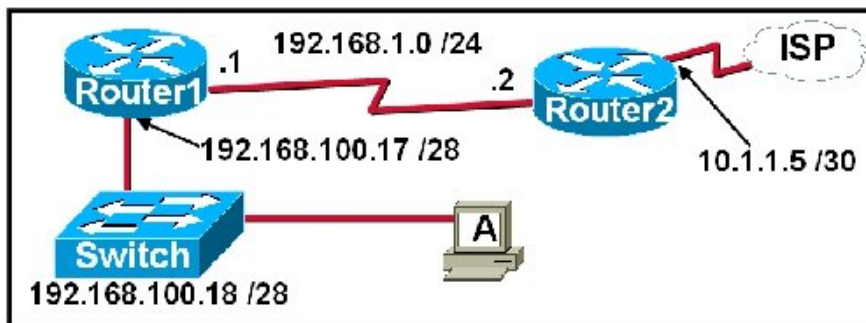# CCNA 1 Final Exam Answers – UPDATE 2012 – eg.1

1. 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

2. 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
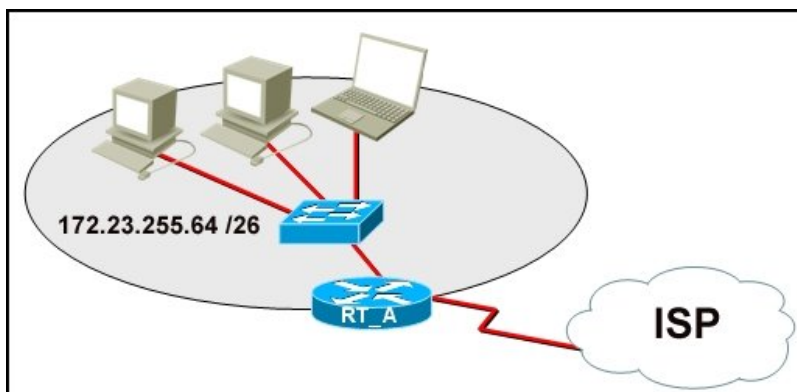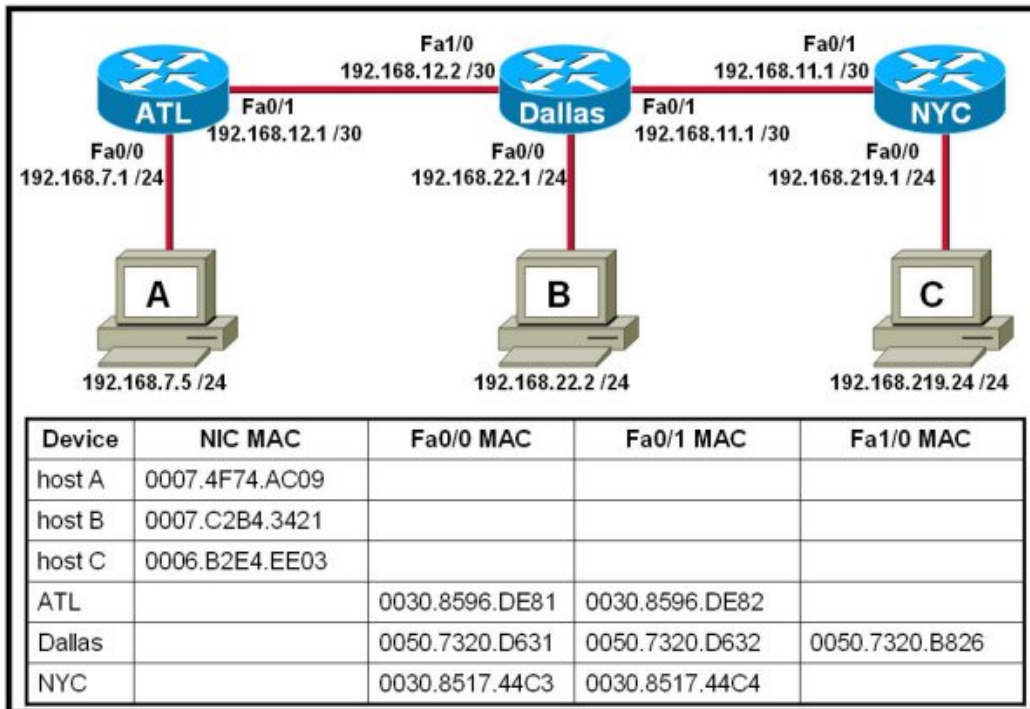

3. Refer to the exhibit. What function does router RT_A need to provide to allow Internet access for hosts in this network?

address translation
DHCP services
ftpd
web server

Device	NIC MAC	Fa0/0 MAC	Fa0/1 MAC	Fa1/0 MAC
host A	0007.4F74.AC09			
host B	0007.C2B4.3421			
host C	0006.B2E4.EE03			
ATL		0030.8596.DE81	0030.8596.DE82	
Dallas		0050.7320.D631	0050.7320.D632	0050.7320.B826
NYC		0030.8517.44C3	0030.8517.44C4	

4. 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

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 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)#
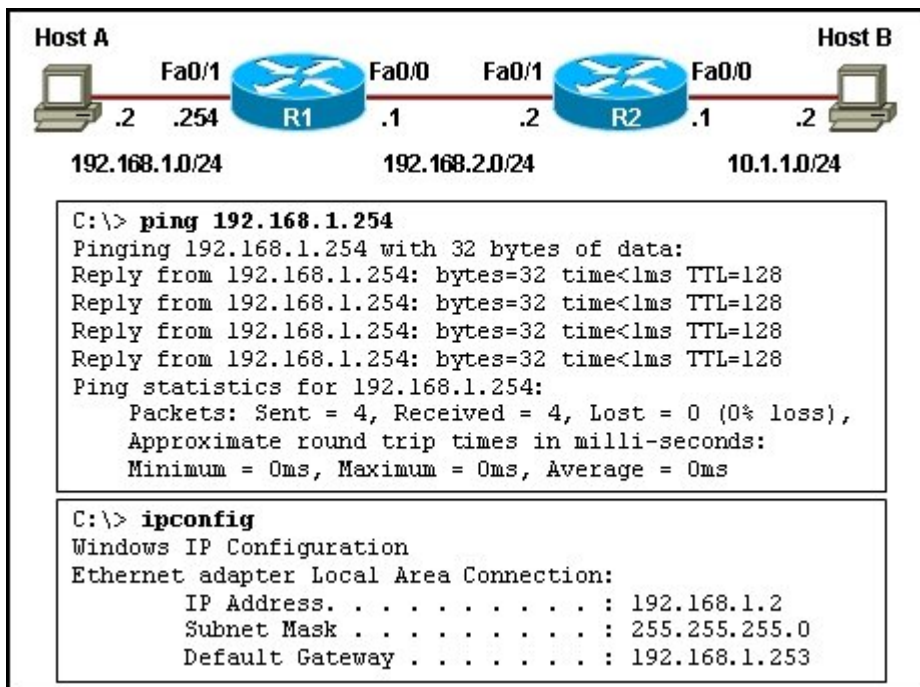
```
C:\> ipconfig /all

Windows IP Configuration

        Host Name . . . . . . . . . . . . : md-wxp2
        Primary Dns Suffix  . . . . . . . : cisco.com
        Node Type . . . . . . . . . . . . : Hybrid
        IP Routing Enabled. . . . . . . . : No
        WINS Proxy Enabled. . . . . . . . : No
        DNS Suffix Search List. . . . . . : cisco.com

Ethernet adapter Wireless Network Connection:

        Connection-specific DNS Suffix  . : cisco.com
        Description . . . . . . . . . . . : Intel(R) PRO/Wireless 3945ABG
        Physical Address. . . . . . . . . : 00-18-DE-C7-F3-FB
        Dhcp Enabled. . . . . . . . . . . : No
        IP Address. . . . . . . . . . . . : 192.168.254.9
        Subnet Mask . . . . . . . . . . . : 255.255.255.0
        Default Gateway . . . . . . . . . : 192.168.254.1
        DNS Servers . . . . . . . . . . . : 192.168.64.196
```

7. Refer to the exhibit. A technician is working on a network problem that requires verification of the router LAN interface. What address should be pinged from this host to confirm that the router interface is operational?

127.0.0.1
192.168.64.196
192.168.254.1
192.168.254.9
192.168.254.254

```
Host A                                                          Host B
        Fa0/1          Fa0/0    Fa0/1          Fa0/0
    .2     .254    R1    .1        .2     R2    .1        .2
    192.168.1.0/24          192.168.2.0/24          10.1.1.0/24

    C:\> ping 192.168.1.254
    Pinging 192.168.1.254 with 32 bytes of data:
    Reply from 192.168.1.254: bytes=32 time<1ms TTL=128
    Reply from 192.168.1.254: bytes=32 time<1ms TTL=128
    Reply from 192.168.1.254: bytes=32 time<1ms TTL=128
    Reply from 192.168.1.254: bytes=32 time<1ms TTL=128
    Ping statistics for 192.168.1.254:
        Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
        Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

    C:\> ipconfig
    Windows IP Configuration
    Ethernet adapter Local Area Connection:
            IP Address. . . . . . . . . . . : 192.168.1.2
            Subnet Mask . . . . . . . . . . : 255.255.255.0
            Default Gateway . . . . . . . . : 192.168.1.253
```

8. Refer to the exhibit. Host A is unable to reach host B on the remote network. A technician attempted to ping the local gateway and the ping was successful. To verify the host configuration, the technician issued the ipconfig command. What is the likely cause of the problem?

The local NIC is incorrectly configured.
The subnet mask on host A is incorrectly configured.
The IP address on host A is incorrectly configured.
The default gateway on host A is incorrectly configured.

9. An organization has been assigned network ID 10.10.128.0 and subnet mask 255.255.224.0. Which IP address range can be used for this organization?

10.10.128.0 to 10.10.160.255
10.10.128.0 to 10.10.159.255
10.10.128.0 to 10.10.192.255
10.10.128.0 to 10.10.0.159
10.10.128.0 to 10.10.159.0
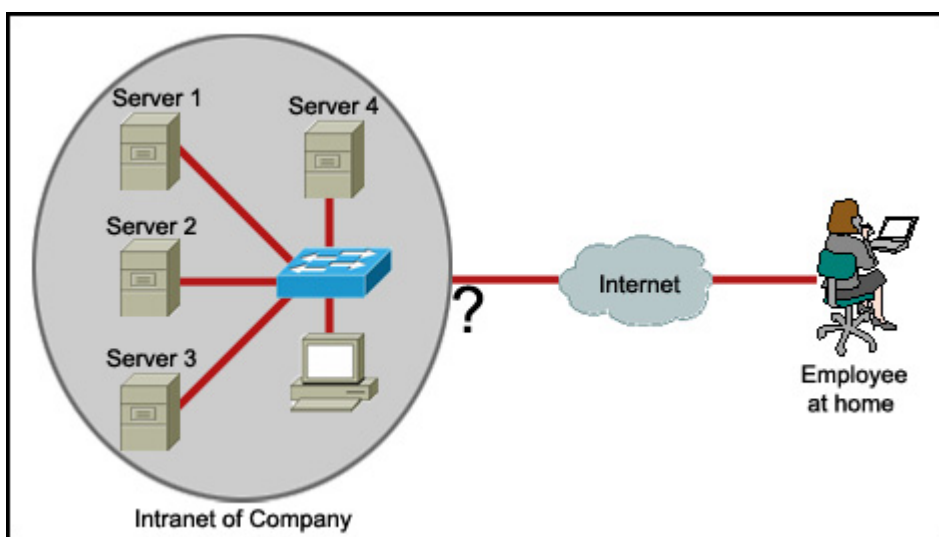
10. Refer to the exhibit. An employee wants to access the organization intranet from home. Which intermediary device should be used to connect the organization intranet to the Internet to enable this access?

hub
switch
router
wireless access point

11. Which OSI layer manages data segments?

application layer
presentation layer
session layer
transport layer

12. Which two types of media can provide bandwidth up to 1 Gb/s? (Choose two.)

10 BASE-T
100 BASE-T
100 BASE-FX
1000 BASE-TX
1000 BASE-SX

13. To enhance security in a network, the network administrator uses these commands:
Router(config)# **line console 0**
Router(config-line)# **password j1mdi2**
Router(config-line)# **login**

14. What two conclusions are evident from these commands? (Choose two.)
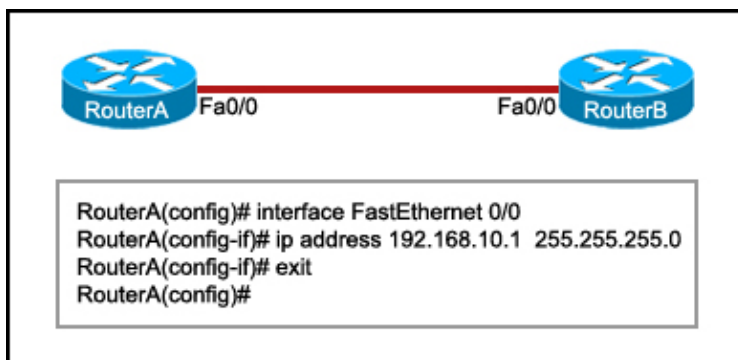
Users who attempt to connect to the console port of the router must enter a password.
The entries permit access through the console by the use of j1mdi2 as the password.
The entries eliminate the need for authentication.
Access through the console will be denied because the console configuration is incomplete.
The entries prevent passwords from being displayed as plain text.

RouterA(config)# interface FastEthernet 0/0
RouterA(config-if)# ip address 192.168.10.1 255.255.255.0
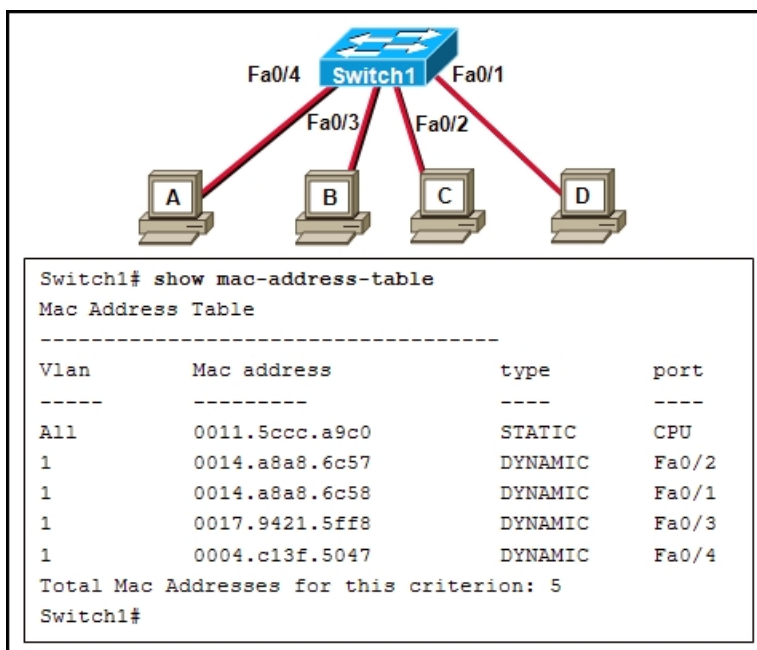RouterA(config-if)# exit
RouterA(config)#

14. 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.


```
Switch1# show mac-address-table
Mac Address Table
----------------------------------
Vlan       Mac address            type        port
-----      ---------              ----        ----
All        0011.5ccc.a9c0         STATIC      CPU
1          0014.a8a8.6c57         DYNAMIC     Fa0/2
1          0014.a8a8.6c58         DYNAMIC     Fa0/1
1          0017.9421.5ff8         DYNAMIC     Fa0/3
1          0004.c13f.5047         DYNAMIC     Fa0/4
Total Mac Addresses for this criterion: 5
Switch1#
```

15. Refer to the exhibit. When host A sends a frame addressed for host D, which hosts will receive the frame?

only host D
only hosts A and D
only hosts B, C, and D
all hosts
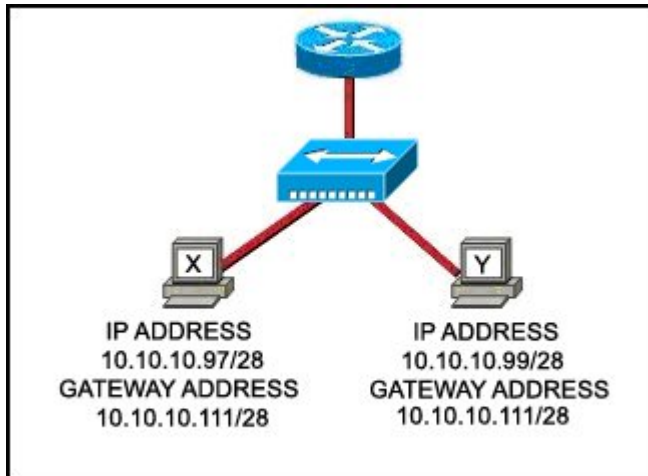
16. Refer to the exhibit. Communication for hosts X and Y is restricted to the local network. What is the reason for this?

Host X is assigned a network address.
Host Y is assigned a multicast address.
Host X and host Y belong to different networks.
**The gateway addresses are broadcast addresses.**

17. 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
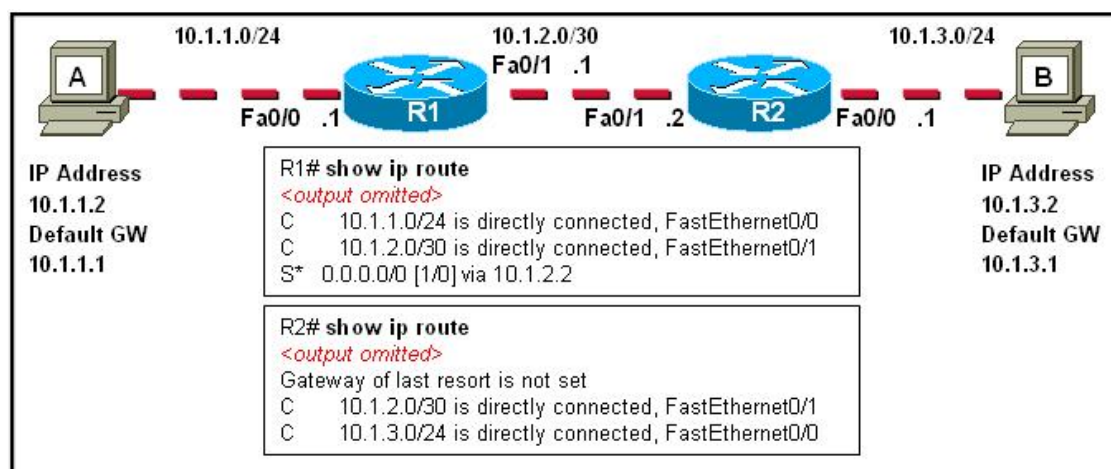
18. The tracert 10.1.3.2 command was issued on computer A. Computer A can ping other addresses on the local subnet. Computer A sent the first ICMP packet toward computer B with a TTL value of 1. A protocol analyzer that was running on computer B showed that the packet never reached its destination. Why did the packet not reach the destination?

There is a TCP/IP problem on computer A.
There is a routing loop between R1 and R2.
R1 does not have a route for the destination network.
The TTL for the packet was decreased to zero by R1.

19. A routing issue has occurred in your internetwork. Which of the following type of devices should be examined to isolate this error?

access point
host
hub
router
switch

20. Which physical component is used to access and perform the initial configuration on a new unconfigured router?
Correct answer is option 2.
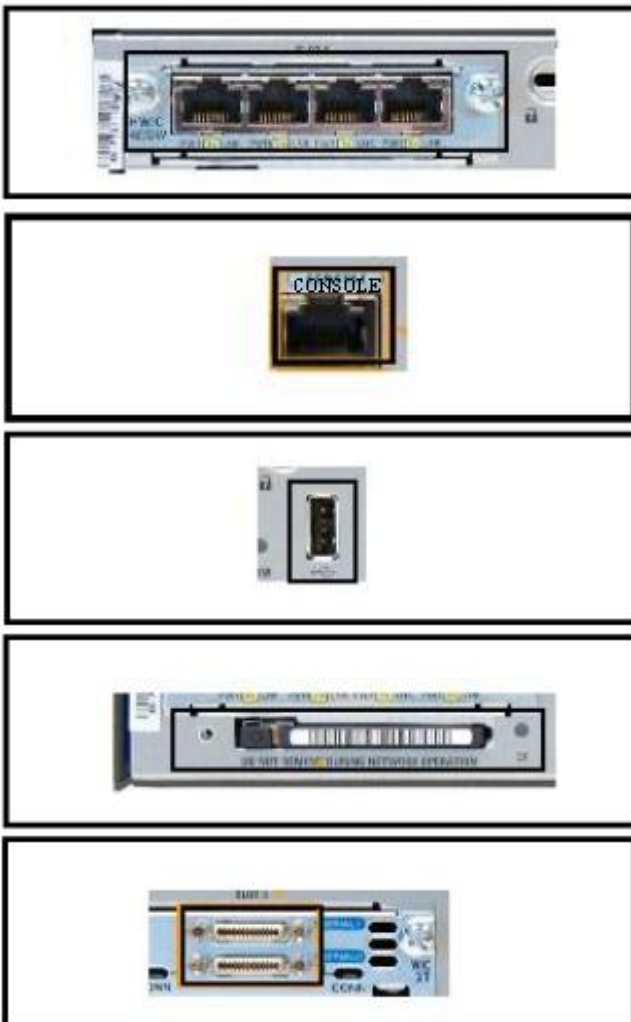
21. What can the user do from the command prompt, Router(config-line)# ?

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.

22. Which option shows the PDU that contains the Layer 3 source and destination addressing for a packet?
Correct answer is option (image) 3.

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	

```
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<lms TTL=128
Reply from 127.0.0.1: bytes=32 time<lms TTL=128
Reply from 127.0.0.1: bytes=32 time<lms TTL=128
Reply from 127.0.0.1: bytes=32 time<lms 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
```

23. 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.

24. Which topology divides the collision domain and provides full media bandwidth to the hosts in the network?

Correct answer is option (image) 3.
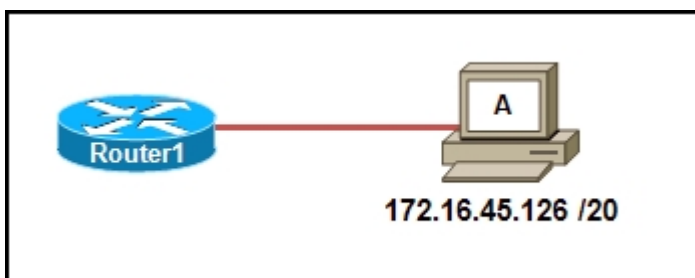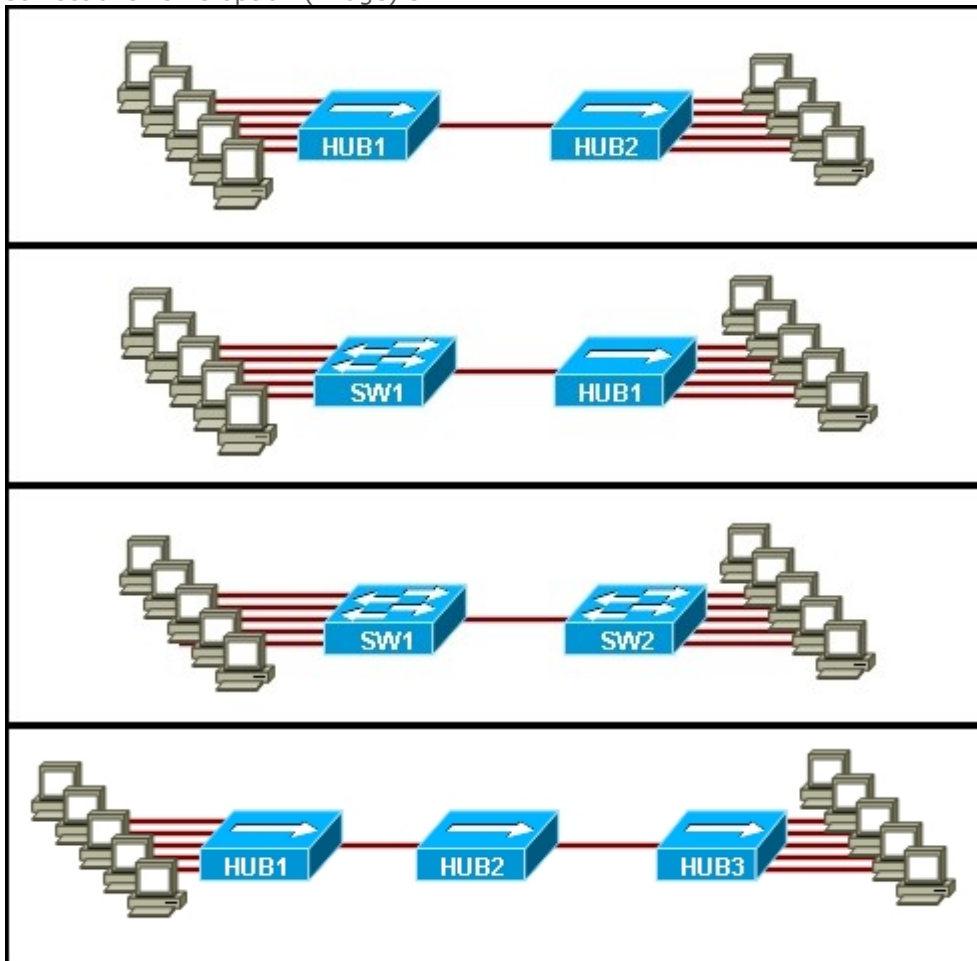
25. Refer to the exhibit. Which option correctly identifies the network address, range of host addresses, and the broadcast address for the network that contains host A?

Correct answer is option (image) 3.

Network Address	Host Range	Broadcast Address
172.16.0.0	172.16.0.1-172.16.47.254	172.16.47.255

Network Address	Host Range	Broadcast Address
172.16.16.0	172.16.0.1-172.16.47.254	172.16.47.255

Network Address	Host Range	Broadcast Address
172.16.32.0	172.16.32.1- 172.16.47.254	172.16.47.255

Network Address	Host Range	Broadcast Address
172.16.32.0	172.16.32.1- 172.16.63.254	172.16.63.255

26. A technician is setting up a workgroup for six users and wants to allow users to share files without setting up a server. Which application layer protocol will provide for peer-to-peer file sharing in a workgroup?

DNS
SMB
HTTP
DHCP

27. Which router component will have contents erased when the command erase startup-config is issued?

flash
RAM
ROM
NVRAM
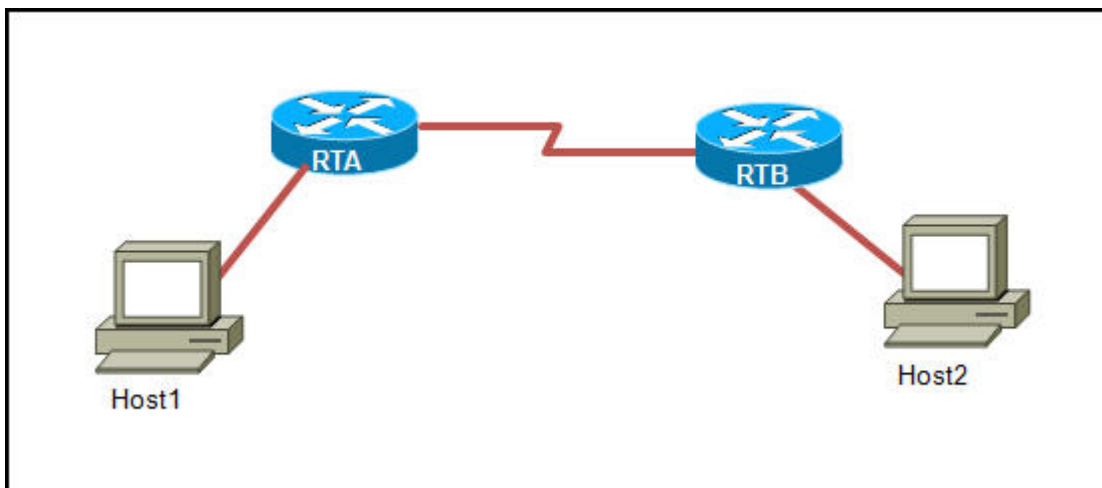
28. Refer to the exhibit. Host1 is in the process of setting up a TCP session with Host2.Host1 has sent a SYN message to begin session establishment. What happens next?

Host1 sends a segment with the ACK flag = 0, SYN flag = 0 to Host2.
Host1 sends a segment with the ACK flag = 1, SYN flag = 0 to Host2.
Host1 sends a segment with the ACK flag = 1, SYN flag = 1 to Host2.
Host2 sends a segment with the ACK flag = 0, SYN flag = 1 to Host1.
Host2 sends a segment with the ACK flag = 1, SYN flag = 0 to Host1.
Host2 sends a segment with the ACK flag = 1, SYN flag = 1 to Host1.

29. How many host addresses may be assigned when using the 128.107.0.0 network address with a subnet mask of 255.255.248.0?

30
256
2046
2048
4094
4096
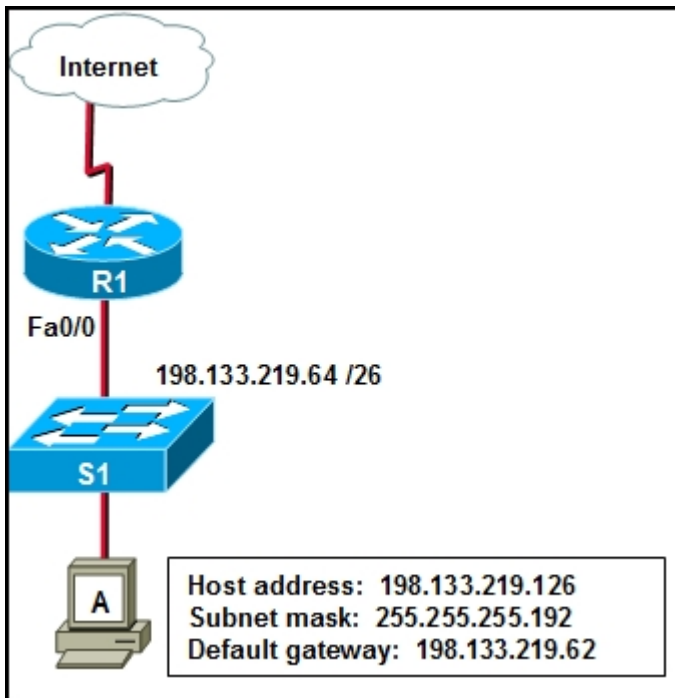
30. Refer to the exhibit. Host A is able to access resources on the local LAN but is unable to access any resources on the Internet. What is the likely cause of this problem?

The host subnet mask in incorrect.
The network uses private addresses.
The host address is a network address.
The default gateway is on a different subnet from the host.

31. What is described by the network access layer of the TCP/IP model?

rules for packet acknowledgment, error recovery, and sequencing
rules for the handoff from the internet layer to the network access protocols
rules for how source and destination hosts exchange data between programs
rules for determining which processes can be used to route messages through an internetwork

32. Which two factors contribute to the increased throughput when all nodes of a LAN are connected to a switch instead of a hub? (Choose two.)

full-duplex operation
collision-free environment
logical bus media access
broadcast-free environment
point-to-multipoint topology

33. Which application layer protocol allows administrators to log into a server from remote locations and control a server as though logged in locally?

DNS
FTP
DHCP
SMTP
Telnet

34. A network technician has made a UTP cable that is terminated as T568A on one end and T568B on the opposite end. What type of cable has been constructed?

patch
console
crossover
straight-through

35. Which application belongs to the category of the client/server model?

using Telnet to access a router
exchanging information via instant messaging
printing a document to a locally connected printer
scanning a document with a directly connected scanner
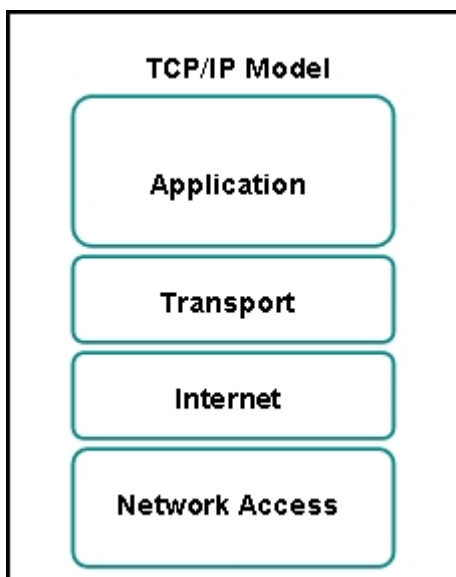
36. Refer to the exhibit. Which two layers of the OSI model describe the same functions as the transport and internet layers of the TCP/IP model? (Choose two.)

application layer
presentation layer
session layer
transport layer
network layer
data link layer
physical layer

37. What command can be used to troubleshoot domain name resolution issues?

get
arp -a
tracert
nslookup
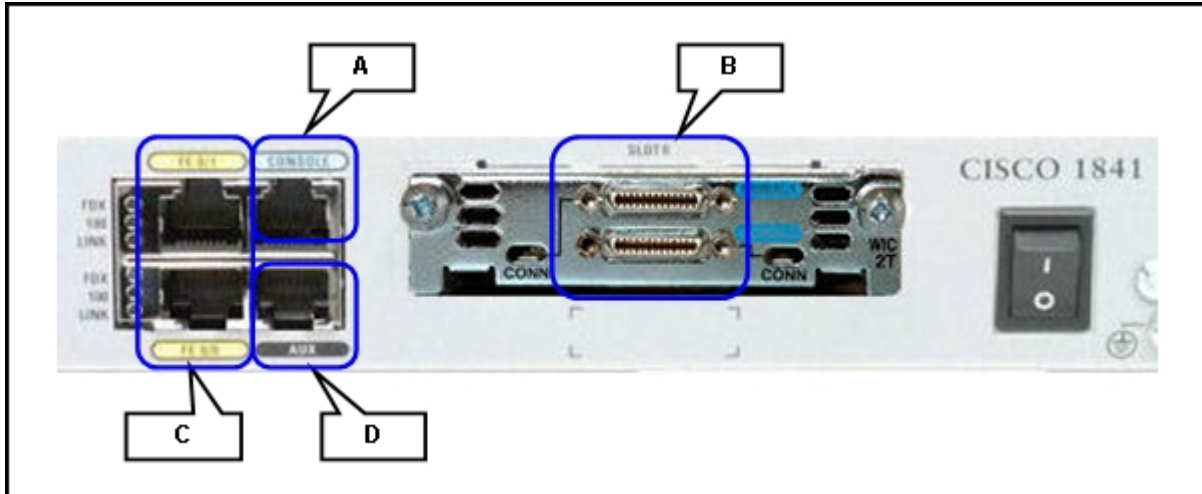
38. Refer to the exhibit. For connecting two routers with an Ethernet crossover cable, which interface should be used?

A
B
C
D

39. 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?
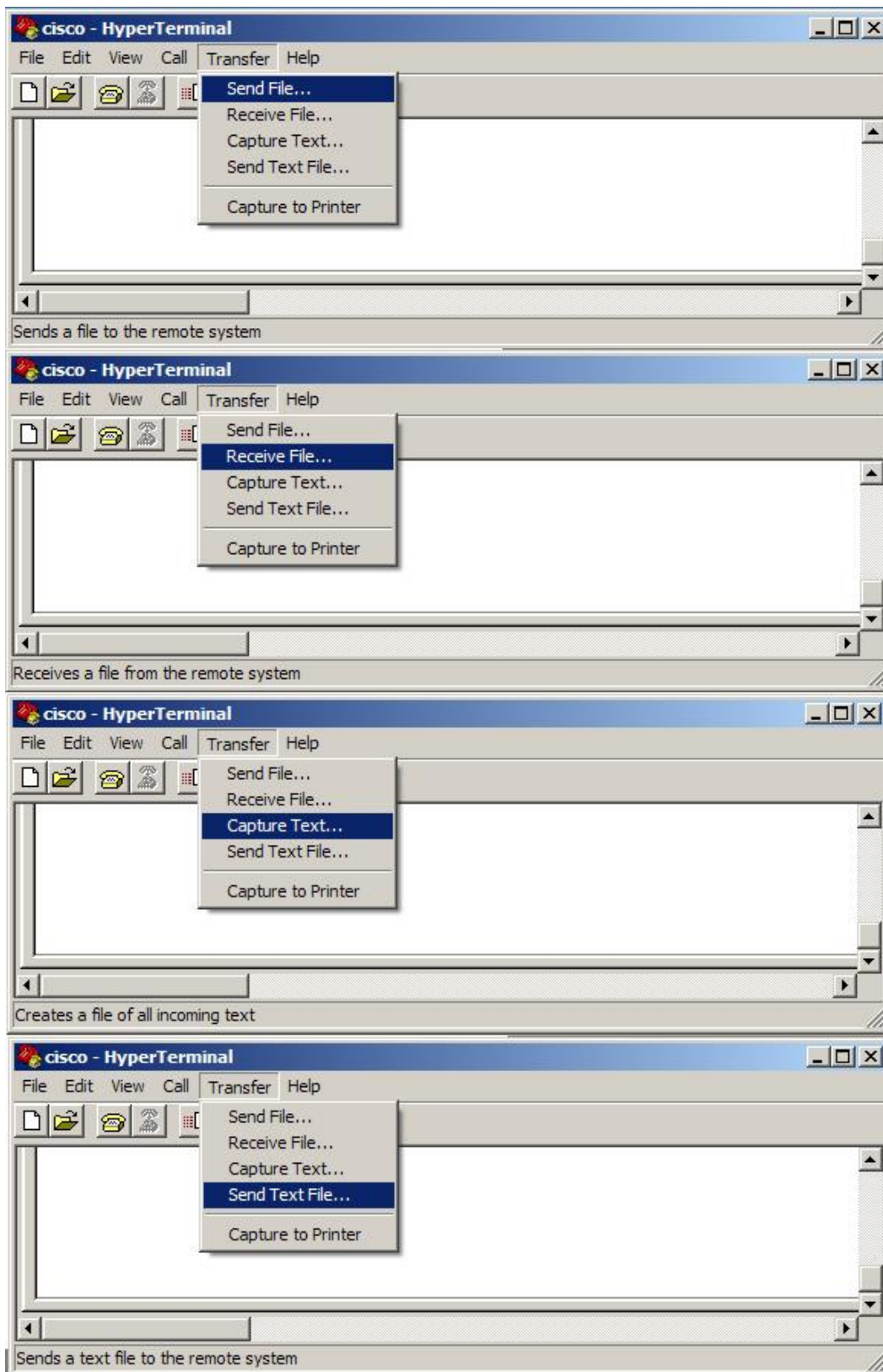
console
enable
enable secret
VTY

**40. Which three addresses belong to the category of public IP addresses? (Choose three.)**

127.0.0.1
196.1.105.6
132.11.9.99
10.0.0.1
172.16.9.10
46.1.1.97

41. A network administrator is configuring several switches for a network. The switches have similar configurations and only minor differences. The administrator wants to save all commands that are issued on the first switch to a text file for editing. Which transfer option should be selected in HyperTerminal?
Correct answer is option (image) 3.

cisco - HyperTerminal
File Edit View Call Transfer Help

Transfer menu:
- Send File...
- Receive File...
- Capture Text...
- Send Text File...
- Capture to Printer

Sends a file to the remote system

cisco - HyperTerminal
File Edit View Call Transfer Help

Transfer menu:
- Send File...
- Receive File...
- Capture Text...
- Send Text File...
- Capture to Printer

Receives a file from the remote system

cisco - HyperTerminal
File Edit View Call Transfer Help

Transfer menu:
- Send File...
- Receive File...
- Capture Text...
- Send Text File...
- Capture to Printer

Creates a file of all incoming text

cisco - HyperTerminal
File Edit View Call Transfer Help

Transfer menu:
- Send File...
- Receive File...
- Capture Text...
- Send Text File...
- Capture to Printer

Sends a text file to the remote system

42. Which option represents a point-to-point logical topology diagram?
Correct answer is option (image) 4.
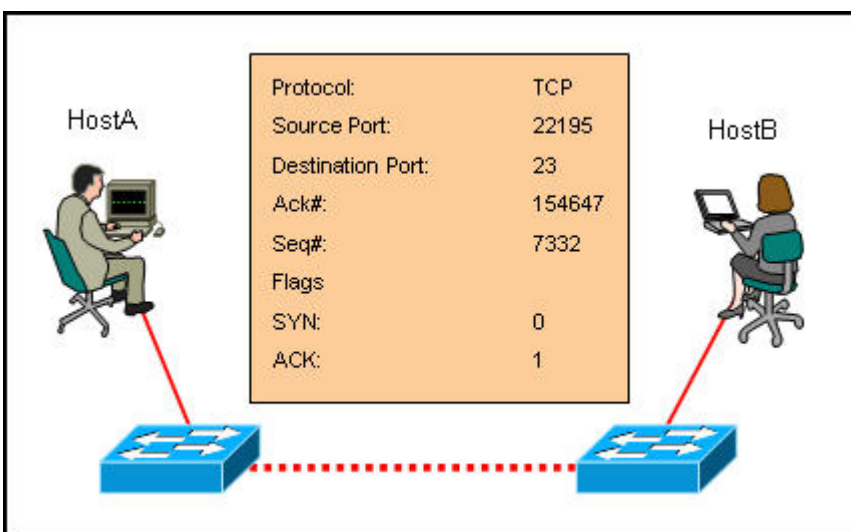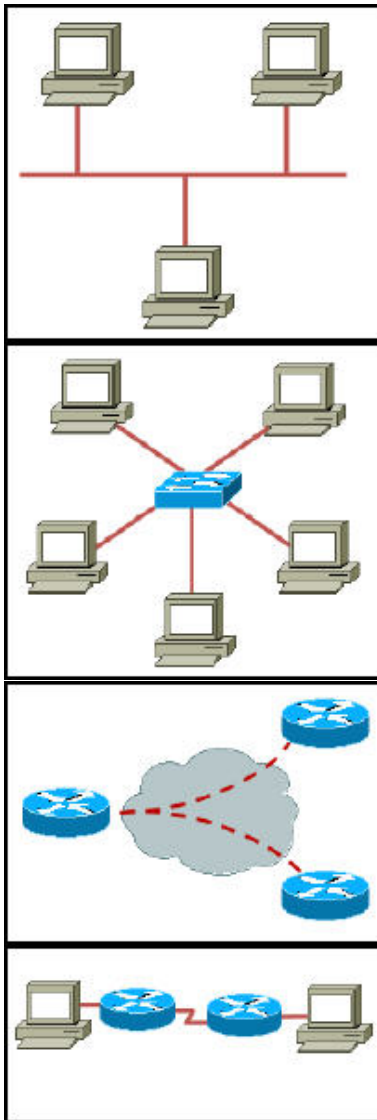
43. Refer to the exhibit. What two facts can be determined from the session information that is displayed? (Choose two.)

The protocol is a connection-oriented protocol.
This exchange is part of the three-way handshake.

The SYN flag is representing the initial establishment of a session.
The destination port indicates that an FTP session has been initiated.
The source port does not support communication with the destination port that is listed.

**44. Which communication tool allows real-time collaboration?**

wiki
e-mail
weblog
instant messaging

45. Which prompt is associated with the privileged exec mode?

R1>
**R1#**
R1(config)#
R1(config-router)#

46. What is the effect of the command copy running-config tftp?

copies the configuration from a remote machine into RAM
copies the configuration from a remote machine into NVRAM
copies the configuration currently in RAM to a remote machine
copies the configuration currently in NVRAM to a remote machine
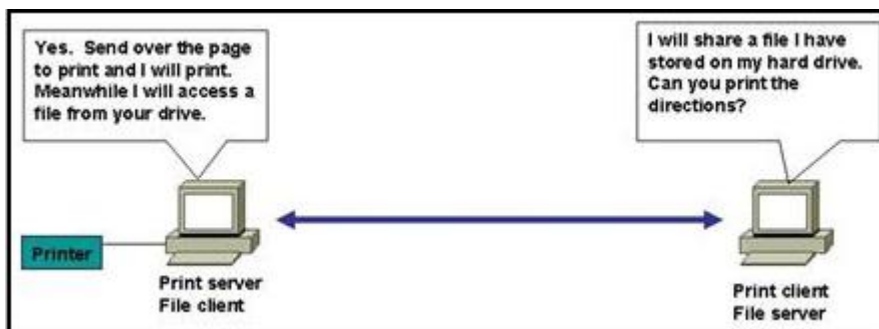
47. Refer to the exhibit. Which type of network design is shown?

client/server
wide area
dedicated server
peer-to-peer
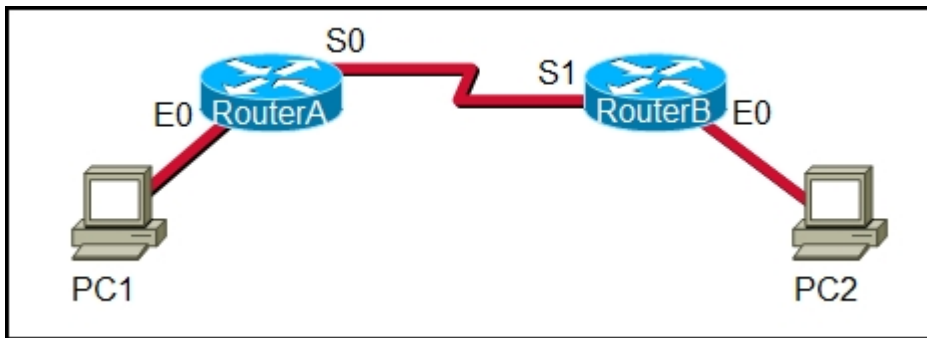
48. Refer to the exhibit. A network administrator remotely accesses the CLI of RouterB from PC1 using Telnet. Which statement is true about this connection?

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.

49. Refer to the exhibit. A network technician wants to connect host A to the console of a Cisco switch to initialize the configuration. What type of cable is required for this connection?

straight-through cable
crossover cable
rollover cable
serial cable

50. A technician makes several changes to the running configuration on a router, but the desired results are not achieved. The technician issues the reload command. What action will be taken by the router?

All changes will be lost and the router will restart immediately.
Changes will be saved automatically and the router will restart.
The user will be prompted to save changes before the router restarts.
The router will detect changes to the running configuration and will reload using the configuration stored in RAM.