF subarea
C.   link-state protocol
D.   hierarchical routing

Answer: D.

Q338.
Two Level-1/Level-2 routers in the same area connected by a WAN link can establish adjacency with each other in what fashion?

A.   Level-1 only
B.   Level-2 only
C.   both Level-1 and Level-2
D.   none unless statically configured
E.   WAN links do not support IS-IS adjacencies

Answer: A.

Q339.
In an NBMA cloud, which configuration element is used to create a static list of other routers in the cloud?

A.   network
B.   neighbor
C.   ip route
D.   router ospf

Answer: B.

Q340.
Which two statements about route summarization are true? (Choose two.)

A.   Private addresses cannot be summarized.
B.   Summarization is not compatible with VLSM.
C.   RIP v.1 automatically summarizes routes on network class boundaries.
D.   Classless routing protocols support summarization on any address bit boundary.

Answer: C, D.

Q341.
On a point-to-point network connection, what do PSNPs do?

A.   acknowledge LSPs
B.   replace IIH packets
C.   establish adjacencies
D.   send link-state changes

Answer: A.

Q342.
You have a branch office that is attached to a central office. You want the central office to learn all routes in the branch office. However, you do not want the branch office to learn all routes form the central office.

What is the most scalable option you should use on the branch office router if all routers from the central office are filtered?

A.   configure static routes pointing to the network behind the central office router
B.   configure a default route pointing to the networks behind the central office router
C.   make the interface that is connected to the central office a passive interface to block incoming updates
D.   enable route update filtering on the interfaced that is connected to the central office to block incoming updates

Answer: B.

Q343.
Which subnet address is included in the route summarization: 172.17.200.0/21?

A.   172.17.198.0
B.   172.17.206.0
C.   172.17.208.0
D.   172.17.224.0

Answer: B.
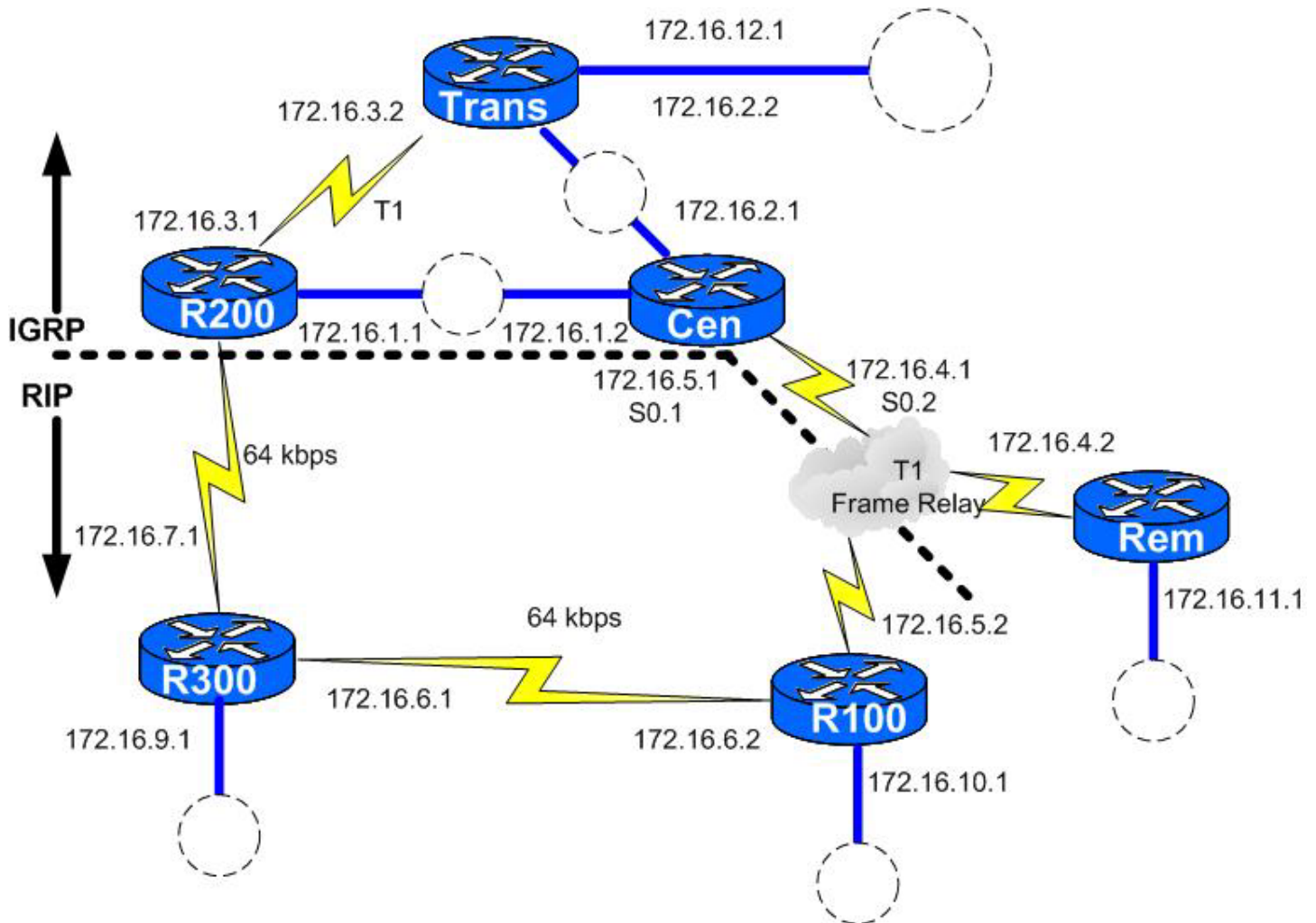
Q344.
How many Level-2 routing processes can an IS-IS Level 1-2 router belong to?

A.   1
B.   2
C.   30
D.   40
E.   limited only by the router's resources

Answer: A.

Q345.

You have a network using two routing protocols with the redundant links between two sites as illustrated in the exhibit. You cannot convert the RIP site to IGRP because of the older hosts which must participate in the routing protocol and you want to ensure that if one link goes down routing protocol will occur through the remaining link.

What helps you ensure that proper metrics are distributed through the IGRP network? (Choose two.)

A.   applying the `distance` command to Cen
B.   applying the `distance` command to R200
C.   applying the `distribute-list` command to Cen
D.   applying the `distribute-list` command to R200

Answer: B.

Q346.
What should you consider when attempting to redistribute BGP router into an IGP (such as EIGRP or OSPF)?

A.   IGPs are limited to 250 routes
B.   A full BGP routing table may contain 100,000+ routes
C.   Because of possible routing loops, Cisco router configuration does not allow BGP routes to be restributed into an IGP.
D.   Because BGP routes are not advertised unless they are known by the IGP, Cisco automatically redistributes routes into IGPs.

Answer: B.

Q347.
When configuring point-to-point subinterfaces on a Frame Relay network using EIGRP, what is the default link speed on the WAN interface?

A.   256 Kbps
B.   1.544 Mbps
C.   set by the PVC
D.   set by the DLCI

Answer: B.

Q348.
Given the configuration

```
ip route 10.0.0.0 255.0.0.0 172.16.1.2
ip route 192.168.1.0 255.255.255.0 172.10.1.2

router eigrp 100
    redistribute ospf 100
    network 172.19.1.0

router ospf 108
    redistribute static
    redistribute eigrp 100
    network 172.16.1.0 00.0.25 area 0
    distribute-list 3 out static

access-list 3 permit 10.0.0.0 0.255.255.255
```

What does the statement `distribute-list 3 out static` do?

A.   denies the route to 10.0.0.0 via ospf
B.   denies the route to 10.0.0.0 via eigrp
C.   propagates the route to 10.0.0.0 via ospf
D.   propagates the route to 10.0.0.0 via eigrp

Answer: C.

Q349.
Which command monitors a BGP peer, stating the reason for the last TCP connection reset?
Enter the number that corresponds to the command.

See the exhibit at the end of the document.

Answer: 44 (`show ip bgp neighbors`**)**

Q350.
Where should route summarization be performed in an EIGRP network?

A.   at area border routers
B.   at autonomous system boundary routers
C.   automatically by the DR router in each area
D.   manually at any interface of any EIGRP router within the network

Answer: B.

Q351.
Your gateway router has OSPF enabled. It is necessary to redistribute the routes to various subnets learned
through BGP AS50 using the default metric. Build the command to configure this route redistribution.

Router(config-router)#   Drop answer here   Drop answer here   Drop answer here

subnets	ospf	bgp 50	200
redistribute	default-metric	metric	area

Answer:

Router(config-router)#   redistribute   bgp 50   subnets

ospf   200

default-metric   metric   area

Q352.
Which command verifies whether a router is a route reflector?

A.   show bgp neighbor
B.   show running-config
C.   show route-reflector
D.   show route-reflector-client

Answer: A.

Q353.
Which two routing protocols require a hierarchical topology? (Choose two.)

A.   IS-IS
B.   IGRP
C.   OSPF
D.   EIGRP
E.   RIP v2

Answer: A, C.

Q354.
Which Cisco IOS command can be used to display the route maps configured on an interface?

A.   show interface

B.   show route-map
C.   show ip policy
D.   show ip route map

Answer: C.

Command Line Exhibit

General

```
01 show cdp neighbors
02 show cdp neightbors detail
03 show controllers serial
04 show interface
05 show interface serial
06 show ip interface
07 show ip policy
08 show ip prefix-list
09 show ip prefix-list detail
10 show ip prefix-list summary
11 show ip protocols
12 show ip route
13 show path
14 show policy statistics
15 show prefix-list
16 show prefix-list detail
17 show prefix-list summary
18 show route-map
19 show route-reflector
20 show ip policy
21 show ip ospf
22 show ip ospf area
23 show ip ospf database
24 show ip ospf interface
25 show ip ospf neighbor
26 show ip ospf process-id
27 show ip ospf timers
28 show ospf process-id
29 show eigrp adjacencies
30 show eigrp neighbors
31 show eigrp route
32 show eigrp successors
33 show ip eigrp neighbors1
34 show ip eigrp route
35 show ip route eigrp
36 clear bgp *
37 clear bgp all
38 clear ip bgp *
39 clear ip bgp * soft
40 clear ip bgp sessions *
41 clear ip bgp sessions all
42 show ip bgp
43 show ip bgp attributes
44 show ip bgp neighbors
```

```
45 show ip bgp origin
46 show ip bgp route-reflector
47 show ip bgp summary
```

Configuration

60	Router(config-router)# bpg neighbor address weight weight
61	Router(config)# bpg set neighbor address weight weight
62	Router(config)# interface loopback number
63	Router(config-router)# ip maximum-paths 0
64	Router(config)# ip prefix-list list-name
65	Router(config-router)# ip prefix-list list-name
66	Router(config-if)# ip prefix-list list-name
67	Router(config)# neighbor address prefix-list list-name
68	Router(config-router)# neighbor address prefix-list list-name
69	Router(config-if)# neighbor address prefix-list list-name
70	Router(config-router)# neighbor address weight weight
71	Router(config-router-map)# neighbor address weight weight
72	Router(config)# ip default route
73	Router(config)# default route
74	Router(config)# no auto-summary
75	Router(config)# no eigrp summary
76	Router(config)# no ip summary
77	Router(config)# ospf interface loopback number
78	Router(config)# ospf loopback number
79	Router(config)# router loopback number
80	Router(config-route-map)# set ip default next-hop
81	Router(config-route-map)# set ip interface
82	Router(config-route-map)# set ip precedence
83	Router(config)# set neighbor address weight weight
84	Router(config-router)# set neighbor address weight weight
85	Router(config-route-map)# set ip next-hop address
86	Router(config)# ip classless
87	Router(config-router)# ip classless

Testing

```
88  debug eigrp adjacencies
89  debug eigrp neighbors
90  debug ip bgp origin
91  debug ip bgp summary
92  debug ip policy
93  ping (extended)
94  ping (record option)
95  ping (standard)
96  test packet
```

97 traceroute