

ELITECERTIFY

Certification Study Guide



Cisco

Demo

640-801 Cisco Certified Network Associate

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QUESTION 1

Which two of the addresses below are available for host addresses on the subnet 192.168.15.19/28? (Select two answer choices)

- A. 192.168.15.17
- B. 192.168.15.14
- C. 192.168.15.29
- D. 192.168.15.16
- E. 192.168.15.31
- F. None of the above

Answer: A, C

Explanation:

The network uses a 28bit subnet (255.255.255.240). This means that 4 bits are used for the networks and 4 bits for the hosts. This allows for 14 networks and 14 hosts ($2^n - 2$). The last bit used to make 240 is the 4th bit (16) therefore the first network will be

192.168.15.16. The network will have 16 addresses (but remember that the first address is the network address and the last address is the broadcast address). In other words, the networks will be in increments of 16 beginning at 192.168.15.16/28. The IP address we are given is 192.168.15.19. Therefore the other host addresses must also be on this network. Valid IP addresses for hosts on this network are: 192.168.15.17-192.168.15.30. Incorrect Answers:

- B. This is not a valid address for this particular 28 bit subnet mask. The first network address should be 192.168.15.16.
- D. This is the network address.
- E. This is the broadcast address for this particular subnet.

QUESTION 2

RIP version 2 is being used as the routing protocol within the EliteCertifynetwork. What does RIP version 2 use to prevent routing loops? (Choose two)

- A. CIDR
- B. Split horizon
- C. Authentication
- D. Classless masking
- E. Hold-down timers
- F. Multicast routing updates
- G. Path Vectoring

Answer: B, E

Explanation:

Distance Vector routing protocols employ the split horizon mechanism to reduce the possibility of routing loops. Split horizon blocks information about routes from being advertised by a router out of any interface

from which that information originated. RIP versions 1 and 2 also use the concept of hold timers. When a destination has become unreachable (or the metric has increased enough to cause poisoning), the destination goes into "holddown". During this state, no new path will be accepted for the same destination for this amount of time. The hold time indicates how long this state should last.

Incorrect Answers:

A, C, D, F. Although these are all features and functions of RIP version 2, they are not mechanisms used to prevent routing loops.

G. Path Vectoring is a concept used by BGP routers. RIP version 1 and 2 are considered to be distance vector routing protocols.

QUESTION 3

Which one of the following commands would you enter to terminate a VTY line session?

- A. close
- B. disable
- C. disconnect
- D. suspend
- E. exit
- F. None of the above

Answer: E

Explanation:

A VTY line is a telnet session. To end a telnet session from a remote device, enter the exit or logout command.

Incorrect Answers:

A, B, C, D. These are all invalid commands.

QUESTION 4

On the topic of OSPF routing; which of the following are the traits of an OSPF area? (Select all that apply)

- A. Each OSPF area requires a loopback interface to be configured.
- B. Areas may be assigned any number from 0 to 65535.
- C. Area 0 is called the backbone area.
- D. Hierarchical OSPF networks do not require multiple areas.
- E. Multiple OSPF areas must connect to area 0.
- F. Single area OSPF networks must be configured in area 1.

Answer: C, E

Explanation: OSPF uses areas in a hierarchical fashion, and the backbone area is always area 0. All other areas have at least one connection to area 0.

Incorrect Answers:

A. Loopback interfaces are often used in OSPF networks, so that the router ID can be configured. However, this is not a requirement.

B. The area-id can be an integer between 0 and 4294967295.

F. Single area OSPF networks do not have to be configured with the backbone area 0. Although area 1 can indeed be used, it is not required that area 1 is used. Single area OSPF networks can be any integer from 0-4294967295.

QUESTION 5

If the bandwidth of an OSPF interface is configured with the "bandwidth 64" command, what would be the calculated cost of the link?

A. 1

B. 64

C. 1562

D. 64000

E. 1500

Answer: C

Explanation: The question states that OSPF interface has been configured with the bandwidth 64 command. Cisco IOS always interprets the values for the bandwidth command as being in kbps, so the bandwidth is configured as 64 kbps. The metric for any OSPF defaults to $100,000,000/\text{bandwidth}$. So, in this example:
 $100,000,000 / 64000 = 1562.5$

QUESTION 6

Which two are NOT characteristics of the OSPF routing protocol? (Select all that apply)

A. It confines network instability to a single area of network.

B. It increases the routing overhead of the network

C. It supports VLSM

D. It routes between Autonomous Systems.

E. It allows extensive control of routing updates

Answer: B, D

Explanation: Through the use of areas, routing information and instability's are reduced to specific areas. This will reduce the routing overhead on a network, not increase it. OSPF is not used to provide routing information between different systems. BGP is predominately used for this purpose.

Incorrect Answers:

A, C, E. These are all true statements that describe the features and functionality of OSPF.

QUESTION 7

Which of the following are true statements regarding the characteristics of OSPF areas? Select all that apply.

- A. All OSPF networks require the use of multiple areas
- B. Multiple OSPF areas must connect to area 0
- C. Single area OSPF networks must be configured in area 1
- D. Areas can be assigned any number from 0 to 63535
- E. Area 0 is called the backbone area
- F. Each OSPF area need to be configured with a loopback interface

Answer: B, E

Explanation: OSPF divides its routing domain into areas. Area 0, the backbone, is required. This divides interior routing into two levels. If traffic must travel between two areas, the packets are first routed to the backbone. This may cause non-optimal routes, since interarea routing is not done until the packet reaches the backbone. Once there, it is routed to the destination area, which is then responsible for final delivery. This layering permits addresses to be consolidated by area, reducing the size of the link state databases. All areas must be connected to area 0, either directly or through the use of virtual links.

Incorrect Answers:

- A. OSPF network can only consist of a single area.
- C. Single area networks can use any area number. If more than one area is configured in the network, then at least one of the areas must be area 0.
- D. The area-id can be an integer between 0 and 4294967295.
- F. While loopback interfaces are commonly used in OSPF networks, it is not a requirement.

QUESTION 8

You wish to increase the security of all of the routers within your network. What can be done to secure the virtual terminal interfaces on a router? (Choose two)

- A. Administratively shut down the interface. B. Physically secure the interface.
- C. Create an access list and apply it to the virtual terminal interfaces with the access-group command.
- D. Configure a virtual terminal password and login process.
- E. Enter an access list and apply it to the virtual terminal interfaces using the accessclass command.

Answer: D, E

Explanation:

There are a total of 5 logical Virtual terminal interfaces in a Cisco router (lines 0-4) and they are used for remote access into the device via telnet. Configuring these interfaces correctly with a login and password information can be used for security, as each user will be prompted for a password in order to obtain access.

A second method is to use the "access-class" command. Combined with an access list, this command can be used to specify the hosts or networks that will be allow access to the device.

Incorrect Answers:

- A. Virtual terminal interfaces are logical interfaces that can not be manually shut down.
- B. Virtual terminal lines are logical interfaces that reside within a router, so there is nothing that can be physically secured.
- C. This command is used with access-lists for LAN and WAN interfaces, but is not used for the VTY lines.

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