



Exam: 350-001

CCIE Written

Demo: Version 3.0

Download Full Version Visit at

www.real-exams.net

© 2007- 2008 Real-Exams, LTD All Rights Reserved

<http://www.real-exams.net>

<http://www.testking.com.tw>

Study Tips

This product will provide you Qs and answers carefully compiled and written by our experts. Try to understand the concepts behind the Qs instead of cramming the Qs. Go through the entire document at least twice so that you make sure that you are not missing anything.

Important Note:

Please Read Carefully

This Real-Exams.net exam has been carefully written and compiled by Real-Exams.net experts. It is designed to help you learn the concepts behind the Qs rather than be a strict memorization tool. Repeated readings will increase your comprehension.

We continually add to and update our exams with new Qs, so check that you have the latest version of this exam right before you take your exam.

For security purposes, each PDF file is encrypted with a unique serial number associated with your Real-Exams.net account information. In accordance with International Copyright Law, Real-Exams.net reserves the right to take legal action against you should we find copies of this PDF file has been distributed to other parties.

Please tell us what you think of our exam. We appreciate both positive and critical comments as your feedback helps us improve future versions.

We thank you for buying our product and look forward to supplying you with all your Certification training needs.

Good studying!

Real-Exams Academic Professionals and Support Team

DISCLAIMER

This study guide and/or material is not sponsored by, endorsed by or affiliated with Microsoft, Cisco, Oracle, Citrix, CIW, Checkpoint, Novell, Sun/Solaris, CWNA, LPI, ISC, Etc. All trademarks are properties of their respective owners.

QUESTION NO: 1

Under the OSPF process of your router's configuration, you type in "redistribute igrp 25 metric 35 subnets" in order to redistribute your OSPF and IGRP routing information. What affect did the "subnets" keyword have in your configuration change?

- A. It resulted in OSPF recognizing non-classful networks.
- B. It had no effect since IGRP will summarize class boundaries by default.
- C. It forced IGRP into supporting VLSM information.
- D. It caused OSPF to accept networks with non-classful masks.

Answer: D

Explanation:

Whenever there is a major net that is subnetted, you need to use the keyword subnet to redistribute protocols into OSPF. Without this keyword, OSPF only redistributes major network boundaries. It is possible to run more than one OSPF process on the same router, but running more than one process of the same protocol is rarely needed, and it consumes the router's memory and CPU.

Incorrect Answers:

- A. OSPF already always recognizes non-classful networks and their VLSM information.
- B. Although IGRP does indeed summarize by class boundaries, OSPF does not by default. The "subnets" keyword enables OSPF to use VLSM information from the IGRP routes.
- C. IGRP does not support VLSM routing information.

QUESTION NO: 2

Which routing protocols do not need to have their router ID reachable by other routers within any given network in order to maintain proper network connectivity? (Choose all that apply)

- A. EIGRP
- B. OSPF
- C. BGP
- D. LDP
- E. TDP
- F. None of the above

Answer: A, B, C

Explanation:

The router ID of each router does not necessarily need to be reached by other routers in the network for EIGRP and OSPF. BGP uses TCP as the reliable exchange of information between routers, and BGP routers do not need to even be directly connected.

Incorrect Answers:

D, E. LDP and TDP are not routing protocols.

QUESTION NO: 3

Which of the following does On Demand Routing use to transport ODR information from router to router?

- A. RIP
- B. BGP
- C. CDP
- D. UDP
- E. LSP

Answer: C

Explanation:

ODR uses information from the Cisco Discovery Protocol (CDP).

Incorrect Answers:

A, B, D, E. ODR has nothing to do with RIP, BGP, UDP, or LSP.

QUESTION NO: 4

A router running multiple protocols learns how to reach a destination through numerous different methods. Which of the following information will the router use first to determine the best way to reach the given destination?

- A. The length of the network mask of a route.
- B. The administrative distance of a route.
- C. The metric of a route.
- D. None of the above.

Answer: A

Explanation:

Refer to the following example:

Let's look at three routes that have just been installed in the routing table, and see how they look on the router.

router# show ip route

....

D 192.168.32.0/26 [90/25789217] via 10.1.1.1

R 192.168.32.0/24 [120/4] via 10.1.1.2

O 192.168.32.0/19 [110/229840] via 10.1.1.3

....

If a packet arrives on a router interface destined for 192.168.32.1, which route would the router choose? It depends on the prefix length, or the number of bits set in the subnet mask. Longer prefixes are always preferred over shorter ones when forwarding a packet.

In this case, a packet destined to 192.168.32.1 is directed toward 10.1.1.1, because 192.168.32.1 falls within the 192.168.32.0/26 network (192.168.32.0 to 192.168.32.63).

It is chosen based on the longest match, not the fact that it has a lower AD. It also falls within the other two routes available, but the 192.168.32.0/26 has the longest prefix within the routing table (26 bits verses 24 or 19 bits).

Likewise, if a packet destined for 192.168.32.100 arrives on one of the router's interfaces, it's forwarded to 10.1.1.2, because 192.168.32.100 doesn't fall within 192.168.32.0/26 (192.168.32.0 through 192.168.32.63), but it does fall within the 192.168.32.0/24 destination (192.168.32.0 through 192.168.32.255). Again, it also falls into the range covered by 192.168.32.0/19, but 192.168.32.0/24 has a longer prefix length.

Incorrect Answers:

B, C: The administrative distance and metric is consulted only for routes with the same network mask length.

Reference:

www.cisco.com/en/US/tech/tk365/technologies_tech_note09186a0080094823.shtml

QUESTION NO: 5

Which of the following are key differences between RIP version 1 and RIP version 2?
(Choose all that apply)

- A. RIP version 1 supports authentication while RIP version 2 does not.
- B. RIP version 2 uses multicasts while RIP version 1 does not.
- C. RIP version 1 uses hop counts as the metric while RIP version 2 uses bandwidth information.
- D. RIP version 1 does not support VLSM while RIP version 2 does.
- E. RIP version 1 is distance vector while RIP version 2 is not.
- F. None of the above are true

Answer: B, D

Explanation:

Both Classless Routing and Multicast updates (224.0.0.9) were impossible with RIP v1 and are available with RIP version 2.

Incorrect Answers:

- A. RIPv2 supports neighbor authentication. RIPv1 does not support this.
- C. Both RIP version use hop counts as the metric.
- E. Both RIP versions are distance vector routing protocols.

QUESTION NO: 6

You are deciding which routing protocol to implement on your network. When weighing the different options, which of the following are valid considerations?

- A. Distance vector protocols have a finite limit of hop counts whereas link state protocols place no limit on the number of hops.
- B. Distance vector protocols converge faster than link state protocols.
- C. RIP is a distance vector protocol. RIP v2 and OSPF are link state protocols.
- D. Distance vector protocols only send updates to neighboring routers. Link state protocols depend on flooding to update all routers in the within the same routing domain.
- E. None of the above

Answer: A

Explanation:

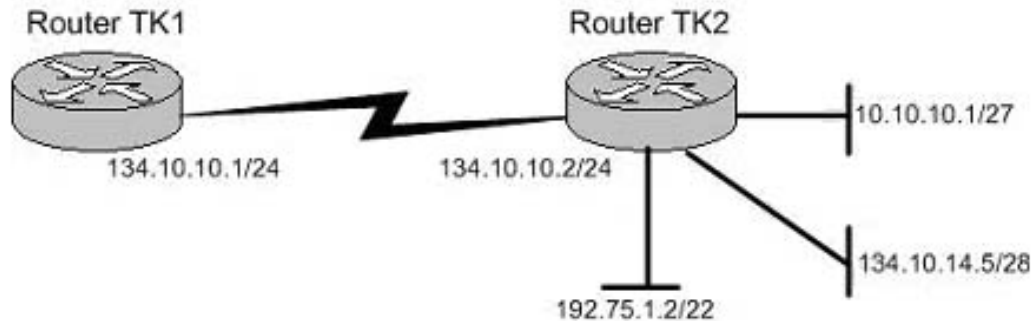
Only A is true.

Incorrect Answers:

- B. Link state protocols have the benefit of better convergence than distance vector protocols.
- C. RIPv2 is a distance vector protocol, just like RIP version 1.
- D. Link state protocols do not flood updates to every router within the same domain, just within their area.

QUESTION NO: 7

The Testking.com.tw network contains two routers named Router TK1 and Router TK2 as shown in the following exhibit:



Both Router TK1 and Router TK2 are running RIPv1. Both routers are configured to advertise all of their attached networks via RIP. Which of the networks connected to Router TK2 will be advertised to Router TK1?

- A. 10.10.10.0/27 and 134.10.15.0/28
- B. 10.0.0.0/8 and 192.75.0.0/24
- C. 134.10.15.0/28 and 192.75.0.0/22
- D. Only 10.0.0.0/8
- E. Only 134.10.15.0/28
- F. Only 10.10.10.0/27
- G. None of the above

Answer: D

Explanation:

Only one subnet 10.0.0.0/8 will be advertised.

In this scenario we are being tested on the following concepts:

RIP V1 performs auto summarization at network boundaries by default. It treats the subnets to be advertised differently depending upon several attributes of the respective subnets.

Here is the process RIP v1 uses to advertise, assuming that there are no filters (such as distribute-lists, or route-maps) to block the packet:

Is the route to be advertised part of the major network of the interface?

If it is, then advertise. If it is not, then summarize the network to its classful boundary and send it out.

This is the fate of the 10.10.10.0/27 subnet, which will be summarized as 10.0.0.0/8 and sent out.

Incorrect Answers:

A, C, E. If the route is part of the major network, check to see if the subnet mask matches that of the outgoing interface. If the subnet mask does match then advertise the route out the interface. If the subnet mask of the route does not match the interface's subnet mask, then do not advertise the route out the interface unless the route is a host route (/32). This is the fate of the **134.10.15.0/28 subnet, which will not be sent out (advertised) at all.**

B, C. Supernet advertisement (advertising any network prefix less than its classful major network) is not allowed in RIP route summarization. This is the fate of the 192.75.1.2/22 subnet, which will be not be sent out (advertised) at all.

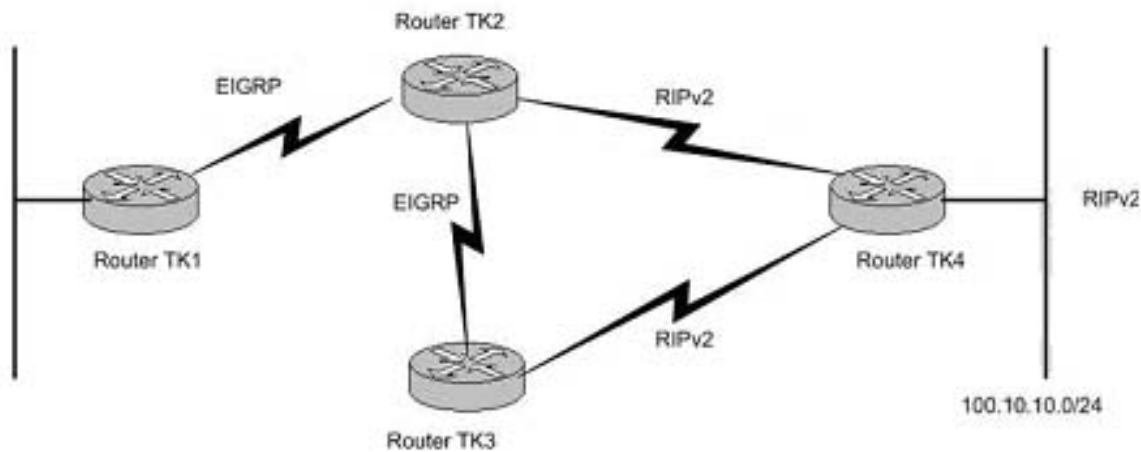
F. The 10.10.10.0/27 network will be summarized and sent as 10.0.0.0/8.

Please note:

If the route is a host route then advertise it out.

QUESTION NO: 8

You are the network administrator at Testking.com.tw. The Routing protocols which run between the different routers in the Testking.com.tw network are shown in the following exhibit:



On Router TK3 RIPv2 is being redistributed into EIGRP. No other redistribution is done to the network.

With regard to this scenario, who owns the route for subnet 100.10.1.0/24 in the routing table of Router TK1?

- A. Nobody, because the route is neither in the routing table of Router TK1, nor EIGRP topology table.
- B. External EIGRP.
- C. The route is only in the EIGRP topology table only and not in the routing table of Router TK1.
- D. Internal EIGRP.
- E. The route is only but is in the EIGRP topology table as an active route and not in the routing table of Router TK1.

Answer: B

Explanation:

External EIGRP will own the route, because the route is from outside the AS. Routes that are redistributed into EIGRP are automatically considered external EIGRP routes.

Incorrect Answers:

A. Since RIPv2 allows for VLSM information to be carried in the route, there are no concerns about the route not being advertised due to summarization. Since RIPv2 is being redistributed into EIGRP, TK1 will learn about the route via TK2 and TK3.

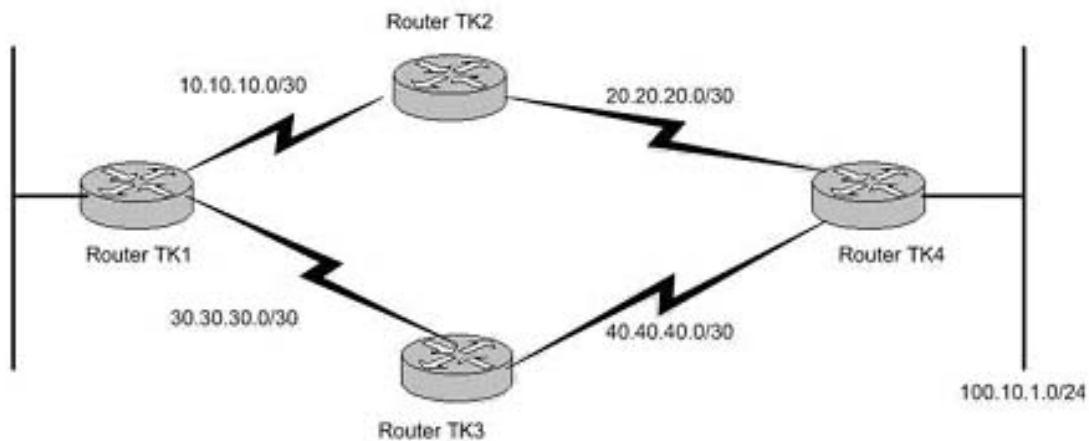
C, E. This route will be in both the EIGRP table, as well as the IP routing table.

D. Redistributed routes always show up as External routes.

Note: From the perspective of router TK1, all routes are EIGRP learned, since that is the only protocol running on this router. Although the AD of RIP is lower than external EIGRP routes, RIP is not being configured on TK1 so it will not learn this route via RIP.

QUESTION NO: 9

The router topology for the multi-protocol Testking.com.tw network is shown in the following exhibit:



The current configuration for Router TK1, Router TK2, Router TK3, and Router TK4 are as follows:

Router TK1:

```
interface loopback0
```

```
ip address 1.1.1.1 255.255.255.255
router eigrp 10
  network 1.0.0.0
  network 10.0.0.0
interface loopback1
  ip address 4.4.4.4 255.255.255.255
```

Router TK2

```
router eigrp 10
network 10.0.0.0
network 20.0.0.0
no auto-summary
```

Router TK3

```
router ospf 10
network 30.30.30.0 0.0.0.255 area 0
network 40.40.40.0 0.0.0.255 area 0
```

Router TK4

```
router eigrp 10
  redistribute connected metric 1400 230 1 255 1500
  network 20.0.0.0
  no auto-summary
router ospf 10
  redistribute connected metric 100 subnets
  network 40.40.40.0 0.0.0.255 area 0
router bgp 10
  network 100.10.1.0 mask 255.255.255.0
  neighbor 1.1.1.1 remote-as 10
  neighbor update-source loopback
  no auto-summary
```

Your newly appointed Testking.com.tw trainee wants to know who owns the subnet 100.10.1.0/24 in the routing table of Router TK1.

What would your reply be?

- A. Router TK1 does not have this subnet in its routing table.
- B. EIGRP
- C. OSPF
- D. BGP
- E. RIP

F. It is there as a static route.

Answer: B

Explanation:

Routers TK1, TK2, and TK4 are all EIGRP neighbors with all relevant subnets advertised, so this route will show up as an EIGRP route.

Incorrect Answers:

C, D, E. Router TK1 is only running the EIGRP protocol, so the other routing protocols are completely ruled out.

QUESTION NO: 10

Which of the following are Distance Vector routing protocols? (Choose all that apply)

- A. OSPF
- B. BGP
- C. RIP version 1
- D. ISIS
- E. EIGRP
- F. RIP version 2

Answer: C, E, F

Explanation:

Both RIP version 1 and RIP version 2 are distance vector protocols.

EIGRP is an enhanced distance vector protocol, relying on the Diffused Update Algorithm (DUAL) to calculate the shortest path to a destination within a network

Incorrect Answers:

A, D. OSPF and ISIS are link state routing protocols.

B. BGP is a path vector protocol, which is similar to a distance vector protocol, but with a key difference. A distance vector protocol chooses routes based on hop count, where BGP chooses routes that traverse the least number of Autonomous Systems, among other things.

