

CCNA2 v6.0 Chapter 3 Exam Answer 2017

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CCNA2 v6.0 Chapter 3 Exam Answer 2017

1. Which dynamic routing protocol was developed to interconnect different Internet service providers?
 - BGP
 - EIGRP
 - OSPF
 - RIP
2. Which routing protocol is limited to smaller network implementations because it does not accommodate growth for larger networks?
 - OSPF
 - RIP
 - EIGRP
 - IS-IS

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3. What two tasks do dynamic routing protocols perform? (Choose two.)

- discover hosts
- **update and maintain routing tables**
- propagate host default gateways
- **network discovery**
- assign IP addressing

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4. When would it be more beneficial to use a dynamic routing protocol instead of static routing?

- in an organization with a smaller network that is not expected to grow in size
- on a stub network that has a single exit point
- in an organization where routers suffer from performance issues
- **on a network where there is a lot of topology changes**

5. When would it be more beneficial to use static routing instead of dynamic routing protocols?

- **on a network where dynamic updates would pose a security risk**
- on a network that is expected to continually grow in size
- on a network that has a large amount of redundant paths
- on a network that commonly experiences link failures

6. What is a purpose of the network command when configuring RIPv2 as

the routing protocol?

- It identifies the interfaces that belong to a specified network.
- It specifies the remote network that can now be reached.
- It immediately advertises the specified network to neighbor routers with a classful mask.
- It populates the routing table with the network entry.

7. A network administrator configures a static route on the edge router of a network to assign a gateway of last resort. How would a network administrator configure the edge router to automatically share this route within RIP?

- Use the auto-summary command.
- Use the passive-interface command.
- Use the network command.
- Use the default-information originate command.

8. What is the purpose of the passive-interface command?

- allows a routing protocol to forward updates out an interface that is missing its IP address
- allows a router to send routing updates on an interface but not receive updates via that interface
- allows an interface to remain up without receiving keepalives
- allows interfaces to share IP addresses
- allows a router to receive routing updates on an interface but not send updates via that interface

9. Which route would be automatically created when a router interface is activated and configured with an IP address?

- D 10.16.0.0/24 [90/3256] via 192.168.6.9
- C 192.168.0.0/24 is directly connected, FastEthernet 0/0
- S 192.168.1.0/24 is directly connected, FastEthernet 0/1
- O 172.16.0.0/16 [110/65] via 192.168.5.1

10. Refer to the exhibit. Which two types of routes could be used to describe the 192.168.200.0/30 route? (Choose two.)

```
R1# show ip route | begin Gateway
Gateway of last resort is not set

 192.168.10.0/24 is variably subnetted, 2 subnets, 2 masks
C   192.168.10.0/24 is directly connected, GigabitEthernet0/0.10
L   192.168.10.254/32 is directly connected, GigabitEthernet0/0.10
 192.168.20.0/24 is variably subnetted, 2 subnets, 2 masks
C   192.168.20.0/24 is directly connected, GigabitEthernet0/0.20
L   192.168.20.254/32 is directly connected, GigabitEthernet0/0.20
O   192.168.30.0/24 [110/2] via 192.168.200.2, 00:01:20,
GigabitEthernet0/1
 192.168.200.0/24 is variably subnetted, 2 subnets, 2 masks
C   192.168.200.0/30 is directly connected, GigabitEthernet0/1
L   192.168.200.1/32 is directly connected, GigabitEthernet0/1
```

CCNA2 v6.0 Chapter 3 Exam 002

- ultimate route
 - level 1 parent route
 - level 1 network route
 - level 2 child route
 - supernet route
11. What occurs next in the router lookup process after a router identifies a destination IP address and locates a matching level 1 parent route?
- The level 2 child routes are examined.
 - The level 1 supernet routes are examined.
 - The level 1 ultimate routes are examined.
 - The router drops the packet.
12. Which route would be used to forward a packet with a source IP address of 192.168.10.1 and a destination IP address of 10.1.1.1?
- C 192.168.10.0/30 is directly connected, GigabitEthernet0/1
 - S 10.1.0.0/16 is directly connected, GigabitEthernet0/0
 - O 10.1.1.0/24 [110/65] via 192.168.200.2, 00:01:20, Serial0/1/0
 - S* 0.0.0.0/0 [1/0] via 172.16.1.1
13. Which two requirements are used to determine if a route can be considered as an ultimate route in a router's routing table? (Choose two.)
- contain subnets
 - be a default route
 - contain an exit interface
 - be a classful network entry
 - contain a next-hop IP address
14. What is a disadvantage of using dynamic routing protocols?
- They are only suitable for simple topologies.

- Their configuration complexity increases as the size of the network grows.
- They send messages about network status insecurely across networks by default.
- They require administrator intervention when the pathway of traffic changes.

15. Which two statements are true regarding classless routing protocols? (Choose two.)

- sends subnet mask information in routing updates
- sends complete routing table update to all neighbors
- is supported by RIP version 1
- allows for use of both 192.168.1.0/30 and 192.168.1.16/28 subnets in the same topology
- reduces the amount of address space available in an organization

16. Refer to the exhibit. Based on the partial output from the show ip route command, what two facts can be determined about the RIP routing protocol? (Choose two.)

```

10.0.0.0/8 is variably subnetted, 4 subnets, 6 masks
C    10.0.0.0/25 is directly connected, GigabitEthernet0/1
L    10.0.0.1/32 is directly connected, GigabitEthernet0/1
C    10.0.0.128/26 is directly connected, GigabitEthernet0/0
L    10.0.0.129/32 is directly connected, GigabitEthernet0/0
R    172.16.0.0/16 is variably subnetted, 2 subnets, 2 masks
R    172.16.0.0/25 [120/1] via 192.168.1.1, 00:00:12, Serial0/1/0
R    172.16.0.128/25 [120/1] via 192.168.1.1, 00:00:12, Serial0/1/0
R    192.168.1.0/24 is variably subnetted, 2 subnets, 3 masks
C    192.168.1.0/30 is directly connected, Serial0/1/0
L    192.168.1.2/32 is directly connected, Serial0/1/0

```

CCNA2 v6.0 Chapter 3 Exam 003

- RIP version 2 is running on this router and its RIP neighbor.
- The metric to the network 172.16.0.0 is 120.
- RIP version 1 is running on this router and its RIP neighbor.
- The command no auto-summary has been used on the RIP neighbor router.
- RIP will advertise two networks to its neighbor.

17. While configuring RIPv2 on an enterprise network, an engineer enters the command network 192.168.10.0 into router configuration mode.

What is the result of entering this command?

- The interface of the 192.168.10.0 network is sending version 1 and version 2 updates.
- The interface of the 192.168.10.0 network is receiving version 1 and version 2 updates.

- The interface of the 192.168.10.0 network is sending only version 2 updates.
- The interface of the 192.168.10.0 network is sending RIP hello messages.

18. A destination route in the routing table is indicated with a code D. Which kind of route entry is this?

- a static route
- a route used as the default gateway
- a network directly connected to a router interface
- a route dynamically learned through the EIGRP routing protocol

19. Refer to the exhibit. Which interface will be the exit interface to forward a data packet with the destination IP address 172.16.0.66?

```

R1# show ip route
<output omitted>

Gateway of last resort is not set

172.16.0.0/16 is variably subnetted, 7 subnets, 3 masks
R 172.16.0.0/26 [120/1] via 192.168.1.1, 00:00:24, Serial0/0/0
D 172.16.0.64/26 [90/2170112] via 192.168.1.6, 00:05:56, Serial0/0/1
R 172.16.0.128/26 [120/1] via 192.168.1.1, 00:00:24, Serial0/0/0
C 172.16.0.192/27 is directly connected, GigabitEthernet0/0
L 172.16.0.193/32 is directly connected, GigabitEthernet0/0
C 172.16.0.224/27 is directly connected, GigabitEthernet0/1
L 172.16.0.225/32 is directly connected, GigabitEthernet0/1
192.168.1.0/24 is variably subnetted, 4 subnets, 2 masks
C 192.168.1.0/30 is directly connected, Serial0/0/0
L 192.168.1.2/32 is directly connected, Serial0/0/0
C 192.168.1.4/30 is directly connected, Serial0/0/1
L 192.168.1.5/32 is directly connected, Serial0/0/1
192.168.2.0/30 is subnetted, 1 subnets
R 192.168.2.0/30 [120/1] via 192.168.1.1, 00:00:24, Serial0/0/0
R1#

```

CCNA2 v6.0 Chapter 3 Exam 001

- Serial0/0/0
- Serial0/0/1
- GigabitEthernet0/0
- GigabitEthernet0/1

20. Which type of route will require a router to perform a recursive lookup?

- an ultimate route that is using a next hop IP address on a router that is not using CEF
- a level 2 child route that is using an exit interface on a router that is not using CEF
- a level 1 network route that is using a next hop IP address on a router that is using CEF
- a parent route on a router that is using CEF

21. Which route is the best match for a packet entering a router with a destination address of 10.16.0.2?

- S 10.0.0.0/8 [1/0] via 192.168.0.2
- S 10.16.0.0/24 [1/0] via 192.168.0.9
- S 10.16.0.0/16 is directly connected, Ethernet 0/1

- S 10.0.0.0/16 is directly connected, Ethernet 0/0

22. A router is configured to participate in multiple routing protocol: RIP, EIGRP, and OSPF. The router must send a packet to network 192.168.14.0. Which route will be used to forward the traffic?

- a 192.168.14.0/26 route that is learned via RIP
- a 192.168.14.0/24 route that is learned via EIGRP
- a 192.168.14.0/25 route that is learned via OSPF
- a 192.168.14.0/25 route that is learned via RIP

23. What is different between IPv6 routing table entries compared to IPv4 routing table entries?

- IPv6 routing tables include local route entries which IPv4 routing tables do not.
- By design IPv6 is classless so all routes are effectively level 1 ultimate routes.
- The selection of IPv6 routes is based on the shortest matching prefix, unlike IPv4 route selection which is based on the longest matching prefix.
- IPv6 does not use static routes to populate the routing table as used in IPv4.

24. Match the dynamic routing protocol component to the characteristic. (Not all options are used.)

- Question

manually implemented routes by an administrator	data structures
a finite list of steps used to determine the best path	Target
tables or databases that are stored in RAM	routing protocol messages
exchanges routing information and maintains accurate information about networks	Target
	algorithm
	Target

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- Answer

data structures
tables or databases that are stored in RAM
routing protocol messages
exchanges routing information and maintains accurate information about networks
algorithm
a finite list of steps used to determine the best path

CCNA2 v6.0 Chapter 3 Exam A002

25. Match the characteristic to the corresponding type of routing. (Not all

options are used.)

- Question

typically used on stub networks	static routing
not suitable for topologies where more than one router is required	Target
new networks are added automatically to the routing table	Target
best choice for large networks	dynamic routing
less routing overhead	Target
	Target

CCNA2 v6.0 Chapter 3 Exam Q001

- Answer

static routing
typically used on stub networks
less routing overhead
dynamic routing
new networks are added automatically to the routing table
best choice for large networks

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Comments

10 comments

