

CCENT Practice Certification Exam # 1 - CCNA Exploration: Accessing the WAN (Version 4.0)

1. What are two ways that TCP uses the sequence numbers in a segment? (Choose two.)

to identify missing segments at the destination

to reassemble the segments at the remote location

to specify the order in which the segments travel from source to destination

to limit the number of segments that can be sent out of an interface at one time

to determine if the packet changed during transit

2. Which three statements characterize UDP? (Choose three.)

UDP provides connectionless, fast transport of data at Layer 4.

UDP provides connection-oriented, fast transport of data at Layer 3.

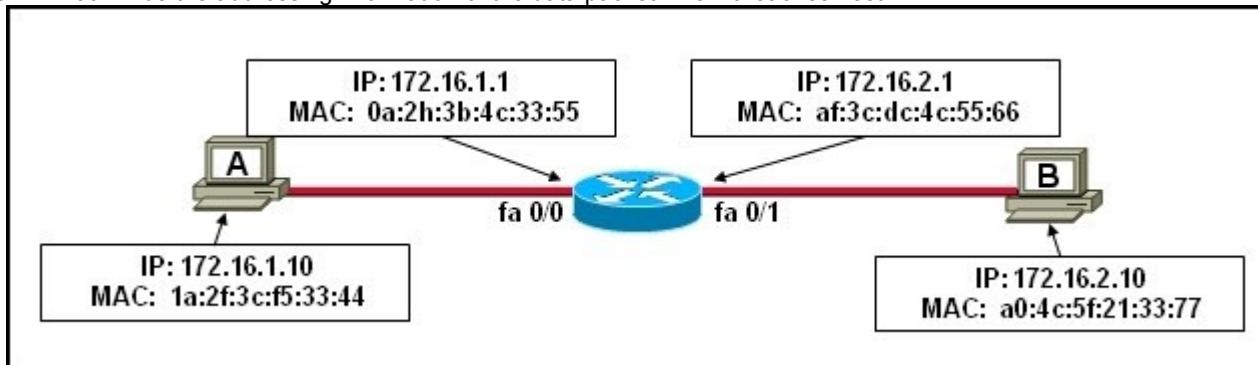
UDP relies on application layer protocols for error detection.

UDP works well when an application does not need to guarantee delivery of data.

UDP relies on IP for error detection and recovery.

UDP provides sophisticated flow control mechanisms.

3. Refer to the exhibit. Host A sends a data packet to host B. What will be the addressing information of the data packet when it reaches host B? Refer to the exhibit. Host A sends a data packet to host B. What will be the addressing information of the data packet when it reaches host B?



Source	Destination	Source	Destination	Data
af:3c:dc:4c:55:66	a0:4c:5f:21:33:77	172.16.1.10	172.16.2.10	

Source af:3c:dc:4c:55:66	Destination a0:4c:5f:21:33:77	Source 172.16.2.1	Destination 172.16.2.10	Data
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Source 0a:2h:3b:4c:33:55	Destination a0:4c:5f:21:33:77	Source 172.16.2.1	Destination 172.16.2.10	Data
-----------------------------	----------------------------------	----------------------	----------------------------	------

Source 1a:2f:3c:f5:33:44	Destination a0:4c:5f:21:33:77	Source 172.16.1.10	Destination 172.16.2.10	Data
-----------------------------	----------------------------------	-----------------------	----------------------------	------

4. Which layer of the OSI model defines logical addressing?

application
presentation
session
transport
network
data link

5. Which device connects a local LAN to a geographically separate network?

switch
hub
router
bridge

6. Refer to the exhibit. Router1 receives packets addressed as follows:

Source IP address: 192.168.1.88

Destination IP address: 172.16.0.3

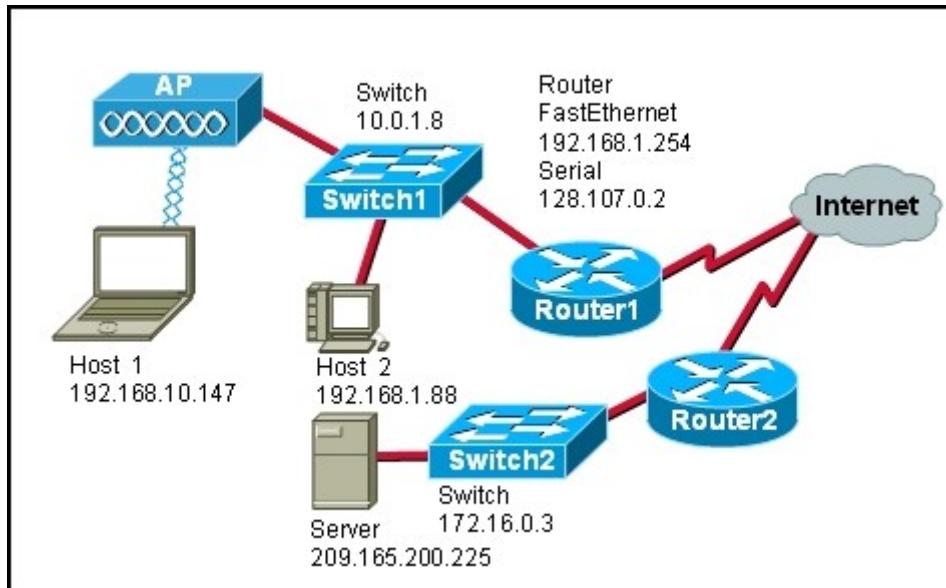
Source MAC address: 00-11-12-7a-41-10

Destination MAC address: 00-11-5c-cc-a9-c0

Source Port: 1464

Destination Port: 23

Assuming that Router1 has not been configured with NAT, what will happen to the packets?



The packets will be sent to the server because it is a server-based port.

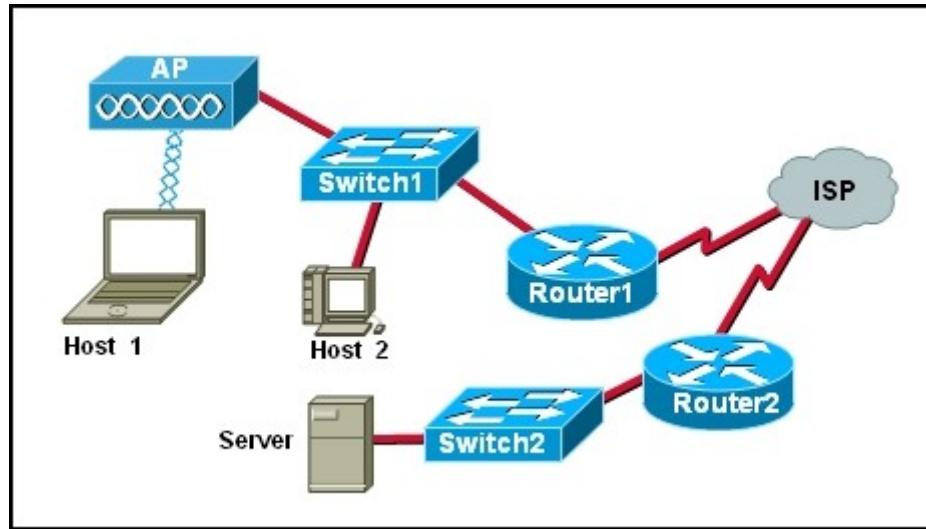
The packets will be sent to Switch2 and not leave the switch because the packets are local.

The packets will be sent to the laptop host.

The packets will be sent to Router1 and dropped because private addresses are not transmitted across the Internet.

The packets will be sent to Router2 and dropped because the server is not directly attached.

7. Refer to the exhibit. If host 1 was to send an HTTP request to the web server that connects to Router2, what type of Layer 2 frame would be sent between Router1 and the ISP?



a frame with a header that contains the port number of 80

a frame with a header and trailer, but no MAC addresses

a frame with a header and a trailer that only contains IP addresses

a frame with the host 1 MAC address as the source and Router1 MAC address as the destination

a frame with the host 1 MAC address as the source and the server MAC address as the destination

8. A company needs to connect an office router to a service provider to access a WAN. What device is needed to connect the router to the ISP if the service provider supplies a T1 line for the connection?

a CSU/DSU

a cable modem

a DSL router

a DTE device

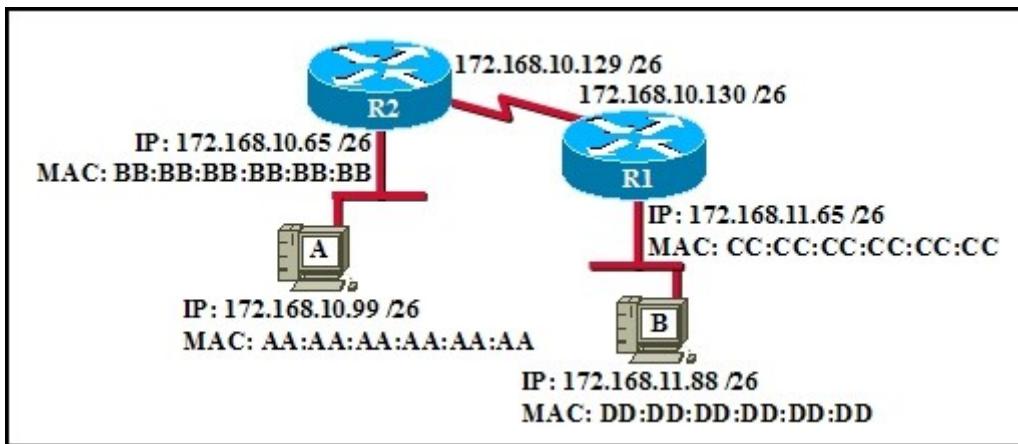
an SLA device

9. Refer to the exhibit. A technician applies the configuration in the exhibit to an unconfigured router. To verify the configuration, the technician issues the **show running-config** command in the CLI session with the router. What lines should the technician expect to see in the router output from the **show running-config** command?

```
Router(config)# service password-encryption
Router(config)# enable secret cisco
Router(config)# enable password class
Router(config)# line console 0
Router(config-line)# password ccna
```

```
enable password class
line console 0
password ccna
enable secret cisco
enable password class
line console 0
password ccna
enable secret 5 $1$v0/3$QyQWmJyT7zCa/yaBRasJm0
enable password class
line console 0
password ccna
enable secret cisco
enable password 7 14141E0A1F17
line console 0
password 7 020507550A
enable secret 5 $1$v0/3$QyQWmJyT7zCa/yaBRasJm0
enable password 7 14141E0A1F17
line console 0
password 7 020507550A
```

10. Refer to the exhibit. If host A sends an IP packet to host B, what will the destination address be in the frame when it leaves host A?



DD:DD:DD:DD:DD:DD
 172.168.10.99
 CC:CC:CC:CC:CC:CC
 172.168.10.65
BB:BB:BB:BB:BB:BB
 AA:AA:AA:AA:AA:AA

11. Refer to the exhibit. What two facts can be determined from the output of the **ping** command? (Choose two.)

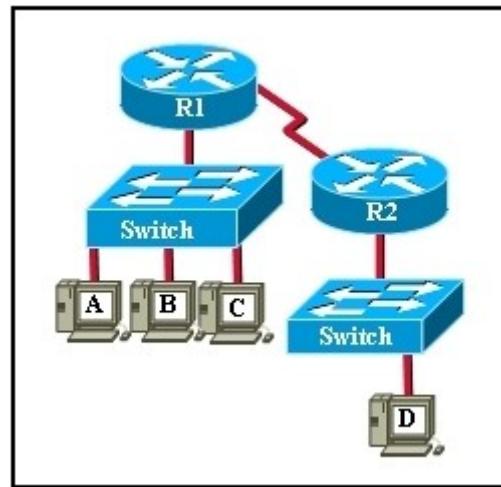
```

Router1> ping 172.16.101.2
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 172.16.101.2,
Timeout is 2 seconds:
. !!!! 
Success rate is 80 percent, round-trip min/avg/max=6/6/6 ms
Router1>
  
```

There was a destination unreachable error.
 The packet type was unknown.

One packet timed out.
 The ping was interrupted.
Four packets of data were successfully received.
 The packet TTL was exceeded.

12. Refer to the exhibit. The switches are in their default configuration. Host A needs to communicate with host D, but host A does not have the MAC address for its default gateway. Which network hosts will receive the ARP request sent by host A?



- only host D
- only router R1
- only hosts A, B, and C
- only hosts A, B, C, and D
- only hosts B and C
- only hosts B, C, and router R1**

13. Refer to the exhibit. Which password will the administrator need to use on this device to enter privileged EXEC mode?

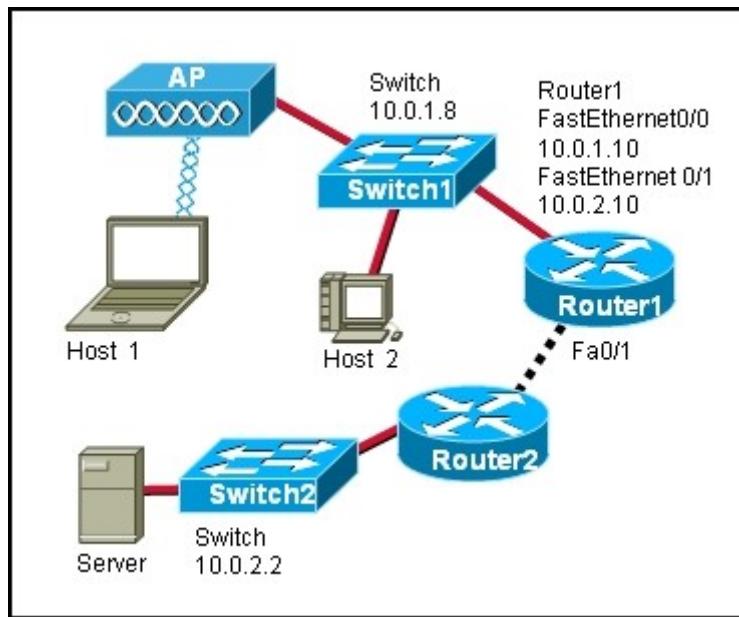
```
Switch> enable
Switch# config terminal
Switch(config)# enable password Cisco
Switch(config)# enable secret cisco
Switch(config)# line con 0
Switch(config-line)# password password
Switch(config-line)# login
Switch(config-line)# end
Switch(config)# line vty 0 15
Switch(config-line)# password class
Switch(config-line)# login
Switch(config-line)# end
```

Cisco
class
password
cisco

14. Refer to the exhibit. Switch1 has only the following commands added to a default Cisco 2960 configuration:

```
enable secret cisco
line vty 0 4
password Kn0ckkn-cK
login
interface vlan 1
ip address 10.0.1.8 255.255.255.0
no shutdown
```

Assume that routing between networks is functioning properly and that Switch2 has been properly configured for remote access. What would the result be if the **telnet 10.0.2.2** command is issued from Switch1 privileged mode?



The following prompt would appear:

User Access Verification

Password:

Switch2 would return a destination unreachable message to Switch1.

Router1 would return a destination unreachable message to Switch1.

The packet would be dropped.

15. What caused the following error message to appear?

01:11:12: %PM-4-ERR_DISABLE: psecure-violation error detected on Fa0/8, putting Fa0/8 in err-disable state

01:11:12: %PORT_SECURITY-2-PSECURE_VIOLATION: Security violation occurred, caused by MAC address 0011.a0d4.12a0 on port FastEthernet0/8.

01:11:13: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/8, changed state to down

01:11:14: %LINK-3-UPDOWN: Interface FastEthernet0/8, changed state to down

Another switch was connected to this switch port with the wrong cable.

An unauthorized user tried to telnet to the switch through switch port Fa0/8.

NAT was enabled on a router, and a private IP address arrived on switch port Fa0/8.

A host with an invalid IP address was connected to a switch port that was previously unused.

Port security was enabled on the switch port, and an unauthorized connection was made on switch port Fa0/8.

16. When configuring a switch to use SSH for virtual terminal connections, what is the purpose of the **crypto key generate rsa** command?

show SSH connected hosts

disconnect SSH connected hosts

create a public and private key pair

show active SSH ports on the switch

access the SSH database configuration

17. Which three statements are true about full-duplex operation on an Ethernet network? (Choose three.)

There are no collisions in full-duplex mode.

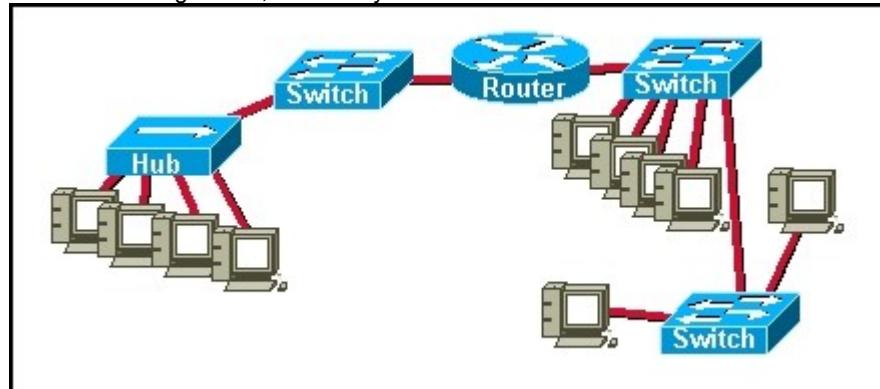
A dedicated switch port is required for each node.

Hub ports are preconfigured for full-duplex mode.

The host network card must detect the availability of the media before transmitting.

The host network card and the switch port must both be in full-duplex mode.

18. Refer to the exhibit. If all the switches have a default configuration, how many broadcast domains are in the network?



1

2

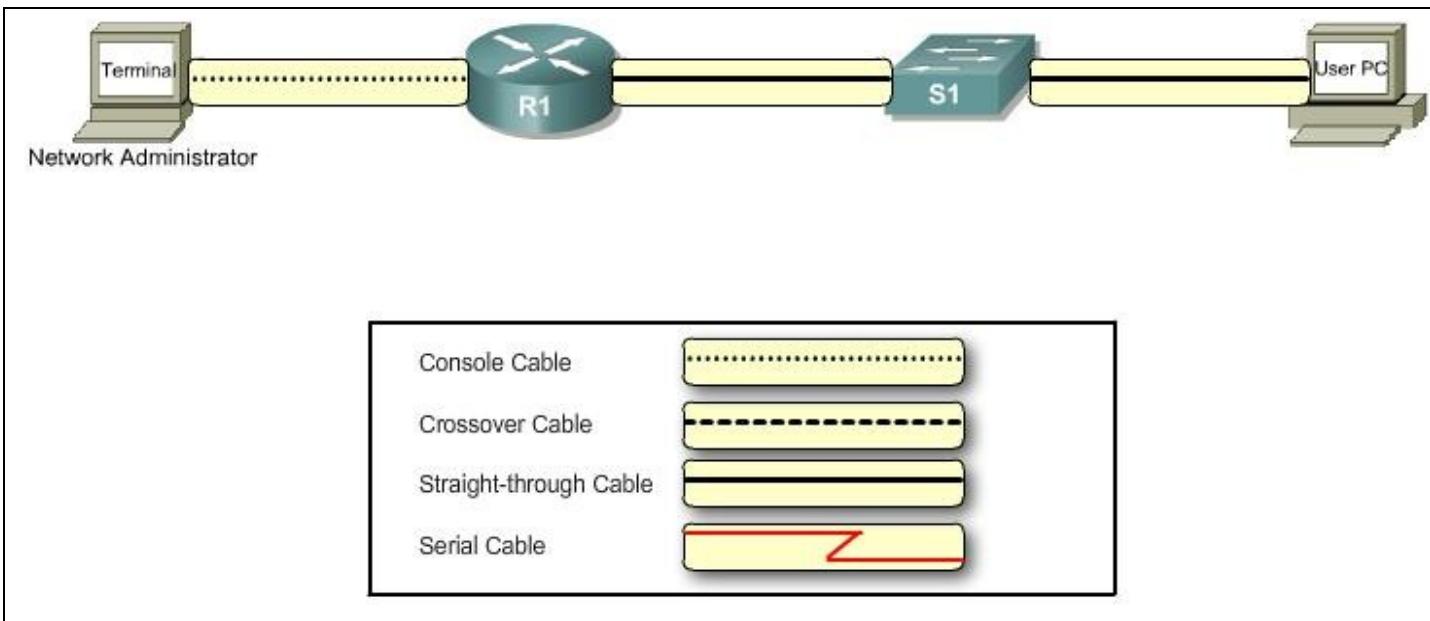
3

4

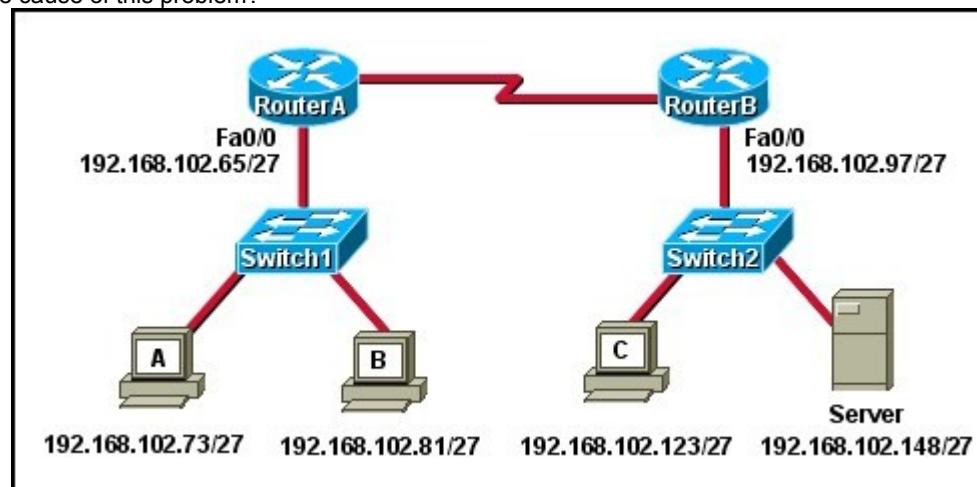
5

14

19.



20. Refer to the exhibit. The devices have been configured with static IP addresses as shown. All hosts can communicate with each other but none of the hosts can communicate with the server. What is the cause of this problem?



The IP address that is assigned to the server is in an incorrect subnet.

The IP address that is assigned to the server is a broadcast address.

The IP address that is assigned to the server is a network address.

The switch to which the server is connected has not been assigned an IP address.

The RouterB LAN interface is incorrectly addressed in the RouterA LAN subnet.

21. A network host has the IP address 10.250.206.55/20. How many more network devices can be added to this same subnetwork?

253
509
1021
2045
4093

22. Which type of Network Address Translation allows a host on a public network consistent access to a specified private inside host?

port-based NAT
static NAT
dynamic NAT
NAT overload

23. Refer to the exhibit. Which two addresses are "inside global" addresses? (Choose two.)

```
Switch> enable
Switch# config terminal
Switch(config)# enable password Cisco
Switch(config)# enable secret cisco
Switch(config)# line con 0
Switch(config-line)# password password
Switch(config-line)# login
Switch(config-line)# end
Switch(config)# line vty 0 15
Switch(config-line)# password class
Switch(config-line)# login
Switch(config-line)# end
```

192.31.7.3
64.40.1.5
198.133.219.35
192.31.7.2
198.133.219.44

64.40.1.4
192.31.7.1

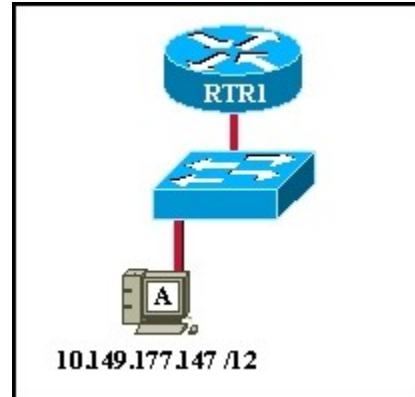
24. Which addresses are valid host IP addresses given the subnet mask 255.255.255.248? (Choose three.)

192.168.200.87
194.10.10.104
223.168.210.100
220.100.100.154
200.152.2.160
196.123.142.190

25. The router receives a packet with the destination address of 172.16.30.79/22. To which subnetwork does this packet belong?

172.16.30.0/22
172.16.30.64/22
172.16.30.76/22
172.16.28.0/22
172.16.28.56/22
172.16.0.0/22

26. Refer to the exhibit. What is the broadcast address for the subnetwork on which host A resides?



10.255.255.255
10.144.255.255
10.149.255.255
10.149.191.255
10.159.255.255

27.

28. What can a network administrator modify on a router to specify the location from which the Cisco IOS loads? (Choose two.)

system ROM
the startup configuration file
the system image file
the configuration register value
the NVRAM file system

29. Which two items are required for initial configuration of Cisco routers if the IOS command-line interface is used? (Choose two.)

a crossover cable
a rollover cable
an RJ-15 to DB-9 adapter
terminal emulation software
router VTY port

30. Refer to the exhibit. The router named "myhome" has received a frame from the host 192.168.254.7. The contents of this frame are being sent to host 172.16.14.243. What is the Layer 2 destination address of the frame as it leaves the myhome router?

myhome# show arp					
Protocol	Address	Age (min)	Hardware Addr	Type	Interface
Internet	172.16.14.129	0	0009.1281.18a8	ARPA	Ethernet1
Internet	172.16.14.243	-	0008.a3b6.ce05	ARPA	Ethernet1
Internet	192.168.254.7	1	000a.8a47.e612	ARPA	Ethernet0
Internet	192.168.254.4	33	000d.5609.fbd1	ARPA	Ethernet0
Internet	192.168.254.1	-	0008.a3b6.ce04	ARPA	Ethernet0
Internet	192.168.254.9	12	000f.3d4e.235f	ARPA	Ethernet0
Internet	192.168.254.86	14	0006.2554.b16c	ARPA	Ethernet0

0008.a3b6.ce05
0009.1281.18a8
000a.8a47.e612
172.16.14.129
172.16.14.243
192.168.254.7

31. Refer to the exhibit. What two facts can be determined about the network from the exhibited output? (Choose two.)

MontegoBay> show cdp neighbors					
Capability Codes: R - Router, T - Trans Bridge, B - Source Route Bridge					
Device ID	Local Intrfce	Holdtme	Capability	Platform	Port ID
Negril	Ser 0/1	146	R	2620	Ser 0/1
Lucia	Ser 0/0	175	R	2621	Ser 0/0
MBSwitch	Fas 0/0	155	SI	WS-C2950-2	Fas 0/11

The MontegoBay router does not have any LAN interfaces configured.

The Negril router is connected to the S0/1 interface of the MontegoBay router.

There are only four devices in this network.

Layer 3 is functioning properly on all routers.

The MBSwitch is connected to the Negril, Lucia, and MontegoBay routers.

Layer 2 is operational on three ports of the MontegoBay router.

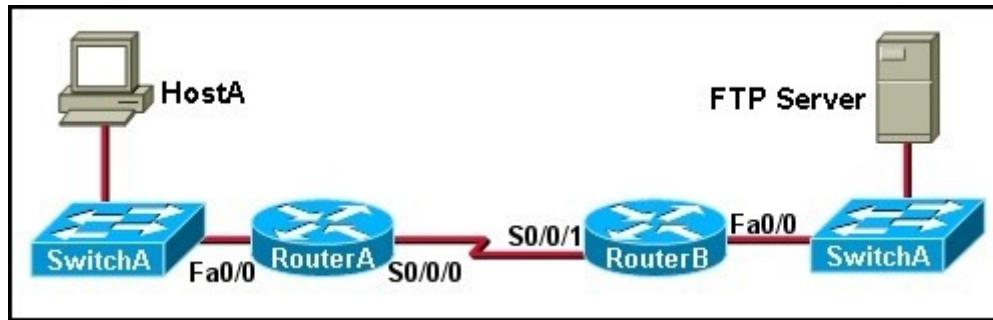
32. Which set of commands is used to name a router and save the configuration?

```
Router(config)# hostname South
South(config)# copy running-config startup-config
Router(config)# hostname South
South(config)# exit
South# copy running-config startup-config
Router(config)# ip host South
South(config)# copy running-config startup-config
Router(config)# ip host South
South(config)# exit
South# copy running-config startup-config
```

33. Which command is used to create an encrypted password that restricts access to the privileged EXEC mode of a Cisco router?

```
RouterA(config)# encrypted password cisco
RouterA(config)# password encrypted cisco
RouterA(config)# enable password cisco
RouterA(config)# enable secret cisco
RouterA(config)# service-password encryption cisco
```

34. Refer to the exhibit. A network administrator working at HostA has problems accessing the FTP server. Layer 3 connectivity testing was successful from HostA to the S0/0/1 interface of RouterB. Which set of commands will allow the network administrator to telnet to RouterB to check its status?



```

RouterB(config)# enable secret class
RouterB(config)# line vty 0 4
RouterB(config-if)# login
RouterB(config)# enable secret class
RouterB(config)# line vty 0
RouterB(config-line)# password cisco
RouterB(config-line)# login
RouterB(config)# enable secret class
RouterB(config)# line aux 0
RouterB(config-line)# password cisco
RouterB(config-line)# login
RouterB(config)# enable secret class
RouterB(config)# line aux 0
RouterB(config-vty)# password cisco
RouterB(config-vty)# login
  
```

35. What is the purpose of using SSH to connect to a router?

- It allows a router to be configured using a graphical interface.
- It allows a secure remote connection to the router command line interface.**
- It allows the router to be monitored through a network management application.
- It allows secure transfer of the IOS software image from an unsecure workstation or server.

36. Which two statements describe the command `ip route 192.168.7.24 255.255.255.248 192.168.7.9`? (Choose two.)

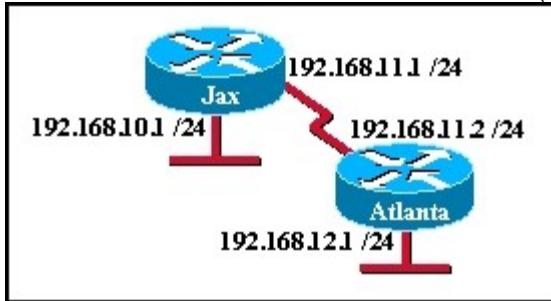
- A packet that is destined for host 192.168.7.30 will be forwarded to address 192.168.7.9.**
- The address 192.168.7.9 is the destination network for this route.
- The address 192.168.7.24 is the next-hop router in this command.
- This command is issued from the interface configuration mode.
- This command is used to define a static route.**

37. Which protocol is described as an enhanced distance vector routing protocol?

- RIP v1
- RIP v2

EIGRP
OSPF

38. Refer to the exhibit. A network administrator can successfully ping, using IP addresses, between router Jax and router Atlanta. However, when the command **telnet Atlanta** is entered from the Jax router, the Telnet connection fails. Which two reasons could be the cause of the failure? (Choose two.)



The Jax router is not an entry in the host table of the Atlanta router.

The Jax router does not have an entry for Atlanta in its host table.

The **hostname** command is not configured correctly on the Atlanta router.

The **hostname** command is not configured correctly on the Jax router.

Access to a DNS server is not available.

39. From what two locations can a router load the Cisco IOS during the boot process? (Choose two.)

RAM
TFTP server
NVRAM
setup routine
Flash memory
terminal

40. Which two statements describe the functions or characteristics of ROM in a router? (Choose two.)

stores routing tables
allows software to be updated without replacing pluggable chips on the motherboard
maintains instructions for POST diagnostics
holds ARP cache
stores bootstrap program

41. Which two statements correctly identify the function of router memory components? (Choose two.)

RAM permanently stores the configuration file used during the boot sequence.
ROM contains diagnostic self test procedures executed on hardware modules.
NVRAM stores a backup copy of the IOS used during the boot sequence.
Flash memory does not lose its contents when a router is powered off.
ROM contains the most current and most complete version of the IOS.

Flash contains boot system commands to identify the location of the IOS.

42. Which router component holds the routing table, ARP cache, and running configuration file?

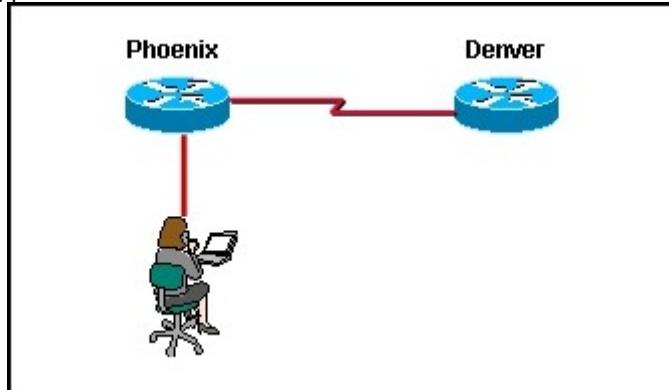
RAM

Flash

NVRAM

ROM

43. Refer to the exhibit. A network administrator can ping the Denver router, but gets a 'Password Required but None Set' message when trying to connect remotely via Telnet. Which command or sequence of commands must be applied to the Denver router to allow remote access?



```
Router(config)# line console 0
Router(config-line)# login
Router(config-line)# password cisco
Router(config)# line vty 0 4
Router(config-line)# login
Router(config-line)# password cisco
Router(config)# line virtual terminal
Router(config-line)# enable login
Router(config-line)# password cisco
Router(config)# line vty 0 4
Router(config-line)# enable secret
Router(config-line)# password cisco
Router(config)# enable secret cisco
Router(config)# enable cisco
```

44.

45. Which security method uses the Advanced Encryption Standard (AES)?

MAC address filtering

WEP
WPA
WPA2

46. What is the purpose of WEP?

It encrypts data.

- It uniquely identifies a wireless network.
- It coordinates and accepts transmissions from wireless hosts.
- It provides information about a directly connected Cisco network device.

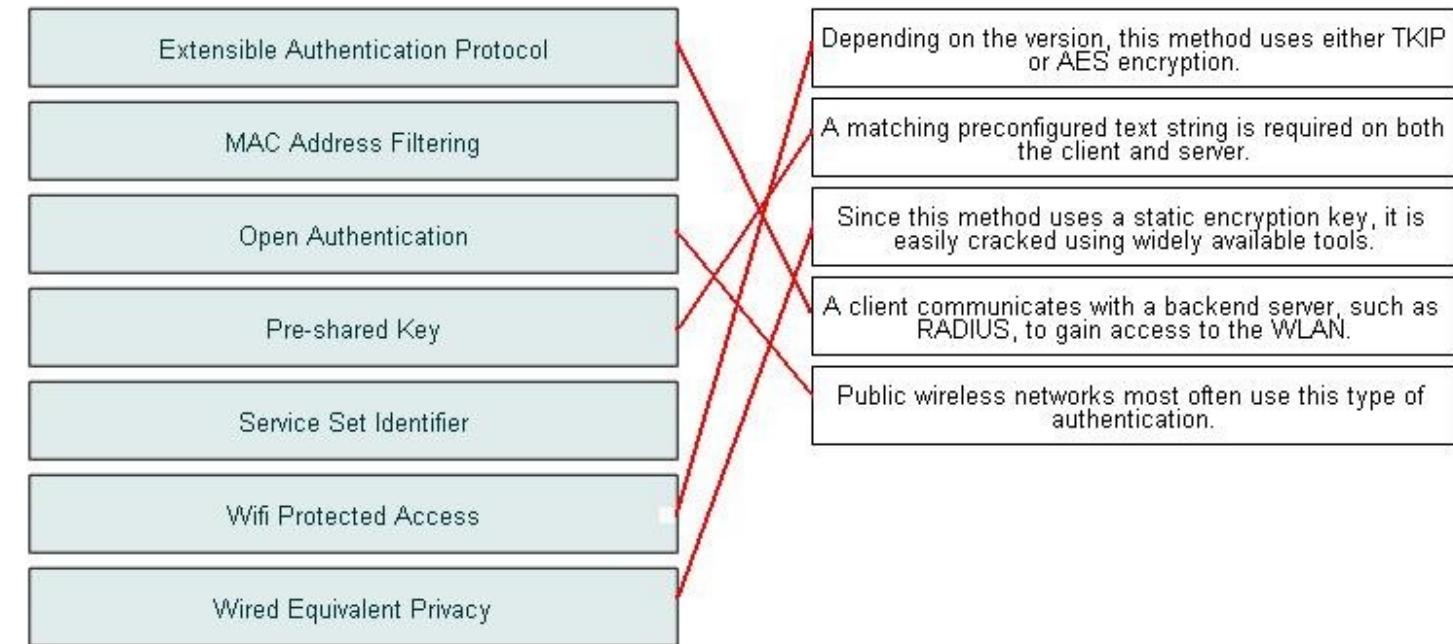
47. A company has an 802.11b wireless access point installed. Which type of wireless NIC is a valid standards-based one but will *not* work in this environment?

802.11a

- 802.11b
- 802.11g
- 802.11n

48.

Drag the wireless security feature on the left to its definition on the right. (Not all options are used.)



49. A company has a sales team that travels with laptops. On Fridays, the sales members come into assigned cubicles and connect their laptop to the wired network. The company is concerned that unauthorized users could also connect to the network. What can be done to ensure that unauthorized laptops are not connected to the wired network?

Implement SSH.

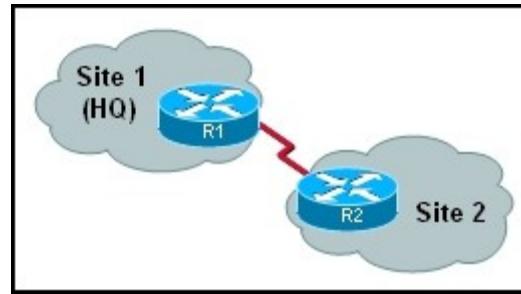
Install WEP or WPA.

Use switch port security.

Clearly label the cubicle network port and the switch port.

Configure usernames and passwords on the switch ports assigned to each cubicle.

50. Refer to the exhibit. For security reasons, information about the HQ R1 router model and IP address should not be accessible from the Site 2 R2 router. What security measure should be implemented?



Install an IDS between R1 and R2.

Install an IPS between R1 and R2.

Install a firewall between R1 and R2.

Disable CDP on the R1 interface that connects to R2.

Disable any routing protocol used between R1 and R2 and install static routes.