

**Date:**

**Module Name: Fundamental of Computer Networks**

**Q. No. 1**

**Question:**

Which functions of the OSI model occur at layer two?

**Answer Choices**

A: physical addressing

C: routing

B: encoding

D: cabling

**Q. No. 2**

**Question:**

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 Choices**

A: console

C: enable secret

B: enable

D: VTY

**Q. No. 3**

**Question:**

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

**Answer Choices** transport

A: application

B: presentation

**Q. No. 4**

**Question:**

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?

**Answer Choices**

A: IP

B: UDP

C: Ethernet

D: an upper-layer, connection-oriented protocol or service

**Q. No. 5**

**Question:**

Which subnet mask will allow 2040 hosts per subnet on the IP network 10.0.0.0?

**Answer Choices**

A: 255.255.0.0  
C: 255.255.252.0

B: 255.255.254.0  
D: 255.255.248.0

**Q. No. 6**

**Question:**

Which statement is true about the TTL value of an IPv4 packet?

**Answer Choices**

- A: It determines the priority of a packet.
- B: It specifies the remaining "life" of the packet.
- C: It indicates that the packet has been fragmented.
- D: It denotes the data payload type that the packet is carrying.

**Q. No. 7**

**Question:**

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

**Answer Choices**

- A: mainframe
- B: client/server
- C: peer-to-peer
- D: centralized

**Q. No. 8**

**Question:**

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

**Answer Choices**

- A: access point
- B: hub
- C: router
- D: switch

**Q. No. 9**

**Question:**

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

**Answer Choices**

- A: Reload the device.
- B: Perform basic tests.
- C: Configure individual interfaces.
- D: Configure individual terminal lines.

**Q. No. 10**

**Question:**

What information can be gathered by using the command netstat?

**Answer Choices**

- A: the default gateway
- B: the routing protocol

C: active TCP connections

D: the locally configured subnet mask

**Q. No. 11**

**Question:**

How can ARP be used to help document the network?

**Answer Choices**

A: It can list each hop on the way to a destination host.

B: It can show the average latency of hosts on the network.

C: It can provide a list of physical addresses on the network.

D: It can indicate which hosts are not responding to network traffic.

**Q. No. 12**

**Question:**

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

**Answer Choices**

A: data

B: frame

C: packet

D: segment

**Q. No. 13**

**Question:**

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

**Answer Choices**

A: DNS

B: FTP

C: SMTP

D: Telnet

**Q. No. 14**

**Question:**

Which statement identifies the DNS protocol?

**Answer Choices**

A: It transmits information using TCP port 25.

B: It transfers and conveys information using HTML pages.

C: It matches a resource name with the required network address.

**Q. No. 15**

**Question:**

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

**Answer Choices**

A: VTY password

B: enable password

C: console password

D: enable secret password

**Q. No. 16**

**Question:**

Which identifier is contained in the header of the Layer 2 Ethernet frame?

**Answer Choices**

- A: timing and synchronization of bits
- B: source and destination port numbers
- C: logical source and destination addresses
- D: physical source and destination addresses

**Q. No. 17**

**Question:**

What happens when a node on an Ethernet network is creating a frame and it does not have the destination MAC address?

**Answer Choices**

- A: The node drops the frame.
- B: The node sends out a Layer 3 broadcast message.
- C: The node sends a message directly to the router for the address.
- D: The node sends out an ARP request with the destination IP address.

**Q. No. 18**

**Question:**

An administrator makes changes to the default configuration of a router and saves them to NVRAM. After testing, it is discovered that the configurations did not have the desired effect and must be removed. What steps must be taken to remove the changes and return the router to the default configuration?

**Answer Choices**

- A: Reboot the router.
- B: Use no version of the commands that are issued.
- C: Issue the erase startup-config command, and then reboot the router.
- D: Issue the erase running-config command, and then reboot the router.

**Q. No. 19**

**Question:**

A network administrator is tasked with connecting two workgroups that are configured to use different subnets. Which device should be selected to allow connectivity between users on the two networks?

**Answer Choices**

- |           |                          |
|-----------|--------------------------|
| A: hub    | B: switch                |
| C: router | D: wireless access point |

**Q. No. 20**

**Question:**

Which program can be used to accomplish terminal emulation for configuring a router from the CLI through the console port?

### Answer Choices

A: HyperTerminal  
C: Secure Shell

B: Internet Explorer  
D: Telnet

### Q. No. 21

#### Question:

Which statement accurately describes file sharing in a peer-to-peer network?

### Answer Choices

A: A dedicated server is required.  
B: Access control is decentralized.  
C: Files are typically stored on the most powerful peer in the network.  
D: Peers can either make requests, or respond to requests, but not both.

### Q. No. 22

#### Question:

What is primary responsibilities of the Ethernet MAC sublayer?

### Answer Choices

A: frame delimiting  
C: logical addressing  
B: data encapsulation  
D: error detection

### Q. No. 23

#### Question:

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

### Answer Choices

A: line  
C: global  
B: router  
D: interface

### Q. No. 24

#### Question:

What purpose does a hostname serve on a router?

### Answer Choices

A: uniquely identifies a router on the internet  
B: used by routing protocols to identify peer routers  
C: provides device identification to users logging on remotely  
D: determines the hosts that are allowed to connect to the device

### Q. No. 25

#### Question:

Which prompt is associated with the privileged exec mode?

### Answer Choices

A: R1>  
C: R1(config)#

B: R1#  
D: R1(config-router)#

#### Q. No. 26

##### Question:

A technician wishes to connect two computers to move data from one to the other before reloading the operating system. The NICs on both PCs do not support autosensing feature. Which procedure will satisfy the requirement?

##### Answer Choices

- A: Interconnect the two PCs with a rollover cable.
- B: Interconnect the two PCs with two rollover cables and a hub.
- C: Interconnect the two PCs with a crossover cable.
- D: Interconnect the two PCs with two crossover cables and a hub.

#### Q. No. 27

##### Question:

Two routers are connected via their serial ports in a lab environment. The routers are configured with valid IP addresses, but they cannot ping each other. The show interface serial0/0 command shows that the serial0/0 interface is up but the line protocol is down. What could be the cause of this problem?

##### Answer Choices

- A: The no shutdown command has not been applied to the interfaces.
- B: The clock rate command has not been entered on the DCE interface.
- C: The interface timers are not cleared.
- D: The Fast Ethernet interface is emulating a serial interface by assigning it a timing signal.

#### Q. No. 28

##### Question:

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?

##### Answer Choices

- A: 10.10.128.0 to 10.10.160.255
- B: 10.10.128.0 to 10.10.159.255
- C: 10.10.128.0 to 10.10.192.255
- D: 10.10.128.0 to 10.10.0.159

#### Q. No. 29

##### Question:

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

##### Answer Choices

- A: when the interface is functioning as a DTE device
- B: when the interface timers have been cleared
- C: when the connected DTE device is shut down
- D: when the interface is functioning as a DCE device

#### Q. No. 30

**Question:**

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

Router(config)# line vty 0 3

Router(config-line)# password c13c0

Router(config-line)# login

**Answer Choices**

A: The entries specify three Telnet lines for remote access.

B: The entries specify four Telnet lines for remote access.

C: The entries set the console and Telnet password to "c13c0".

D: Telnet access will be denied because the Telnet configuration is incomplete.

**Q. No. 31****Question:**

Which password is automatically encrypted when it is created?

**Answer Choices**

A: vty

B: console

C: enable secret

D: enable password

**Q. No. 32****Question:**

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

**Answer Choices**

A: Switch-6J>

B: Switch-6J#

C: Switch-6J (config) #

D: Switch-6J (config-if) #

**Q. No. 33****Question:**

Which information is used by the router to determine the path between the source and destination hosts?

**Answer Choices**

A: the host portion of the IP address

B: the network portion of the IP address

C: host default gateway address

D: the MAC address

**Q. No. 34****Question:**

Well-known services and applications use which range of TCP/UDP port numbers?

**Answer Choices**

A: 0 to 255  
C: 1024 to 49151

B: 0 to 1023  
D: 49152 to 65535

**Q. No. 35**

**Question:**

Which IPv4 address represents subnet broadcast addresses?

**Answer Choices**

A: 192.168.4.63 /26  
C: 192.168.4.51 /27

B: 192.168.4.129 /26  
D: 192.168.4.221 /27

**Q. No. 36**

**Question:**

Which statement is true about network layer addressing?

**Answer Choices**

A: The addresses are 48 bits long.  
B: Network layer addressing is used by Ethernet switches to make forwarding decisions.  
C: A portion of the address is used to identify the network.  
D: It does not support broadcasts.

**Q. No. 37**

**Question:**

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

**Answer Choices**

A: Layer 1  
C: Layer 3

B: Layer 2  
D: Layer 4

**Q. No. 38**

**Question:**

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?

**Answer Choices**

A: 30  
C: 2046

B: 256  
D: 2048

**Q. No. 39**

**Question:**

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

**Answer Choices**



A: bit  
C: frame

B: data  
D: packet

**Q. No. 40**

**Question:**

Which service is used when the nslookup command is issued on a computer?

**Answer Choices**

A: FTP  
C: DHCP

B: DNS  
D: Telnet