

**100-105.exam**

Number: 100-105  
Passing Score: 800  
Time Limit: 120 min



**100-105**

**Interconnecting Cisco Networking Devices Part 1 (ICND)**

**Exam A****QUESTION 1**

Which route source code represents the routing protocol with a default administrative distance of 90 in the routing table?

- A. S
- B. E
- C. D
- D. R
- E. O

**Correct Answer:** C

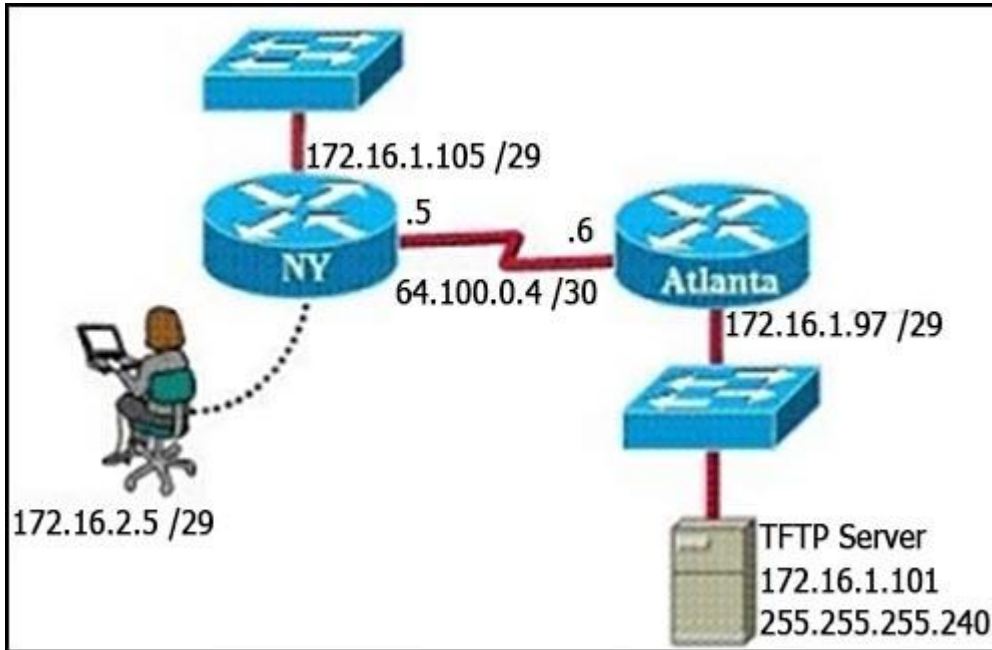
**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 2**

Refer to the exhibit.



A TFTP server has recently been instated in the Atlanta office. The network administrator is located in the NY office and has made a console connection to the NY router. After establishing the connection they are unable to backup the configuration file and iOS of the NY router to the TFTP server. What is the cause of this problem?

- A. The TFTP server has an incorrect subnet mask.
- B. The TFTP server has an incorrect IP address.
- C. The network administrator computer has an incorrect IP address.
- D. The NY router has an incorrect subnet mask.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 3

On a Cisco switch, which protocol determines if an attached VoIP phone is from Cisco or from another vendor?

- A. CDP
- B. RTP
- C. UDP
- D. TCP

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 4**

Which statement about a router on a stick is true?

- A. Its data plane routes traffic for a single VLAN over two or more switches.
- B. It uses multiple subinterfaces of a single interface to encapsulate traffic for different VLANs on the same subnet
- C. It requires the native VLAN to be disabled.
- D. It uses multiple subinterfaces of a single interface to encapsulate traffic for different VLANs.

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 5**

Which routing protocol has the smallest default administrative distance?

- A. IBGP
- B. OSPF
- C. IS-IS
- D. EIGRP
- E. RIP

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:****QUESTION 6**

Two hosts are attached to a switch with the default configuration. Which statement about the configuration is true?

- A. IP routing must be enabled to allow the two hosts to communicate.
- B. The two hosts are in the same broadcast domain.
- C. The switch must be configured with a VLAN to allow the two hosts to communicate.
- D. Port security prevents the hosts from connecting to the switch.

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:****QUESTION 7**

Which MTU size can cause a baby giant error?

- A. 1500
- B. 9216
- C. 1600
- D. 1518

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:****QUESTION 8**

Which statement about static routes is true?

- A. The source interface can be configured to make routing decisions.
- B. A subnet mask is entered for the next-hop address.
- C. The subnet mask is 255.255.255.0 by default.
- D. The exit interface can be specified to indicate where the packets will be routed.

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 9**

Which two statements describe the IP address 10.16.3.65/23? (Choose two.)

- A. The lowest host address in the subnet is 10.16.2.1 255.255.254.0.
- B. The last valid host address in the subnet is 10.16.2.254 255.255.254.0.
- C. The network is not subnetted.
- D. The broadcast address of the subnet is 10.16.3.255 255.255.254.0.
- E. The subnet address is 10.16.3.0 255.255.254.0.

**Correct Answer:** AD

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 10**

Which NAT type is used to translate a single inside address to a single outside address?

- A. dynamic NAT
- B. NAT overload
- C. PAT
- D. static NAT

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 11**

Which option is a valid hostname for a switch?

- A. 5switch-Cisco
- B. Switch-Cisco!
- C. 5switchCisc0
- D. SwitchCisc0

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 12**

Which function enables an administrator to route multiple VLANs on a router?

- A. IEEE 802.1X
- B. HSRP
- C. port channel
- D. router on a stick

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 13**

Which NTP command configures the local device as an NTP reference clock source?

- A. ntp peer
- B. ntp broadcast
- C. ntp master
- D. ntp server

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:****QUESTION 14**

Which RFC was created to alleviate the depletion of IPv4 public addresses?

- A. RFC 4193
- B. RFC 1519
- C. RFC 1518
- D. RFC 1918

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:****QUESTION 15****Instructions**

For both the Router and the Switch the simulated console mode needs to start and remain in enabled mode.

RouterA and SwitchA have been configured to operate in a private network which will connect to the Internet. You have been asked to review the configuration prior to cabling and implementation.

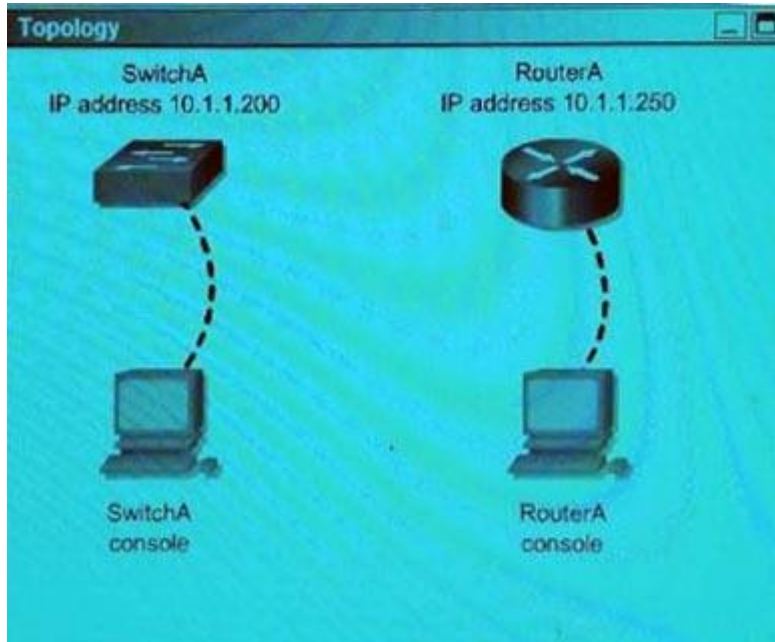
This task requires the use of various IOS commands to access and inspect the running configuration of RouterA and SwitchA. No configuration changes are necessary.

You will connect to RouterA and SwitchA via the console devices that are attached to each.

There are 4 multiple-choice questions with this task. Be sure to answer all of them before leaving this item. In order to score the maximum points you will need to have accessed both SwitchA and RouterA.

NOTE: The configuration command has been disabled for both the router and switch in this simulation.





Which two of the following are true regarding the configuration of RouterA? (Choose two.)

- A. at least 5 simultaneous remote connections are possible
- B. only telnet protocol connections to RouterA are supported
- C. remote connections to RouterA using telnet will succeed
- D. console line connections will never time out due to inactivity
- E. since DHCP is not used on Fa0/1 there is no need to use the NAT protocol

**Correct Answer:** AC

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

Here is the RouterA configuration:

for Router

!

!

```
no service password-encryption
!
hostname Router1
enable secret 5 $1$14mlkm52....
ip domain-name cisco.com
ip ssh version 2
!
!
username ciscouser password 0 cisco
banner login ^c
***** welcome to router1 If you encountered any problem, please consult the administrator ***** ^c
!
line con 0
password cisco
line vty 0 4
password 4thfcvcf
no login
transport input telnet ssh
for switch
!
!
no service password-encryption
!
hostname switch1
enable password cisco
username ciscouser password 0 cisco
ip domain-name cisco.com
banner login ^c
***** welcome to router1 If you encountered any problem, please consult the administrator ***** ^c
line con 0
line vty 0 4
login login local
transport input ssh
line vty 5 15
login local
transport input ssh
```

A is correct as we can telnet from line 0 to line 4 (line vty 0 4).

We can use both telnet and SSH to connect to this router (transport input telnet ssh) -> B is not correct.

C is correct as we can telnet to it.

D is not correct because by default, the timeout is set to 10 minutes on both the console and the vty ports.

E is not correct as NAT can be used even DHCP is not used.

## QUESTION 16

A workstation has just resolved a browser URL to the IP address of a server. Which protocol will the workstation now use to determine the destination MAC address to be placed into frames directed toward the server?

- A. ARP
- B. RARP
- C. DNS
- D. DHCP
- E. HTTP

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 17**

What is the default lease time for a DHCP binding?

- A. 24 hours
- B. 12 hours
- C. 48 hours
- D. 36 hours

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 18**

When a router makes a routing decision for a packet that is received from one network and destined to another, which portion of the packet does it replace?

- A. Layer 2 frame header and trailer
- B. Layer 3 IP address
- C. Layer 5 session
- D. Layer 4 protocol

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

What does a router do with a packet received from one network and destined for another network? The router performs the following three major steps:

- **Step 1.** De-encapsulates the Layer 3 packet by removing the Layer 2 frame header and trailer.
- **Step 2.** Examines the destination IP address of the IP packet to find the best path in the routing table.
- **Step 3.** If the router finds a path to the destination, it encapsulates the Layer 3 packet into a new Layer 2 frame and forwards the frame out the exit interface.

Reference: <http://www.ciscopress.com/articles/article.asp?p=2180208&seqNum=8>

### QUESTION 19

Which device allows users to connect to the network using a single or double radio?

- A. access point
- B. switch
- C. wireless controller
- D. firewall

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 20

Which entity assigns IPv6 addresses to end users?

- A. ICANN
- B. APNIC
- C. RIR
- D. ISPs

**Correct Answer:** D

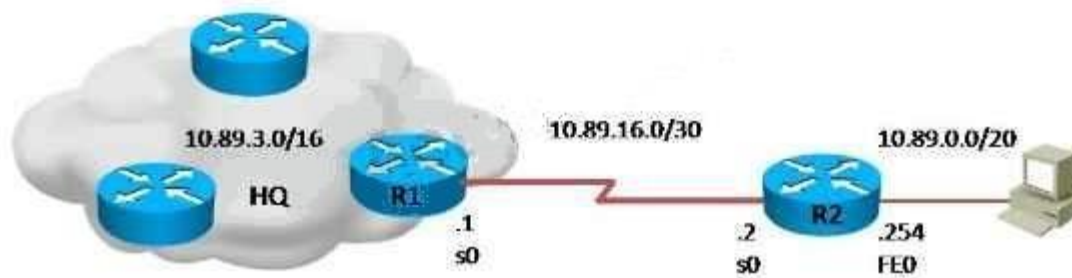
**Section:** (none)

**Explanation**

Explanation/Reference:

**QUESTION 21**

Refer to the exhibit.



Which command is simplest to configure routing between the regional office network 10.89.0.0/20 and the corporate network?

- A. `router2(config)#ip route 0.0.0.0 0.0.0.0 10.89.16.1`
- B. `router2(config)#ip route 10.89.3.0 255.255.0.0 10.89.16.2`
- C. `router1(config)#ip route 10.89.0.0 255.255.240.0 10.89.16.1`

D. router1(config)#ip route 10.89.0.0 255.255.240.0 10.89.16.2

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 22**

What is one requirement for interfaces to run IPv6?

- A. An IPv6 address must be configured on the interface.
- B. An IPv4 address must be configured.
- C. Stateless autoconfiguration must be enabled after enabling IPv6 on the interface
- D. IPv6 must be enabled with the **ipv6 enable** command in global configuration mode.

**Correct Answer:** A

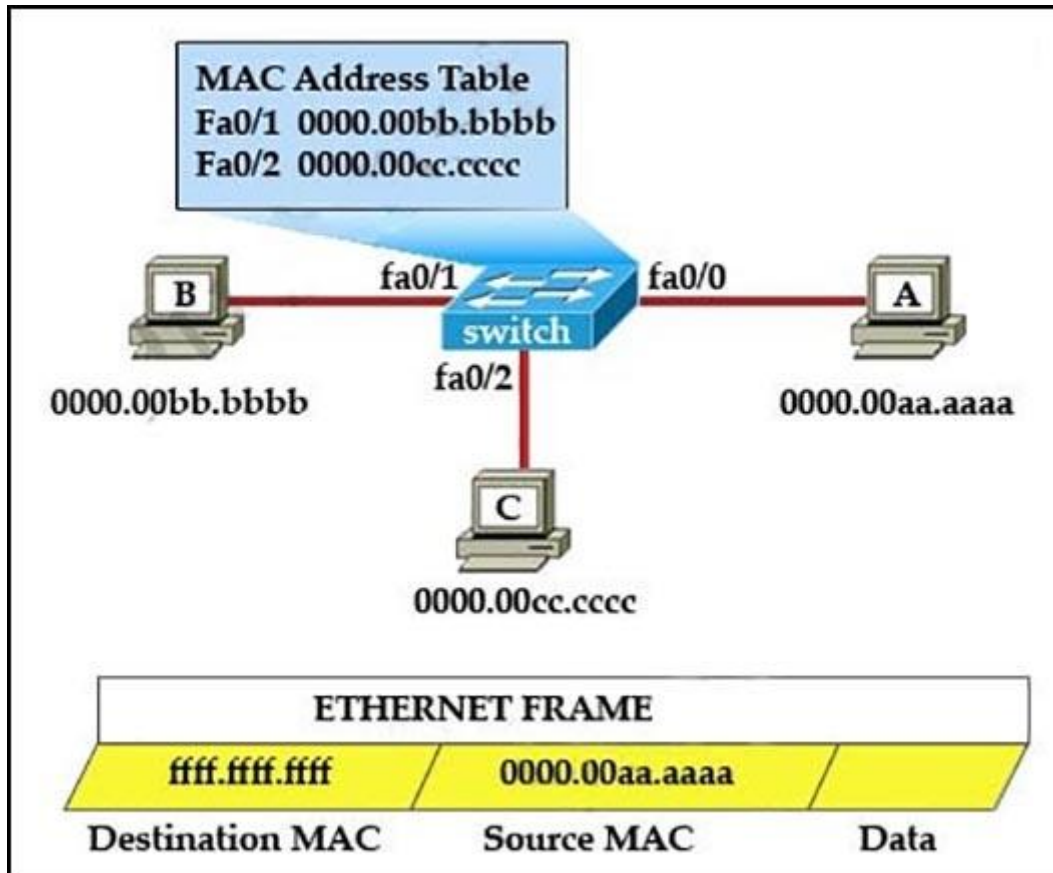
**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 23**

Refer to the exhibit.



The MAC address table is shown in its entirety. The Ethernet frame that is shown arrives at the switch. What two operations will the switch perform when it receives this frame? (Choose two.)

- A. The switch will not forward a frame with this destination MAC address.
- B. The frame will be forwarded out of all the ports on the switch.
- C. The MAC address of ffff.ffff.ffff will be added to the MAC address table.
- D. The frame will be forwarded out of all the active switch ports except for port fa0/0.
- E. The MAC address of 0000.00aa.aaaa will be added to the MAC Address Table.
- F. The frame will be forwarded out of fa0/0 and fa0/1 only.

**Correct Answer:** DE

**Section:** (none)

## Explanation

### Explanation/Reference:

Explanation:

If the switch already has the MAC address in its table for the destination, it will forward the frame directly to the destination port. If it was not already in its MAC table, then the source MAC is added to the MAC address table and frame would have been flooded out all ports except for the port that it came from.

### QUESTION 24

Which network topology allows all traffic to flow through a central hub?

- A. bus
- B. star
- C. mesh
- D. ring

**Correct Answer:** B

**Section:** (none)

**Explanation**

### Explanation/Reference:

Explanation:

Star topology is the arrangement of the computers in such a way that all the terminals or work stations are connected to the main central hub. The terminals are referred to as the clients and the main central hub is referred to as the switch. It is the easiest way of arranging a network topology with one central main computer connected to several other functioning terminals. All the network traffic passes through the central device and all the data transmission occurs through the main switch as well as all the hub acts as the signal repeater. One advantage of such an arrangement is the simplicity and the ease with which you can add additional nodes. The disadvantage is that if an error occurs in the central hub the whole network shuts down.





Reference: <http://www.certiology.com/computing/computer-networking/network-topology.html>

#### QUESTION 25

Which two statements are true regarding ICMP packets? (Choose two.)

- A. They are encapsulated within IP datagrams.
- B. They guarantee datagram delivery.
- C. TRACERT uses ICMP packets.
- D. They acknowledge receipt of TCP segments.
- E. They are encapsulated within UDP datagrams.

**Correct Answer:** AC

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 26

Which method does a connected trunk port use to tag VLAN traffic?

- A. IEEE 802.1w
- B. IEEE 802.1D
- C. IEEE 802.1Q
- D. IEEE 802.1p

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 27

On which type of device is every port in the same collision domain?

- A. a router
- B. a Layer 2 switch
- C. switch
- D. a hub

E. a Layer 3 switch

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

The definition of a collision domain is a set of LAN devices whose frames could collide with one another. This happens with hubs, bridges, repeaters and wireless access points as only one device can send and receive. If more than one device tries sending or receiving, the information is lost and irrecoverable it will need to be resent. This can slow down network performance along with making it a security threat.

**QUESTION 28**

Which option is the default switch port port-security violation mode?

- A. shutdown
- B. protect
- C. shutdown vlan
- D. restrict

**Correct Answer:** A

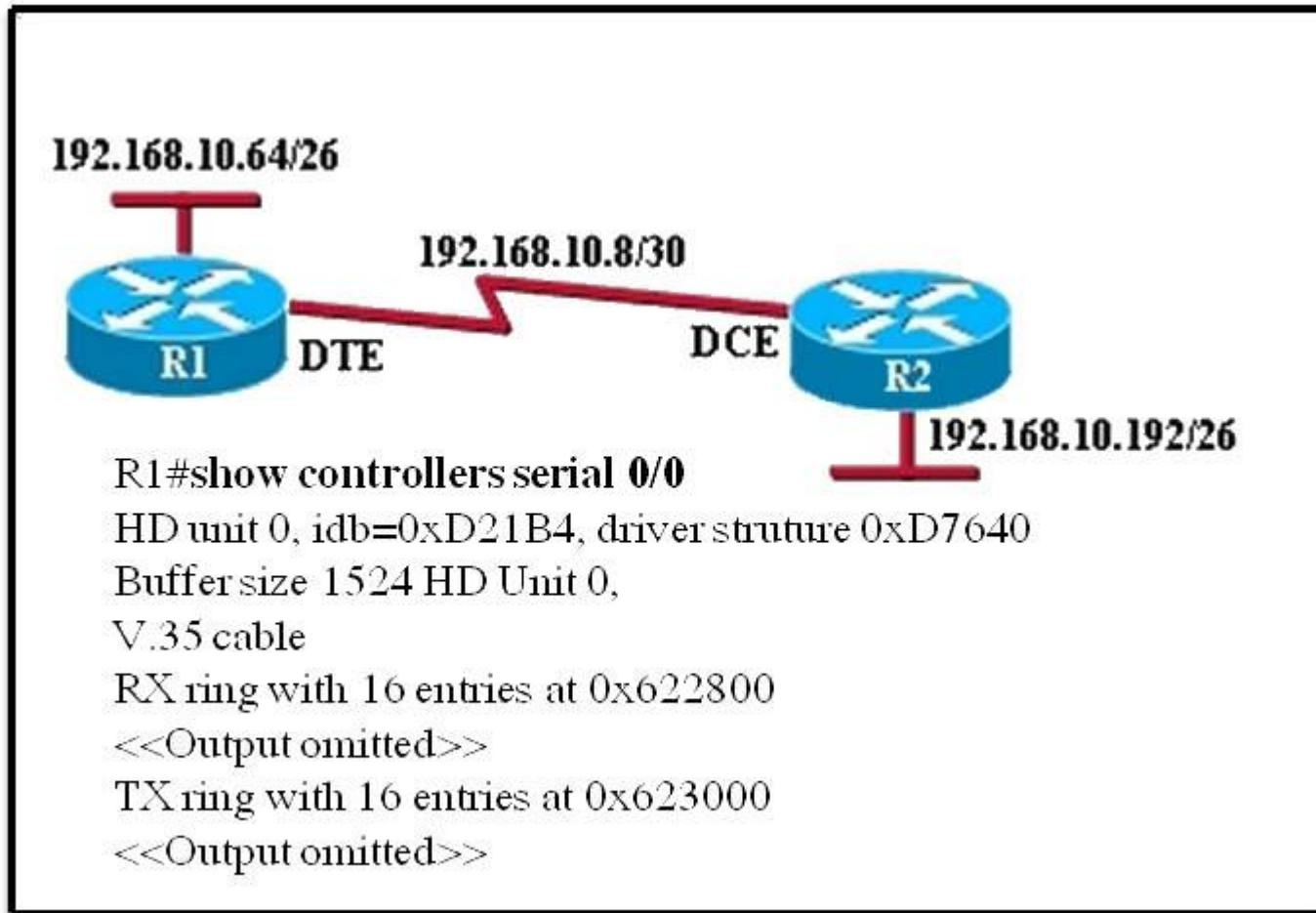
**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 29**

Refer to the exhibit.



An administrator cannot connect from R1 to R2. To troubleshoot this problem, the administrator has entered the command shown in the exhibit. Based on the output shown, what could be the problem?

- A. The serial interface is configured for the wrong frame size.
- B. The serial interface does not have a cable attached.
- C. The serial interface has the wrong type of cable attached.
- D. The serial interface has a full buffer.
- E. The serial interface is configured for half duplex.

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### **QUESTION 30**

Which statement about native VLAN traffic is true?

- A. Cisco Discovery Protocol traffic travels on the native VLAN by default.
- B. Traffic on the native VLAN is tagged with 1 by default.
- C. Control plane traffic is blocked on the native VLAN.
- D. The native VLAN is typically disabled for security reasons.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### **QUESTION 31**

Which value is indicated by the next hop in a routing table?

- A. preference of the route source
- B. IP address of the remote router for forwarding the packets
- C. how the route was learned
- D. exit interface IP address for forwarding the packets

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### **QUESTION 32**

Which component of the routing table ranks routing protocols according to their preferences?

- A. administrative distance

- B. next hop
- C. metric
- D. routing protocol code

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 33

At which layer of the OSI model does the protocol that provides the information that is displayed by the **show cdp neighbors** command operate?

- A. data link
- B. application
- C. network
- D. transport
- E. physical

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 34

Which statement about unicast frame forwarding on a switch is true?

- A. The TCAM table stores destination MAC addresses.
- B. If the destination MAC address is unknown, the frame is flooded to every port that is configured in the same VLAN except on the port that it was received on.
- C. The CAM table is used to determine whether traffic is permitted or denied on a switch.
- D. The source address is used to determine the switch port to which a frame is forwarded.

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:****QUESTION 35**

By default, how many MAC addresses are permitted to be learned on a switch port with port-security enabled?

- A. 8
- B. 2
- C. 1
- D. 0

**Correct Answer: C**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Reference: [http://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst6500/ios/12-2SX/configuration/guide/book/port\\_sec.pdf](http://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst6500/ios/12-2SX/configuration/guide/book/port_sec.pdf)