Vendor: Cisco

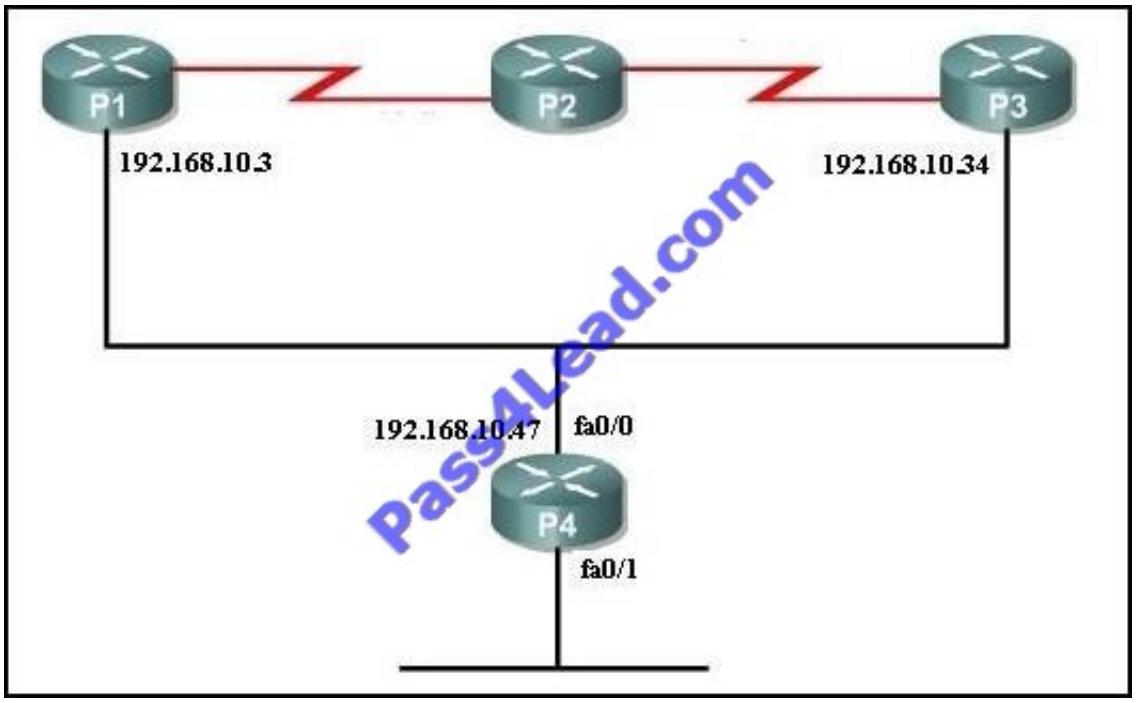
Exam Code:642-902

Exam Name: Implementing cisco ip routing

Version: Demo

QUESTION 1

Refer to the Exhibit.



What is the correct configuration to enable router P4 to exchange RIP routing updates with router P1 but not with router P3?

A. P4(Config)# interface fa0/0 P4(Config-if)# neighbor 192.168.10.3 P4(config-if)# passive-interface fa0/0

B. P4(config)# router rip P4(config-router)#neighbor 192.168.10.3 P4(Config-router)#passive-interface fa0/0

C. P4(config)# interface fa0/0 P4(config-if)# neighbor 192.168.10.3 P4(config-if)# passive interface192.168.10.34

D. P4(config)# router rip P4(config-router)# neighbor 162.168.10.34 no broadcast P4(config-router)# passive-interface fa0/0

Correct Answer: B

When you configure router P1 to be the nieghtobr of P4 with a passive interface, the RIP routing updates will be exchanged with the neighbor only.

QUESTION 2

If a metric is not specified for routes that are redistributed into OSPF, the default metric that is assigned to the routes is 20, except for redistributed BGP routes. What is the metric that is assigned to redistributed BGP routes?

A. 0

B. 1

C. 10

D. 200

Correct Answer: B

If a metric is not specified, OSPF puts a default value of 20 when redistributing routes from all protocols except Border Gateway Protocol (BGP) routes, which get a metric of 1.

Reference:

http://www.cisco.com/en/US/tech/tk365/technologies_tech_note09186a008009487e.shtml#os pf

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QUESTION 3

Which command displays the number of times that the OSPF Shortest Path First (SPF) algorithm has been executed?

A. show ip protocol

B. show ip ospf

C. show ip ospf database

D. show ip ospf interface

Correct Answer: B

The following table describes the output of the "show ip ospf" command and their meanings: Table52 show ip ospf Field Descriptions

Field	Description
Routing process "ospf 201" with ID 10.0.0.1	Process ID and OSPF router ID.
Supports...	Number of types of service supported (Type 0 only).
SPF schedule delay	Delay time of SPF calculations.
Minimum LSA interval	Minimum interval between link-state advertisements.
LSA group pacing timer	Configured LSA group pacing timer (in seconds).
Interface flood pacing timer	Configured LSA flood pacing timer (in milliseconds).
Retransmission pacing timer	Configured LSA retransmission pacing timer (in milliseconds).
Number of...	Number and type of link-state advertisements that have been received.
Number of external LSA	Number of external link-state advertisements.
Number of opaque AS LSA	Number of opaque link-state advertisements.
Number of DCbitless external and opaque AS LSA	Number of demand circuit external and opaque link-state advertisements.
Number of DoNotAge external and opaque AS LSA	Number of do not age external and opaque link-state advertisements.
Number of areas in this router is	Number of areas configured for the router.
External flood list length	External flood list length.

Reference:http://www.cisco.com/univercd/cc/td/doc/product/software/ios123/123cgcr/iprrp_r /ip2_s3g.htm#wp1036469

QUESTION 4

Which two statements are true of the OSPF link-state routing protocol? (Choose two.)

A. Using the Bellman-Ford algorithm, each OSPF router independently calculates its best paths to all destinations in the network.

B. Using the DUAL algorithm, each OSPF router independently calculates its best paths to all destinations in the network.

C. OSPF sends summaries of individual link-state entries every 30 minutes to ensure LSDB synchronization.

D. OSPF sends triggered updates when a network change occurs.

E. OSPF sends updates every 10 seconds.

F. When a link changes state, the router that detected the change creates a link-state advertisement (LSA) and propagates it to all OSPF devices using the 224.0.0.6 multicast address.

Correct Answer: CD

The point of this question is the basis of OSPF.

Incorrect answer A. OSPF send hello packets every 10 seconds, not the updates, OSPF sends triggered updates when a network change occurs. For OSPF, D Rother use the multicast address 224.0.0.6 to send packets to DR and BDR, only

DR and BDR can get the information from this multicast address.

QUESTION 5

The administrator wants to verify the current state of the OSPF database loading process. Which show command should the administrator use?

A. show ip ospf [process-id] interface

B. show ip ospf neighbor

C. show ip ospf [process-id]

D. show ip ospf [process-id area-id] database

Correct Answer: B

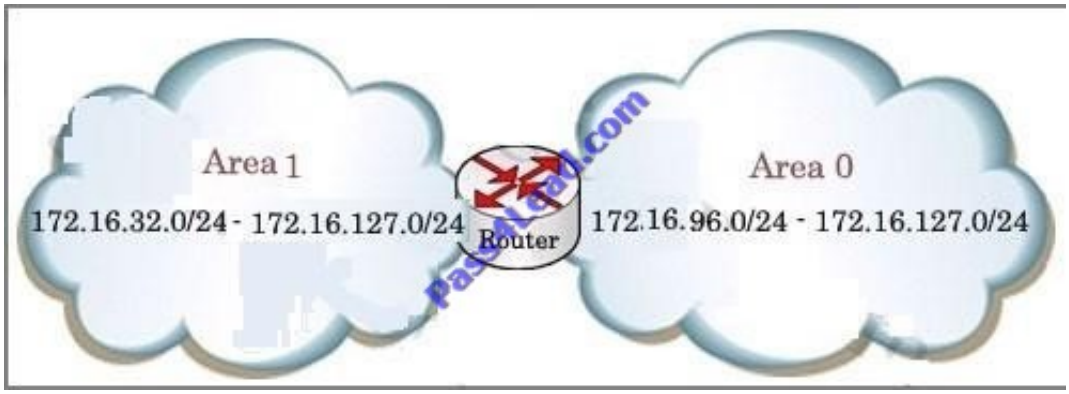
The "show ip ospf neighbor" command can be used to view the current state of the OSPF database loading process. In the output below we can see router 2.2.2.2 is in 2way state, router 3.3.3.3 is elected as the BDR and router 4.4.4.4 is the BR.

```
R1# show ip ospf neighbor fa0/0

Neighbor ID  Pri  State           Dead Time  Address    Interface
2.2.2.2        1  2WAY/DR0THER    00:00:35   10.1.1.2   Fast Ethernet0/0
3.3.3.3        1  FULL/BDR        00:00:38   10.1.1.3   Fast Ethernet0/0
4.4.4.4        1  FULL/BR         00:00:34   10.1.1.4   Fast Ethernet0/0
```

QUESTION 6

Study the exhibit below carefully.



In order to summarize all routes from area 0 to area 1, what must be configured on the router?

A. area 0 range 172.16.96.0 255.255.224.0

B. area 1 range 172.16.96.0 255.255.224.0

C. area 1 range 172.16.96.0 255.255.0.0

D. area 0 range 172.16.96.0 255.255.255.0

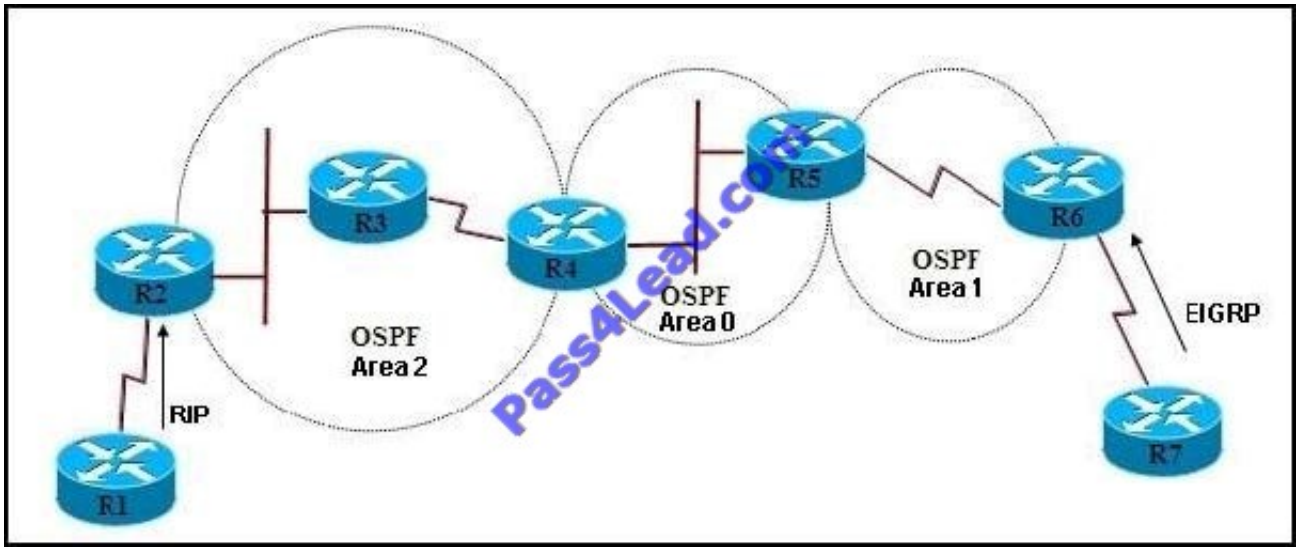
Correct Answer: A

This identifies area 0 as the area containing the range of networks to be summarized. The networks will be summarized into area 1. The ABR R1 summarizes the range of subnets from 172.16.32.0 to 172.16.63.0 into one range: 172.16.32.0

255.255.224.0.

QUESTION 7

Refer to the exhibit.



Routers R2, R3, R4, and R5 have OSPF enabled. What should be configured on the routers in area 1 to ensure that all default summary routes and redistributed EIGRP routes will be forwarded from R6 to area 1, and only a default route for

all other OSPF routes will be forwarded from R5 to area 1.

A. R5(config-router)# area 1 stub R6(config-router)# area 1 stub

B. R5(config-router)# area 1 stub no-summary R6(config-router)# area 1 stub

C. R5(config-router)# area 1 nssa R6(config-router)# area 1 nssa

D. R5(config-router)# area 1 nssa no-summary R6(config-router)# area 1 nssa

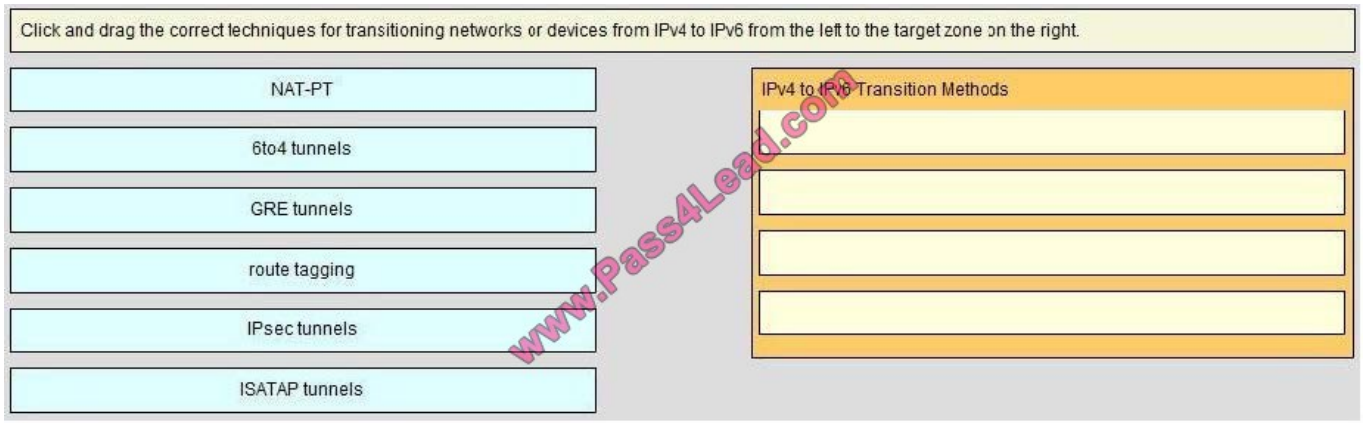
Correct Answer: D

External RIP routes are being routed in OSPF area 1 where they are injected as type 7 so we use (area 1 NSSA) command on the ASBR(R2) and (Area 1 NSSA no-summary) command on R3 and R4. You can verify issuing the command "show ip ospf database" and you will see the type 7 lsa\\'s on ASBR(R2) and LSA\\'s Type 5 and 7 on both the ABR routers(R3 ,R4)

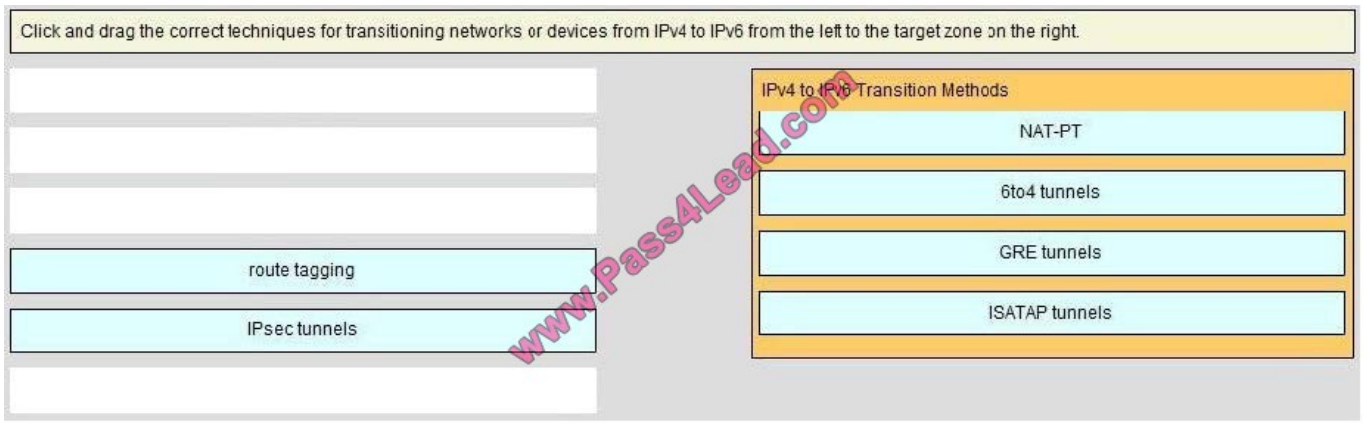
QUESTION 8

Click and drag the correct techniques for transitioning networks or devices from IPv6 from the left to the target zone on the right.

Select and Place:



Correct Answer:



QUESTION 9

Which of the following settings could prevent two potential EIGRP neighbors from becoming neighbors? (Choose two answers.)

A. The interface used by one router to connect to the other router is passive in the EIGRP process.

B. Duplicate EIGRP router IDs

C. Mismatched Hold Timers.

D. IP addresses of 10.1.1.1/24 and 10.2.2.2/24, respectively.

Correct Answer: AD

Reference: http://smitley.net/?p=167 (see `configuration settings that could prevent neighbor relationships\\')

QUESTION 10

Which three route filtering statements are true? (Choose three)

A. After the router rip and passive-interface s0/0 commands have been issued, the s0/0 interface will not send any RIP updates, but will receive routing updates on that interface.

B. After the router eigrp 10 and passive-interface s0/0 commands have been issued, the s0/0 interface will not send any EIGRP updates, but will receive routing updates on that interface

C. After the router ospf 10 and passive-interface s0/0 commands have been issued , the s0/0 interface will not send any OSPF updates, but will receive routing updates on that interface

D. When you use the passive-interface command with RIPv2, multicasts are sent out the specified interface

E. When you use the passive-interface command with EIGRP, hello messages are not sent out the specified interface

F. When you use the passive-interface command with OSPF, hello messages are not sent out the specified interface

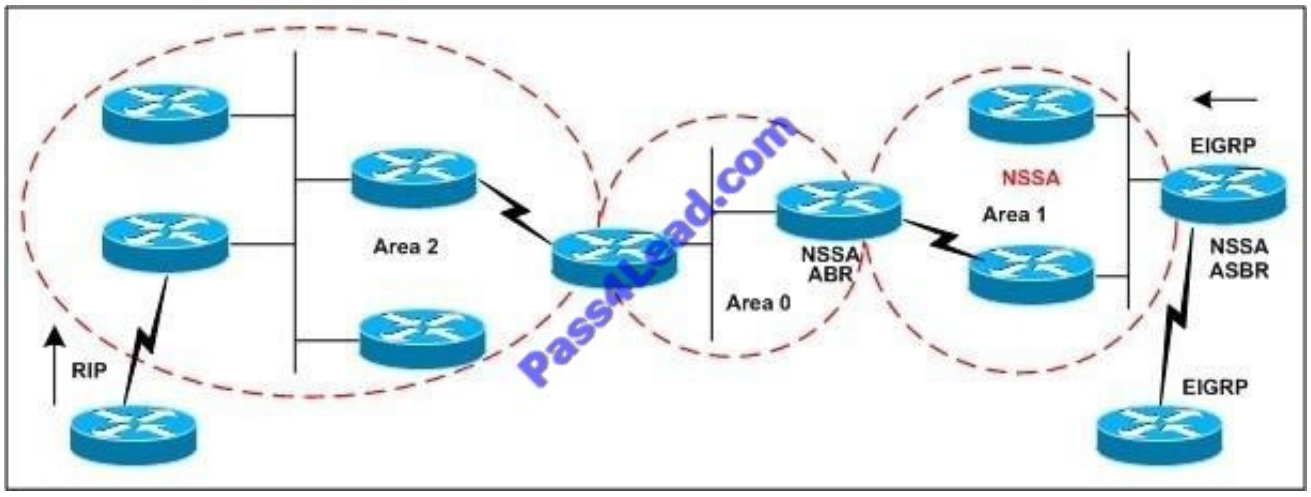
Correct Answer: AEF

Passive-interface command is used in all routing protocols to disable sending updates out from a specific interface. However the command behavior varies from o ne protocol to another"

- In RIP, this command will not allow sending multicast updates via a specific interface but will allow listening to incoming updates from other RIP speaking neighbors. This means that the router will still be able to receive updates o n that passive interface and use them in its routing table. In EIGRP and OSPF the passive-interface command stops sending outgoing hello packets, hence the router can not form any neighbor relationship via the passive interface. This behavior stops both outgoing and incoming routing updates.

QUESTION 11

Refer to the exhibit.



In the network diagram, Area 1 is defined as a stub area. Because redistribution is not allowed in the stub area, EIGRP routes cannot be propagated into the OSPF domain. How does defining area 1 as a not-so-stubby area (NSSA) make it possible to inject EIGRP routes into the OSPF NSSA domain?

A. by creating type 5 LSAs

B. by creating type 7 LSAs

C. by creating a link between the EIGRP domain and the RIP domain, and redistributing EIGRP into RIP

D. by manually changing the routing metric of EIGRP so that it matches the routing metric of OSPF

Correct Answer: B

QUESTION 12

Based on the exhibited output,

```
R1# show ip eigrp topology

IP-EIGRP Topology Table for process 200

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

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


Which three statements are true? (Choose three.)

A. R1 is in AS 200.

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

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

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

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

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

Correct Answer: ACD

It can be determined that AS 200 is used, from the fact that the IS-IS process ID is labeled as 200. The best path to reach the network 192.168.1.48/28 is the first one displayed in the routing table. This can be further demonstrated by the fact that the metric is less than the alternative route, via serial 0. Finally, the AD can be found by viewing the second number within the parentheses, which in this case is 40512000.

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