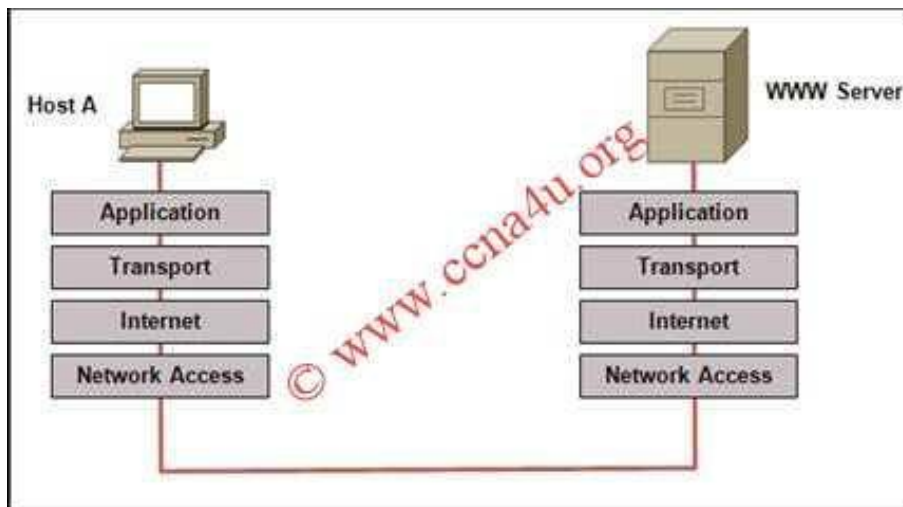


Trắc nghiệm về công nghệ thông tin

1. Which OSI layer does IP rely on to determine whether packets have been lost and to request retransmission?

- ☐ application
- ☐ presentation
- ☐ session
- ☒ transport



2. Refer to the exhibit. Which layered network model is shown in the diagram?

- ☐ Cisco
- ☐ IETF
- ☐ OSI
- ☒ TCP/IP



3. Refer to the exhibit. The diagram represents the process of sending e-mail between clients. Which list correctly identifies the component or protocol used at each numbered stage of the diagram?

☐ 1.MUA 2.MDA 3.MTA 4.SMTP 5.MTA 6.POP 7.MDA 8.MUA

- ☐ 1.MUA 2.POP 3.MDA 4.SMTP 5.MTA 6.MDA 7.SMTP 8.MUA
- ☐ 1.MUA 2.POP 3.SMTP 4.MDA 5.MTA 6.SMTP 7.POP 8.MUA
- ☒ 1.MUA 2.SMTP 3.MTA 4.SMTP 5.MTA 6.MDA 7.POP 8.MUA

4. A user enters *http://www.cisco.com/web1.htm* in the address line of a browser. Which statement is true about this transaction?

- ☐ The "http" portion indicates the protocol that is being used.
 - ☐ The "web1.htm" portion is the specific service name.
 - ☐ The retrieved web page will be displayed in URL code.
 - ☒ The "www.cisco.com" is the name of the web page file that is called.
-

5. Which range of port numbers are reserved for services that are commonly used by applications that run on servers?

- ☐ 0 to 255
 - ☒ 0 to 1023
 - ☐ 1024 to 49151
 - ☐ 49152 to 65535
-

6. Which OSI layer addressing is required to route packets between two networks?

- ☐ Layer 1
- ☐ Layer 2
- ☒ Layer 3
- ☐ Layer 4

7. When connectionless protocols are implemented at the lower layers of the OSI model, what is usually used to acknowledge that the data was received and to request the retransmission of missing data?

- ☐ IP
 - ☐ UDP
 - ☐ Ethernet
 - ☐ a connectionless acknowledgement
 - ☒ an upper-layer, connection-oriented protocol or service
-

8. Which statement is true about Layer 3 addresses?

- ☐ They are physical addresses.
- ☒ They are used in routing decisions.
- ☐ They are only used on local networks.

☐ They are altered each time a packet crosses a router.

9. Which option shows the PDU that contains the Layer 3 source and destination addressing for a packet?

☐

Preamble	Destination	Source	Type	Data	FCS
----------	-------------	--------	------	------	-----

☐

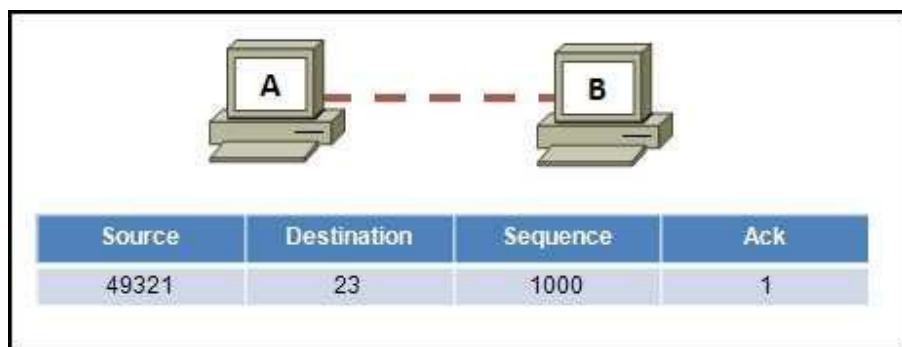
Source Port	Destination Port
Length	Checksum
Data	

☐

Ver.	IHL	TOS	Length
Identification		Flag	Fragment
Time To Live	Protocol	Header Checksum	
Source Address			
Destination Address			
Options			Padding

☐

Source Port	Destination Port
Sequence Number	
Acknowledgment Number	
Header Length	Window
Checksum	Urgent
Options	
Data	



10. Refer to the exhibit. Host A sends 1000 bytes of Telnet data to host B. What does host B send back if it only receives the first 500 bytes?

- ☐ Source 23 Destination 49321 Seq 1000 Ack 500
- ☐ Source 23 Destination 49321 Seq 500 Ack 1000
- ☐ Source 23 Destination 49321 Seq 500 Ack 500
- ☒ Source 23 Destination 49321 Seq 1000 Ack 501
- ☐ Source 23 Destination 49321 Seq 501 Ack 1000
- ☐ Source 23 Destination 49321 Seq 501 Ack 501



11. Refer to the exhibit. In a network, PC1 sends a message to PC2. The frame received at PC2 is shown. What information in this frame determines the correct destination application?

- ☐ timing and synchronization bits
- ☐ destination and source physical addresses
- ☐ destination and source logical network addresses
- ☒ destination and source process numbers

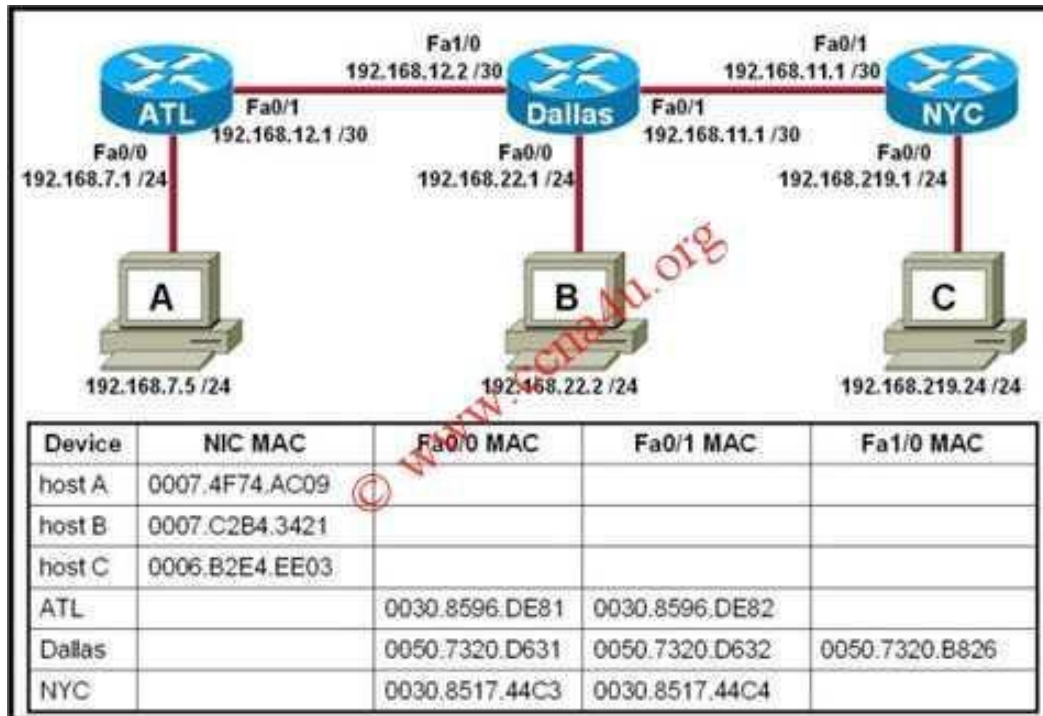
12. What three statements are true about network layer addressing? (Choose three.)

- ☒ Network layer addressing uses a hierarchy.
- ☐ It uses addresses that are 48 bits in length.
- ☐ It is used by Ethernet switches to make forwarding decisions.
- ☐ It does not support broadcasts.
- ☒ It uses a method by which the network portion of an address can be identified.
- ☒ Network layer addressing identifies each host distinctly.

13. Which device should be used for enabling a host to communicate with another host on a different network?

- ☐ switch
☐ hub
☒ router
☐ Host

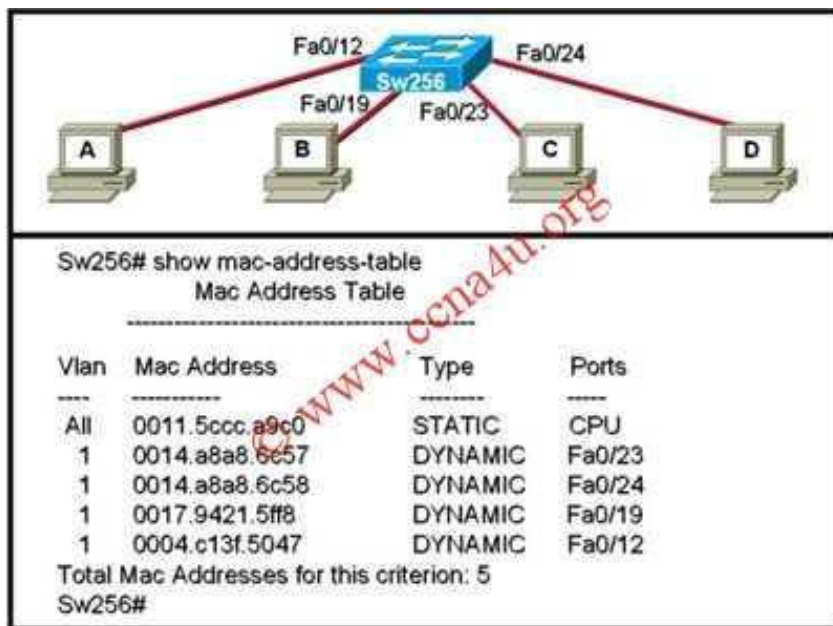
14.



Refer to the exhibit. Host A attempts to establish a TCP/IP session with host C. During this attempt, a frame was captured with the source MAC address 0050.7320.D632 and the destination MAC address 0030.8517.44C4. The packet inside the captured frame has an IP source address 192.168.7.5, and the destination IP address is 192.168.219.24. At which point in the network was this packet captured?

- ☐ leaving host A
☐ leaving ATL
☒ leaving Dallas
☐ leaving NYC

15.



Refer to the exhibit. When computer A sends a frame to computer D, what computers receive the frame?

- ☒ only computer D
- ☐ only computer A and computer D
- ☐ only computer B, computer C, and computer D
- ☐ all computers

16.

What type of network is maintained if a server takes no dedicated role in the network?

- ☐ mainframe
- ☐ client/server
- ☒ peer-to-peer
- ☐ centralized

17.



Refer to the exhibit. Assume all devices are using default configurations. How many subnets are required to address the topology that is shown?

- ☐ 1
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 7

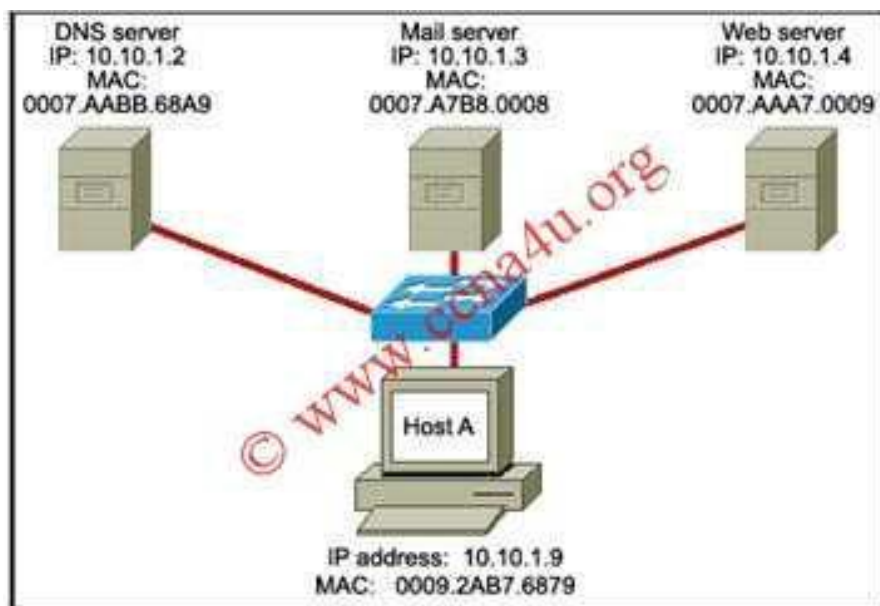
18.



Refer to the exhibit. Which type of network design is shown?

- ☐ client/server
- ☐ wide area
- ☐ dedicated server
- ☒ peer-to-peer

19.



Refer to the exhibit. Host A is accessing multiple servers. Which combination of port number and address will uniquely identify a particular process running on a specific server?

- ☐ MAC address of the server and port number of the service
- ☐ IP address of the host and port number of the service
- ☐ MAC address of the host and port number of the service
- ☒ IP address of the server and port number of the service

20.

A network technician is tasked with setting up a network for six users, but the users should be able to use their accounts to log on from any of the six computers. What type of network should be used?

- ☐ workgroup
- ☐ P2P applications
- ☐ peer-to-peer network
- ☒ client-server network

21.

What are three characteristics of CSMA/CD? (Choose three.)

- ☐ Devices can be configured with a higher transmission priority.
- ☐ A jam signal indicates that the collision has cleared and the media is not busy.
- ☒ A device listens and waits until the media is not busy before transmitting.

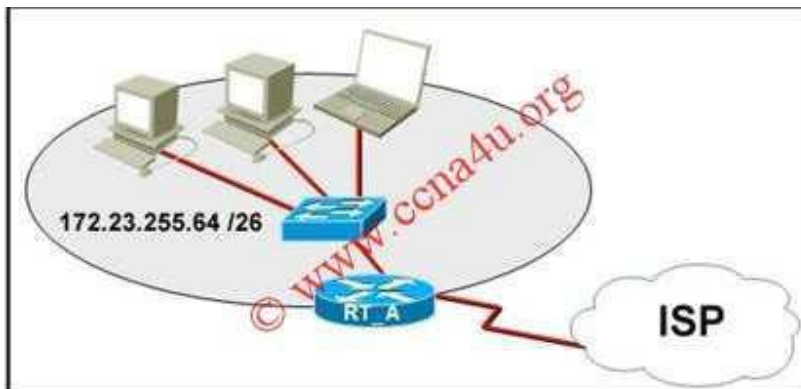
- ☐ The device with the electronic token is the only one that can transmit after a collision.
 - ☒ All of the devices on a segment see data that passes on the network medium.
 - ☒ After detecting a collision, hosts can attempt to resume transmission after a random time delay has expired.
-

22.

Which of the following are the address ranges of the private IP addresses?
(Choose three.)

- ☒ 10.0.0.0 to 10.255.255.255
 - ☐ 200.100.50.0 to 200.100.25.255
 - ☐ 150.150.0.0 to 150.150.255.255
 - ☒ 172.16.0.0 to 172.31.255.255
 - ☒ 192.168.0.0 to 192.168.255.255
 - ☐ 127.16.0.0 to 127.31.255.255
-

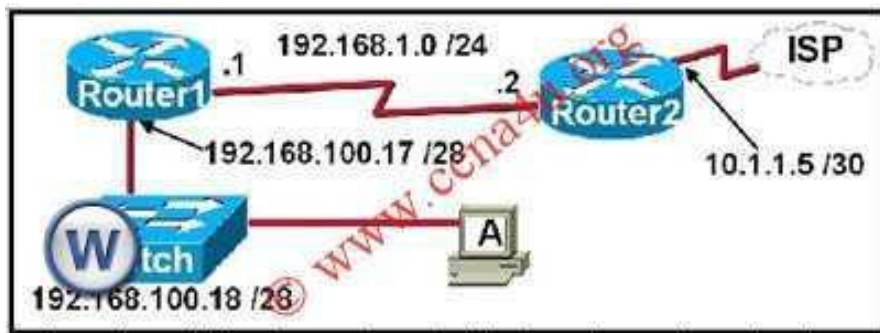
23.



Refer to the exhibit. What function does router RT_A need to provide to allow Internet access for hosts in this network?

- ☒ address translation
 - ☐ DHCP services
 - ☐ ftpd
 - ☐ web server
-

24.



Refer to the exhibit. A network technician is trying to determine the correct IP address configuration for Host A. What is a valid configuration for Host A?

- ☐ IP address: 192.168.100.19; Subnet Mask: 255.255.255.248; Default Gateway: 192.16.1.2
- ☒ IP address: 192.168.100.20; Subnet Mask: 255.255.255.240; Default Gateway: 192.168.100.17
- ☐ IP address: 192.168.100.21; Subnet Mask: 255.255.255.248; Default Gateway: 192.168.100.18
- ☐ IP address: 192.168.100.22; Subnet Mask: 255.255.255.240; Default Gateway: 10.1.1.5
- ☐ IP address: 192.168.100.30; Subnet Mask: 255.255.255.240; Default Gateway: 192.168.1.1
- ☐ IP address: 192.168.100.31; Subnet Mask: 255.255.255.240; Default Gateway: 192.168.100.18

25.



Refer to the exhibit. Host C is able to ping 127.0.0.1 successfully, but is unable to communicate with hosts A and B in the organization. What is the likely cause of the problem?

- ☐ Hosts A and B are not on the same subnet as host C.
- ☐ The IP addresses on the router serial interfaces are wrong.

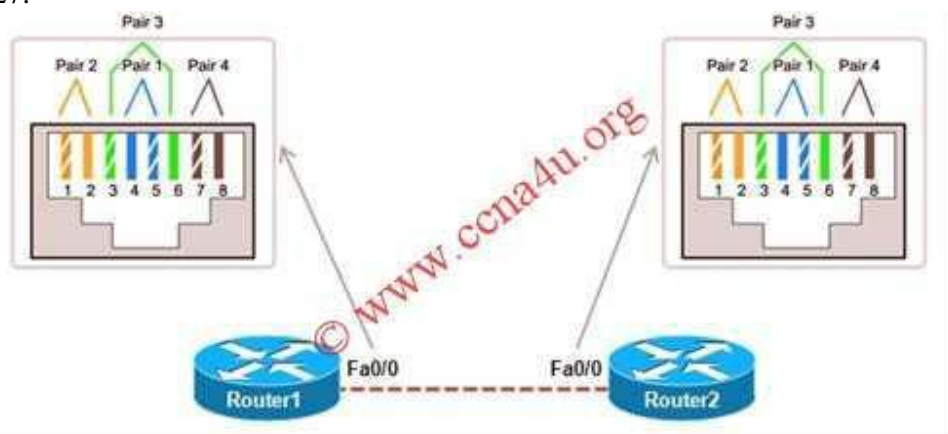
- ☒ The subnet mask on host C is improperly configured.
- ☐ The FastEthernet interface fa0/0 of router 1 is wrongly configured.

26.

What happens when a host station receives a frame that contains its own MAC address in the destination field?

- ☒ The Layer 2 information is removed and the frame is pushed up to Layer 3.
- ☐ The host station will copy the information to its buffers and send it back out.
- ☐ The frame originated from the host and will be ignored.
- ☐ The Layer 3 information is added to the frame.

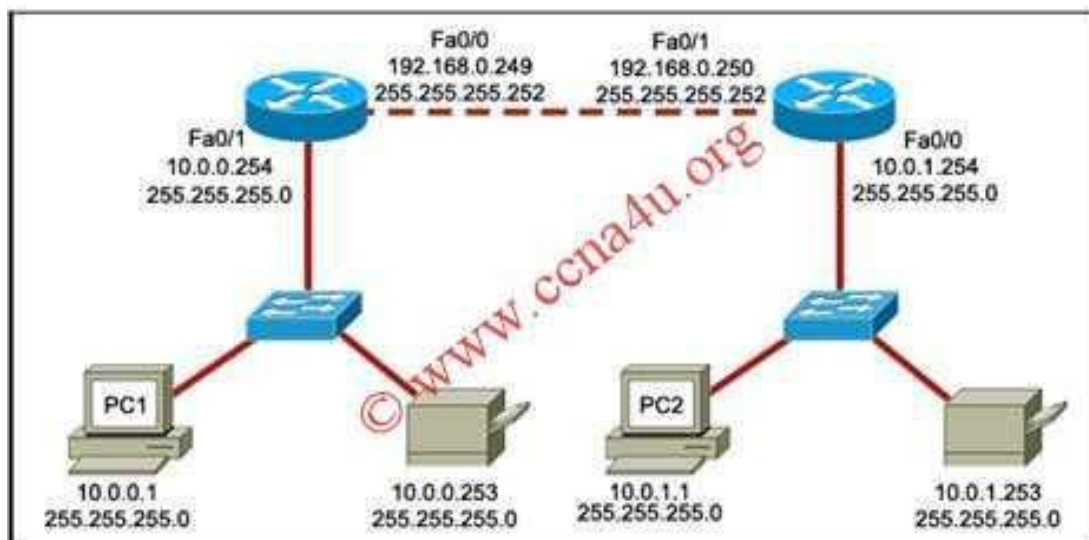
27.



Refer to the exhibit. A network administrator is troubleshooting a link that is down between Router1 and Router2. To correct the problem, which wire pairs need to be switched on one of the Ethernet cable ends?

- ☐ pair 1 and pair 2
- ☐ pair 1 and pair 3
- ☒ pair 2 and pair 3
- ☐ pair 2 and pair 4

28.



Refer to the exhibit. PC1 is unable to access PC2. To troubleshoot this problem, the technician needs to confirm that the next hop interface is operational. Which default gateway address should the technician ping from PC1 to confirm this?

- ☒ 10.0.0.254
- ☐ 192.168.0.249
- ☐ 192.168.0.250
- ☐ 10.0.1.254

29.

Which combination of network id and subnet mask correctly identifies all IP addresses from 172.16.128.0 through 172.16.159.255?

- ☐ 172.16.128.0 255.255.255.224
- ☐ 172.16.128.0 255.255.0.0
- ☐ 172.16.128.0 255.255.192.0
- ☒ 172.16.128.0 255.255.224.0
- ☐ 172.16.128.0 255.255.255.192

30.



Refer to the exhibit. Host A wants to connect to host B on a different network. Which three IP addresses can be assigned to host A to enable this connectivity? (Choose three.)

- ☒ 172.16.11.36
- ☐ 172.16.11.95
- ☐ 172.16.11.88
- ☒ 172.16.11.70
- ☐ 172.16.11.64
- ☒ 172.16.11.67

31. A user sees the command prompt: Router(config-if)# . What task can be performed at this mode?

- ☐ Reload the device.
- ☐ Perform basic tests.
- ☒ Configure individual interfaces.
- ☐ Configure individual terminal lines.

32.

Which password is automatically encrypted when it is created?

- ☐ vty
- ☐ aux
- ☐ console
- ☒ enable secret
- ☐ enable password

33.

Which router component will have contents erased when the command **erase startup-**

config is issued?

- ☐ flash
 - ☐ RAM
 - ☐ ROM
 - ☒ NVRAM
-

34. A technician is asked to secure the privileged EXEC mode of a switch by requiring a password. Which type of password would require this login and be considered the most secure?

- ☐ console
 - ☐ enable
 - ☒ enable secret
 - ☐ VTY
-

35.

Which exhibit shows the interface that is configured by the command, `router(config)# interface serial 0/0/1`?





36.

When must a router serial interface be configured with the **clock rate** command?

- ☐ when the interface is functioning as a DTE device
- ☐ when the interface timers have been cleared when
- ☐ the connected DTE device is shut down when the
- ☒ interface is functioning as a DCE device

37. What can the user do from the command prompt, Router(config-line)# ?

- ☐ Configure one of the network interfaces.
- ☒ Configure one of the physical or virtual lines.
- ☐ Verify the running configuration on the device.
- ☐ Configure the parameters for one of the routing protocols.

38.

Due to a security violation, the router passwords must be changed. What information can be learned from the following configuration entries? (Choose two.)

```
Router(config)# line vty 0 3
```

```
Router(config-line)# password c13c0
```

```
Router(config-line)# login
```

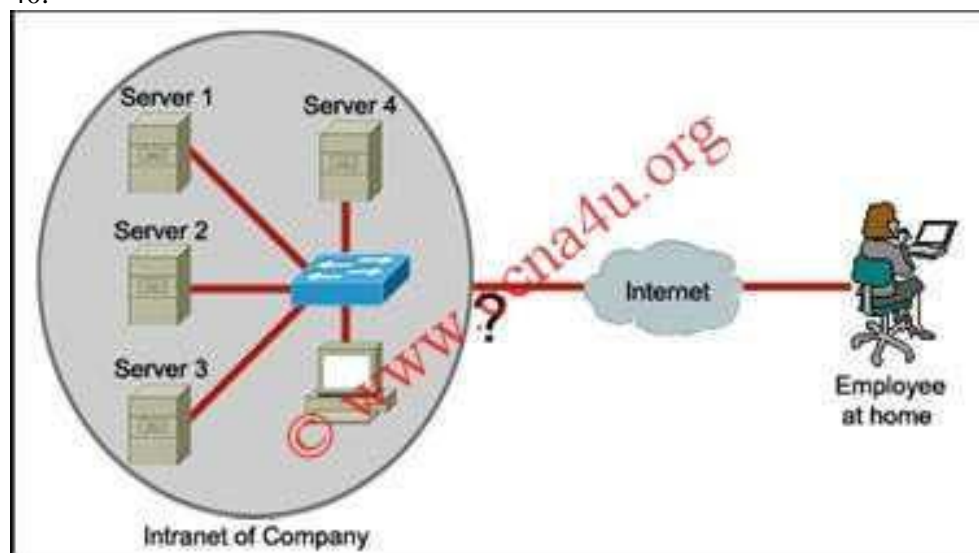
- ☐ The entries specify three Telnet lines for remote access.
- ☒ The entries specify four Telnet lines for remote access.
- ☐ The entries set the console and Telnet password to "c13c0".
- ☐ Telnet access will be denied because the Telnet configuration is incomplete.
- ☒ Access will be permitted for Telnet using "c13c0" as the password.

39.

Which prompt represents the appropriate mode used for the **copy running-config startup-config** command ?

- ☐ Switch-6J>
- ☒ Switch-6J#
- ☐ Switch-6J(config)#
- ☐ Switch-6J(config-if)#
- ☐ Switch-6J(config-line)#

40.



Refer to the exhibit. An employee wants to access the organization intranet from home.

Which intermediary device should be used to connect the organization intranet to the Internet to enable this access?

- ☐ hub
- ☐ switch
- ☒ router
- ☐ wireless access point

41.



Refer to the exhibit. A PC is communicating with another PC on a remote network. The two networks are connected by three routers. Which action will help to identify the path between the hosts?

- ☐ Use the **ipconfig** command at the host.
- ☐ Use the **ipconfig/all** command at the destination.
- ☒ Use the **tracert** command at the host.
- ☐ Use the **ping** command at the destination.

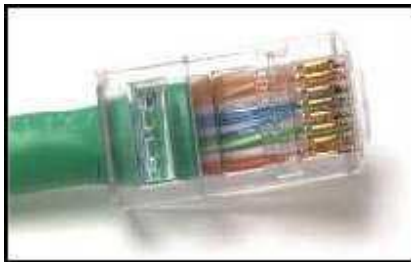
42.



Refer to the exhibit. RouterB is configured properly. The Ethernet interface Fa0/0 of RouterA is configured with the use of the commands that are shown. However, a ping from the Fa0/0 interface of RouterA to the Fa0/0 interface of RouterB is unsuccessful. What action should be taken on RouterA to solve this problem?

- ☐ Use the **description** command on the FastEthernet interface Fa0/0.
 - ☐ Configure the clock rate of the FastEthernet interface Fa0/0.
 - ☐ Use the **no shutdown** command on the FastEthernet interface Fa0/0.
 - ☐ Reboot the router.
-

Which physical connector type is used for a serial V.35 connection to the CSU/DSU?



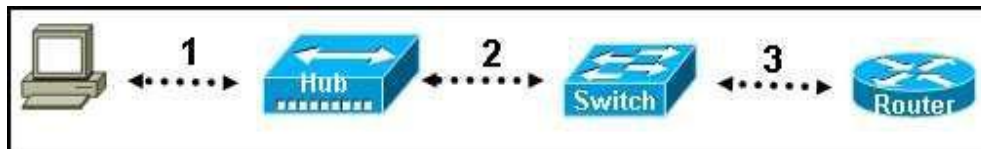


44.

What information can be gathered by using the command **netstat**?

- ☐ the default gateway
- ☐ the routing protocol
- ☒ active TCP connections
- ☐ the locally configured subnet mask

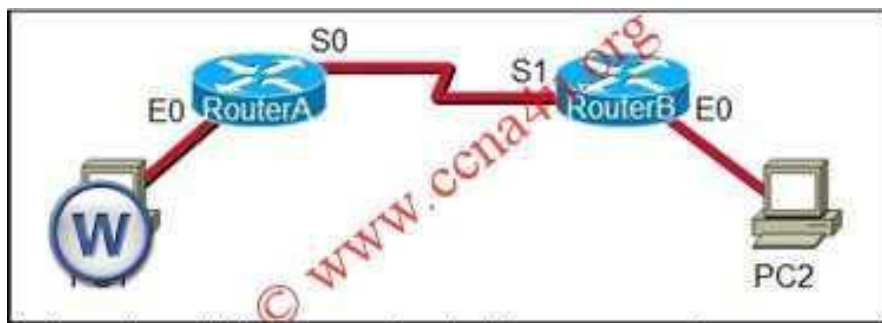
45.



Refer to the exhibit. Each media link is labeled. What type of cable should be used to connect the different devices?

- ☐ Connection 1 - rollover cable
Connection 2 - straight-through cable
Connection 3 - crossover cable
- ☐ Connection 1 - crossover cable
Connection 2 - rollover cable
Connection 3 - crossover cable
- ☐ Connection 1 - straight-through cable
Connection 2 - crossover cable
Connection 3 - crossover cable
- ☒ Connection 1 - straight-through cable
Connection 2 - crossover cable
Connection 3 - straight-through cable
- ☐ Connection 1 - crossover cable
Connection 2 - straight-through cable
Connection 3 - crossover cable

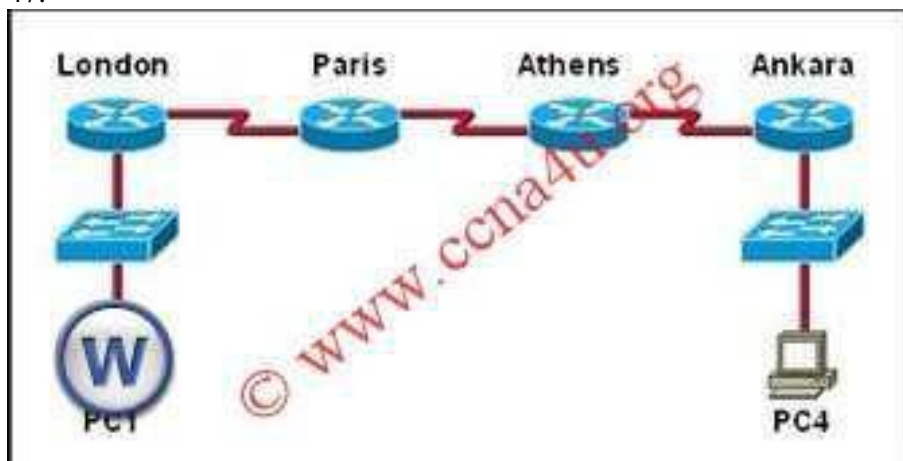
46.



Refer to the exhibit. A network administrator remotely accesses the CLI of RouterB from PC1 using Telnet. Which statement is true about this connection?

- ☐ The data is automatically encrypted.
- ☐ A Telnet server process is running on PC1.
- ☒ The connection is made through a VTY session on the router.
- ☐ A GET request was sent to RouterB to retrieve data during this session.

47.



Refer to the exhibit. The **tracert** command is initiated from PC1 to PC4. Which device will send a response to the initial **tracert** packet from PC1?

- ☐ Athens
- ☐ Ankara
- ☒ London
- ☐ Paris
- ☐ PC4

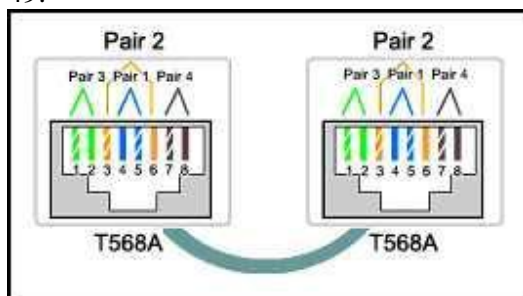
48.



Refer to the exhibit. Host A is transmitting data to host B. Which address combination will be used as the data leaves the Router1 Fa0/1 interface?

- ☐ Destination IP: 192.168.72.2 Source MAC: 0007.C2B4.3421
- ☐ Destination IP: 192.168.10.4 Source MAC: 0030.8596.DE81
- ☐ Destination IP: 192.168.10.4 Source MAC: 0007.C2B4.3421
- ☐ Destination IP: 192.168.72.2 Source MAC: 0030.8596.DE81

49.



Refer to the exhibit. While configuring a network, a technician wired each end of a Category 5e cable as shown. Which two statements are true about this setup? (Choose two.)

- ☒ The cable is suitable for connecting a switch to a router Ethernet port.
- ☒ The cable is suitable for connecting dissimilar types of devices.
- ☐ The cable is unusable and must be rewired.
- ☐ The cable is terminated in a way that the transmit pin is wired to the receive pin.
- ☐ The cable simulates a point-to-point WAN link.

50.


```
C:\> ping 127.0.0.1
Pinging 127.0.0.1 with 32 bytes of data:
Reply from 127.0.0.1: bytes=32 time<1ms TTL=128
Reply from 127.0.0.1: bytes=32 time<1ms TTL=128
Reply from 127.0.0.1: bytes=32 time<1ms TTL=128
Reply from 127.0.0.1: bytes=32 time<1ms TTL=128
Ping statistics for 127.0.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

Refer to the exhibit. The **ping 127.0.0.1** command is issued on the local host. What do the ping results indicate?

- ☐ The local host can send packets on the local network.
- ☒ The TCP/IP stack on the local host operates properly.
- ☐ The local host has full connectivity to the default gateway.
- ☐ The local host has full connectivity to the remote network.