

QUIZ 1

_____ 1. Which two locations can be configured as a source for the IOS image in the boot system command?

(Choose two.)

- A. RAM
- B. NVRAM
- C. flash memory
- D. HTTP server
- E. TFTP server
- F. Telnet server

_____ 2. What is the reason that the interface status is "administratively down, line protocol down"?

```
Router# show interface s0/0/0
Serial 0/0/0 is administratively down, line protocol is down
```

- A. There is no encapsulation type configured.
- B. There is a mismatch in encapsulation types.
- C. The interface is not receiving any keepalives.
- D. The interface has been configured with the shutdown command.
- E. The interface needs to be configured as a DTE device.
- F. The wrong type of cable is connected to the interface.

_____ 3. Which command displays CPU utilization?

- A. show protocols
- B. show process
- C. show system
- D. show version

_____ 4. For what two purposes does the Ethernet protocol use physical addresses? (Choose two.)

- A. to uniquely identify devices at Layer 2
- B. to allow communication with devices on a different network
- C. to differentiate a Layer 2 frame from a Layer 3 packet
- D. to establish a priority system to determine which device gets to transmit first
- E. to allow communication between different devices on the same network
- F. to allow detection of a remote device when its physical address is unknown

_____ 5. A user is unable to connect to the Internet. Based on the layered approach to troubleshooting and beginning with lowest layer, follow the guide and drag the contents to relevant modules

1. Step 1 verify URL
2. Step 2 verify NIC operation
3. Step 3. verify IP configuration
4. Step 4 verify Ethernet cable connection

- A. 4-1-3-2
- B. 4-2-3-1
- C. 4-3-1-2
- D. 4-1-2-3

_____ 6. A network administrator configures a new router and enters the copy startup-config running-config command on the router. The network administrator powers down the router and sets it up at a remote location. When the router starts, it enters the system configuration dialog as shown. What is the cause of the problem?

```
--- System Configuration Dialog ---

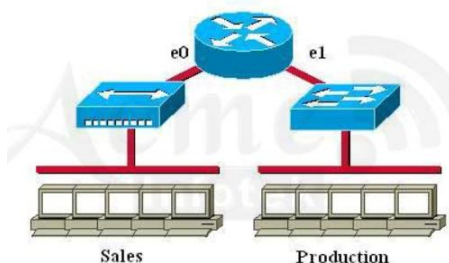
Would you like to enter the initial configuration dialog? [yes/no]:
% Please answer 'yes' or 'no'.
Would you like to enter the initial configuration dialog? [yes/no]: n

Would you like to terminal autoinstall? [yes]:

Press RETURN to get started!
```

- A. The network administrator failed to save the configuration.
- B. The configuration register is set to 0x2100.
- C. The boot system flash command is missing from the configuration.
- D. The configuration register is set to 0x2102.
- E. The router is configured with the boot system startup command.

_____ 7. Which of the following statements describe the network shown in the graphic? (Choose two.)



What are the proper statements ? . (Choose two)

- A. There are two broadcast domains in the network.
- B. There are four broadcast domains in the network.
- C. There are six broadcast domains in the network.
- D. There are four collision domains in the network.
- E. There are five collision domains in the network.
- F. There are seven collision domains in the network.

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8. Match the security feature on the left to the specific security risks they help protect against on the right. (Not all options are used.)

___E___ . remote access to device console

A. access-group

___B___ . access to the console 0 line

B. console password

___A___ . access to connected network or resources

C. enable secret

___F___ . viewing of passwords

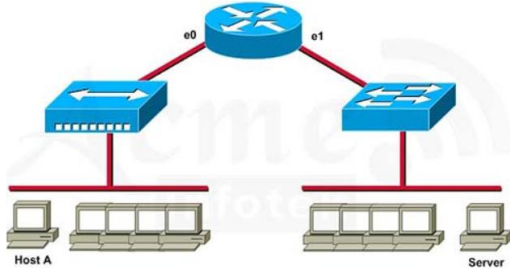
D. CHAP authentication

___C___ . access to privileged mode

E. VTY password

F. service password-encryption

9. Host A is communicating with the server. What will be the source MAC address of the frames received by Host A from the server?



A. the MAC address of the server network interface

B. the MAC address of host A

C. the MAC address of router interface e1

D. the MAC address of router interface e0

10. Which of the following correctly describe steps in the OSI data encapsulation process? (Choose two)

A. The transport layer divides a data stream into segments and may add reliability and flow control information.

B. The data link layer adds physical source and destination addresses and an FCS to the segment.

C. Packets are created when the network layer encapsulates a frame with source and destination host addresses and protocol-related control information.

D. Packets are created when the network layer adds Layer 3 addresses and control information to a segment.

E. The presentation layer translates bits into voltages for transmission across the physical link.

11. Where does routing occur within the DoD TCP/IP reference model?

A. application

B. internet

C. network

D. transport

12. A network administrator needs to allow only one Telnet connection to a router.

For anyone viewing the configuration and issuing the show run command, the password for Telnet access should be encrypted. Which set of commands will accomplish this task?

A service password-encryption

access-list 1 permit 192.168.1.0.0.0.255

line vty0 4

login

password cisco

access-class 1

B. enable password secret

line vty0

login

password cisco

C. service password-encryption

line vty1

login

password cisco

D. service password-encryption

line vty0 4

login

password cisco

13. A Cisco router is booting and has just completed the POST process. It is now ready to find and load an IOS image. What function does the router perform next?

A. It checks the configuration register.

B. It attempts to boot from a TFTP server.

C. It loads the first image file in flash memory.

D. It inspects the configuration file in NVRAM for boot instructions.

14. How does using the service password-encryption command on a router provide additional security?

A. by encrypting all passwords passing through the router.

B. by encrypting passwords in the plain text configuration file.

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- C. by requiring entry of encrypted passwords for access to the device.
- D. by configuring an MD5 encrypted key to be used by routing protocols to validate routing exchanges.
- E. by automatically suggesting encrypted passwords for use in configuring the router.

_____ **15. A receiving host computes the checksum on a frame and determines that the frame is damaged. The frame is then discarded. At which OSI layer did this happen?**

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

_____ **16. Which statement is correct regarding the operation of DHCP?**

- A. A DHCP client uses a ping to detect address conflicts.
- B. A DHCP server uses a gratuitous ARP to detect DHCP clients.
- C. A DHCP client uses a gratuitous ARP to detect a DHCP server.
- D. If an address conflict is detected, the address is removed from the pool and an administrator must resolve the conflict.**
- E. If an address conflict is detected, the address is removed from the pool for an amount of time configurable by the administrator.
- F. If an address conflict is detected, the address is removed from the pool and will not be reused until the server is rebooted.

_____ **17. In an Ethernet network, under what two scenarios can devices transmit? (Choose two.)**

- A. when they receive a special token
- B. when there is a carrier
- C. when they detect no other devices are sending**
- D. when the medium is idle**
- E. when the server grants access

_____ **18. Which statement describes the process of dynamically assigning IP addresses by the DHCP server?**

- A. Addresses are allocated after a negotiation between the server and the host to determine the length of the agreement.
- B. Addresses are permanently assigned so that the hosts uses the same address at all times.
- C. Addresses are assigned for a fixed period of time, at the end of the period, a new request for an address must be made.
- D. Addresses are leased to hosts, which periodically contact the DHCP server to renew the lease.**

_____ **19. Before installing a new, upgraded version of the IOS, what should be checked on the router, and which command should be used to gather this information? (Choose two.)**

- A. the amount of available ROM.
- B. the amount of available flash and RAM memory.**
- C. the version of the bootstrap software present on the router.
- D. show version.**
- E. show processes.
- F. show running-config.

_____ **20. What is the effect of the configuration that is shown?**

```
line vty 0 4
password 7 030752180500
login
transport input ssh
```

- A. It tells the router or switch to try establishing an SSH connection first and if that fail to use telnet.
- B. It configures a Cisco network device to use the SSH protocol on incoming communications via the virtual terminal ports.**
- C. It allows seven failed login attempts before the VTY lines are temporarily shut down.
- D. It configures the virtual terminal lines with the password 030752180500.
- E. It configures SSH globally for all logins.

Test II

Write your own abbreviation of the OSI Model. From TOP – BOTTOM and BOTTOM – TOP (10 pts) this should be the same as what you uploaded own your notebook. If you don't upload it you don't have any point here.

QUIZ 2

ROUND 1 (5 pts)

1. What command will place the router into the correct mode to configure an appropriate interface to connect to a LAN?

- A. TUPM# configure terminal
- B. TUPM(config)# line vty 0 4
- C. TUPM(config)# line console 0
- D. TUPM(config)# interface Serial 0/0/0
- E. TUPM(config)# interface FastEthernet 0/1

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ANSWER:

E. TUPM(config)# interface FastEthernet 0/1

2. In a Cisco router, when do changes made to the running-configuration take effect?

- A. after a system restart
- B. as the commands are entered
- C. when logging off the system
- D. when the configuration is saved to the startup-configuration

ANSWER:

B. as the commands are entered

3. In an IPv4 environment, what information is used by the router to forward data packets from one interface of a router to another?

- A. destination network address
- B. source network address
- C. source MAC address
- D. well known port destination address

ANSWER:

A. destination network address

4. What is a component of a routing table entry?

- A. the MAC address of the interface of the router
- B. the destination Layer 4 port number
- C. the destination host address
- D. the next-hop address

ANSWER:

D. the next-hop address

5. How many bits make up an IPv4 address?

- A. 128
- B. 64
- C. 48
- D. 32

ANSWER:

D. 32

6. What subnet mask would a network administrator assign to a network address of 172.30.1.0 if it were possible to have up to 254 hosts?

- A. 255.255.0.0
- B. 255.255.255.0
- C. 255.255.254.0
- D. 255.255.248.0

ANSWER:

B. 255.255.255.0

7. What is the network address of the host 172.25.67.99 /23 in binary?

- A. 10101100.00011001.01000011.00000000
- B. 10101100.00011001.01000011.11111111
- C. 10101100.00011001.01000010.00000000
- D. 10101100.00011001.01000010.01100011
- E. 10101100.00010001.01000011.01100010
- F. 10101100.00011001.00000000.00000000

ANSWER:

C. 10101100.00011001.01000010.00000000

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8. What is a group of hosts called that have identical bit patterns in the high order bits of their addresses?

- A. an internet
- B. a network
- C. an octet
- D. a radi

ANSWER:

- B. a network
-

9. What is a primary purpose of encapsulating packets into frames?

- A. provide routes across the internetwork
- B. format the data for presentation to the user
- C. facilitate the entry and exit of data on media
- D. identify the services to which transported data is associated

ANSWER:

- C. facilitate the entry and exit of data on media
-

10. What determines the method of media access control?

- A. network layer addressing
- B. application processes
- C. logical topology
- D. intermediary device function

ANSWER:

- C. logical topology
-

11. What is the purpose of the preamble in an Ethernet frame?

- A. identifies the source address
- B. identifies the destination address
- C. marks the end of timing information
- D. is used for timing synchronization with alternating patterns of ones and zeros

ANSWER:

- D. is used for timing synchronization with alternating patterns of ones and zeros
-

12. What is a function of the data link layer?

- A. provides the formatting of data
- B. provides for the exchange data over a common local media
- C. provides end-to-end delivery of data between hosts
- D. provides delivery of data between two applications

ANSWER:

- B. provides for the exchange data over a common local media
-

13. Which type of Category 5 cable is used to make an Ethernet connection between router CIT_A and router CIT_B?

- A. crossover cable
- B. coax cable
- C. rollover cable
- D. straight-through cable

ANSWER:

- A. crossover cable
-

14. Ethernet operates at which layers of the OSI model?

- A. Network layer
- B. Transport layer
- C. Session layer
- D. Data-link layer

ANSWER:

- D. Data-link layer

15. What three primary functions does data link layer encapsulation provide?

- A. error detection
- B. port identification
- C. path determination
- D. IP address resolution

ANSWER:

- A. error detection
-

16. When a collision occurs in a network using CSMA/CD, how do hosts with data to transmit respond after the backoff period has expired?

- A. The hosts return to a listen-before-transmit mode.
- B. The hosts creating the collision have priority to send data.
- C. The hosts creating the collision retransmit the last 16 frames.
- D. The hosts extend their delay period to allow for rapid transmission.

ANSWER:

- A. The hosts return to a listen-before-transmit mode.
-

17. Which statements are true about the role of routers in the network?

- A. They propagate broadcasts.
- B. They enlarge collision domains.
- C. Each router interface requires a separate network or subnet.
- D. They maintain a common frame format between LAN and WAN interfaces.

ANSWER:

- C. Each router interface requires a separate network or subnet.
-

18. A company is planning to subnet its network for a maximum of 27 hosts. Which subnet mask would provide the needed hosts and leave the fewest unused addresses in each subnet?

- A. 255.255.255.192
- B. 255.255.255.224
- C. 255.255.255.240
- D. 255.255.255.248

ANSWER:

- B. 255.255.255.224
-

19. Which subnet mask would be assigned to the network address of 192.168.32.0 to provide 254 useable host addresses per subnetwork?

- A. 255.255.0.0
- B. 255.255.254.0
- C. 255.255.255.0
- D. 255.255.248.0

ANSWER:

- C. 255.255.255.0
-

20. Users in the network are experiencing slow response time when doing file transfers to a remote server. What command could be issued to determine if the router has experienced any input or output errors?

- A. show interfaces
- B. show startup-config
- C. show running-config
- D. show ip route

ANSWER:

- A. show interfaces
-

ROUND 2 (10 pts)

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1. 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?

ANSWER: enable secret

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

ANSWER: peer-to-peer

3. What is the protocol data unit that is associated with the data link layer of the OSI reference model?

ANSWER: frame

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

ANSWER: Telnet

5. What identifier is contained in the header of the Layer 2 Ethernet frame?

ANSWER: physical source and destination addresses

6. Which password would allow a user to establish a Telnet session with a Cisco device?

ANSWER: VTY password

7. Which router configuration mode would an administrator use to configure the router for SSH or Telnet login access?

ANSWER: line

8. What prompt is associated with the privileged exec mode?

ANSWER: R1#

9. During the encapsulation process, what is the PDU of the internet layer?

ANSWER: packet

10. In a router configuration mode, what will require user authentication if an administrator issues the enable secret command?

ANSWER: privileged executive mode

11. Which location of router memory is cleared with the erase startup-config command?

ANSWER: NVRAM

12. 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?

ANSWER: crossover

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

ANSWER: Router

14. A network has grown too large for technicians to configure network addresses and hosts files for name resolution. What application layer services should be added to the server to allow these needs to be satisfied dynamically?

ANSWER: DNS or DHCP