Test Bank for CompTIA Network N10 008 Cert Guide 4th Sequeira

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N10-008 Network+ Instructor's Test Bank (Chapters 1-25)

Chapter 1 OSI Model

1. At which OSI layer can a source MAC address be found in the Ethernet header?

a. Network layer
b. Transport layer
c. Physical layer
d. Data link layer

1 Answer D

2. Which of the following statements is true? (Choose two.)

a. Client/server networks can easily scale, which might require the purchase of additional client licenses.
b. Client/server networks can cost more than peer-to-peer networks. For example, client/server networks might require the purchase of dedicated server hardware and a network OS with an appropriate number of licenses.
c. Peer-to-peer networks can be very difficult to install.
d. Peer-to-peer networks typically cost more than client/server networks because there is no requirement for dedicated server resources or advanced NOS software.

2 Answer: A, B

3. The option of sending a group of segments at one time, instead of just one segment at a time, is provided at what layer of the OSI reference model?

a. Data link layer – using link aggregation
b. Network layer- using multiprotocol routing
c. Transport layer- using Windowing
d. Physical layer- using interface bonding

C. The key word was segments, a datagram term found at the Transport layer

4. The source IP address can be found in the header of a packet at this layer of the OSI reference model

a. Network layer
b. Session layer
c. Data link layer
d. Transport layer

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4 Answer A

5. Which of the following is a connectionless network layer protocol?

a. IP
b. TCP
c. UDP
d. SFTP

5. c. UDP and TCP are Transport Layer. IP is Network layer and can only be made connection oriented if coupled with TCP.

6. What transmission technology requires a segment to be resent if a collision with another segment ocurrs?

a. CSMA/CA
b. MTU
c. SSH
d. CSMA/CD

6. D. CSMA/CA avoids collisions, CSMA/CD detects and compensates by resending damaged segments.

7) What is the protocol of the address used by a router (at Layer 3) to identify specific devices?

a. MAC
b. IP
c. LLC
d. ARP

7 Answer: B

Explanation: The Internet Protocol (IP) address is used by routers (at Layer 3) to identify specific devices on a network. This type of address, as opposed to a MAC address, is used across routed devices (routers) (that is, the IP address typically does *not* change when traffic flows through a router).

8) Which IEEE standard defines wired Ethernet as it is used on modern networks?

a. 802.5
b. 802.16
c. 802.3

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d. 802.1

Answer: C

Explanation: Ethernet as it is used on modern networks is defined within the IEEE 802.3 standard. Other common IEEE standards included 802.1 (bridging), 802.2 (LLC), and 802.11 (wireless Ethernet).

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9) A Bluetooth connection between a mobile phone and a headset is an example of what type of network category?

a. CAN
b. LAN
c. MAN
d. PAN

Answer: D

Explanation: A personal-area network (PAN) is a small network when compared to a typical local-area network (LAN). It typically involves a wired or wireless connection between devices within close proximity to each other (~10-500 ft).

10. Which of the following can sequence a received set of segments correctly to reassemble a data stream?

a. UDP
b. FTP
c. ICMP
d. TCP

10 Answer D

11. Which of the following correctly describes encapsulation as opposed to decapsulation?

a. The data moves from the physical layer to application layer
b. A header is added at the beginning of a packet.
c. The frame header and trailer are stripped off
d. The packets are sent to the transport to be reassembled.
e. A port number is identified and the data associated with an application.

11 B. As data moves down through the OSI model layers (on a host) it is encapsulated with a header at each OSI Layer whether it be a segment, packet, or frame.

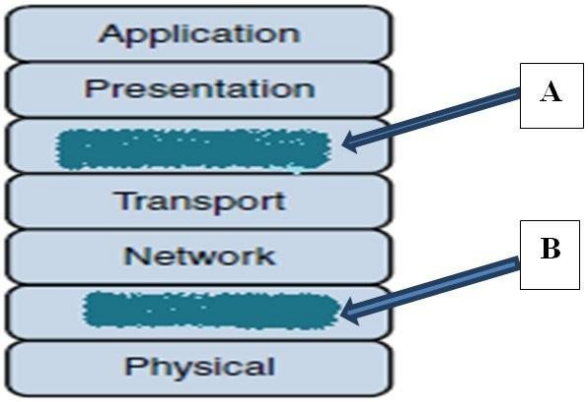
12. Which layer of the OSI reference model enforces the Maximum Transmission Unit (MTU) size allowed for transmitted frames?

a. Network layer
b. Transport layer
c. Physical layer
d. Data Link Layer

12d. Data link layer

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13. What layer of the OSI corresponds to label A and B?



a. A is the host-to-host layer, and B is the Internet access layer.
b. A is the session layer, and B is the application layer.
c. A is the session layer, and B is the data link layer.
d. A is the session layer, and B is the physical layer.

13 Answer: C

14. A Protocol Data unit (PDU) refers to payload data with metadata fields that describe how the data needs to be handled by the different OSI layers. What is the name of the PDU in the physical layer of the OSI reference model?

a. Segment
b. Frames
c. Bits
d. Packet

14 Answer: C

15. Which of the following is not a characteristic of the Media Access Control (MAC) sublayer of the data link layer (Layer 2) of the OSI reference layered model?

a. The MAC sublayer uses a physical address call a MAC address, which is a 48-bit (6-byte) address assigned to a device network interface card.
b. Layer 2 devices transmit to logical network addresses.
c. Method of transmitting on the media.
d. The use of flow control on a network to prevent a receiver from being overwhelmed.

15 Answer: D

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16. Which of the following layers of the OSI reference model is primarily concerned with forwarding data based on logical addresses?

a. Physical layer
b. Data link layer
c. Network layer
d. Presentation layer

16 Answer: C

17. Which of the following transport layer protocol of the OSI reference model is a connection-oriented protocol that provides reliable transport between two communicating hosts?

a. Transmission Control Protocol (TCP)
b. Transport Control Protocol (TCP)
c. User datagram Protocol (UDP)
d. Internetwork Packet Exchange (IPX)

17 Answer: A

18. Which OSI reference model layer is responsible for the following?

- **Setting up session**
- **Maintaining a session**
- **Tearing down a session**

a. Presentation layer (Layer 6)
b. Data link layer (Layer 2)
c. Session layer (Layer 5)
d. Transport layer (layer 4)

18 Answer: C

19. ABC Corporation is changing the format of text from American Standard Code for Information Interchange (ASCII) to Extended Binary Code Decimal Interchange Code (EBCDIC). They also requested that confidential files on servers be protected by applying an appropriate encryption. What OSI reference model layer is responsible for formatting the data encryption?

a. Presentation layer (Layer 6)
b. Data-link layer (Layer 2)

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c. Session layer (Layer 5)
d. Transport layer (Layer 4)

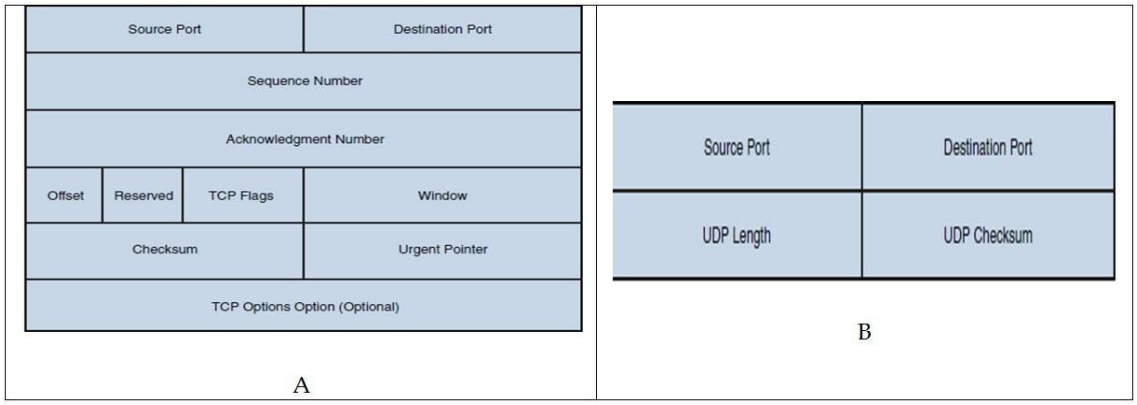
19 Answer: A

20. Which of the following layers is not part of the TCP/IP protocol stack?

a. Transport
b. Application
c. Presentation
d. Internet

20 Answer: C

21. Given the two displays below, what are they?



a. A is UDP segment format, and B is a TCP segment format.
b. A is TCP segment format, and B is a UDP segment format.
c. A is IPX segment format, and B is a Session layer format.
d. A is SPX segment format, and B is a IPX segment format.

21 Answer: B

22. What is the name of the mechanism used by TCP to increase and decrease the number of segments that are sent between each other before an acknowledgment is required?

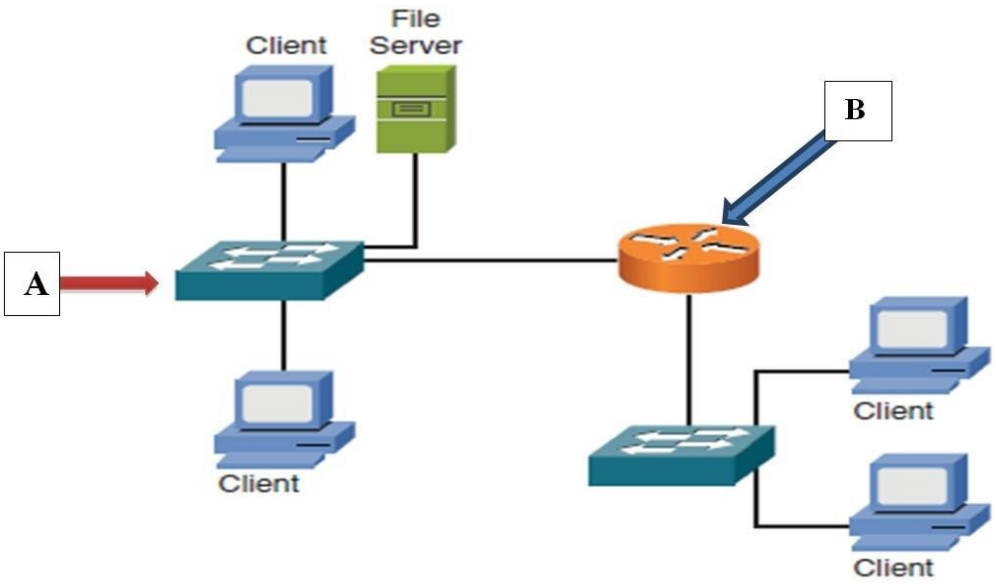
a. Buffering
b. Synchronizing
c. Scaling
d. Windowing

22 Answer: D

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Explanation: TCP uses a mechanism called windowing to control the number of segments that are sent between a one device and another before an acknowledgment is required. This "window" slides (or adjusts) as the available bandwidth between devices increases and decreases based on a negotiation between devices.

23. Examine the devices in the following exhibit. What OSI layer do devices A and B function at?



a. Device A is a Transport layer switch, and device B is Network layer bridge.
b. Device A is a Data Link layer switch, and device B is a Network layer router.
c. Device A is a Physical Layer switch, and device B is an Application layer server.
d. Device A is a Network Layer router, and device B is a Data Link Layer switch.

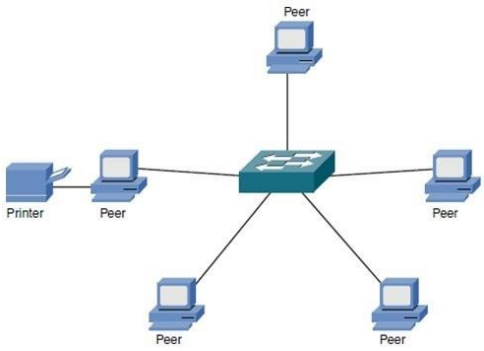
23 Answer: B

24. Which one of the following is true of a client-server network?

a. Client/server networks are not commonly used by businesses.
b. Administration of client/server is more difficult than in a peer-to-peer network because the resources are located on one or more servers.
c. Client/server networks can have better performance than a peer-to-peer network because their resources can be located on dedicated servers rather than on a PC running a variety of end-user applications.

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d. The following diagram represents a client/server network.



24 Answer: B

25. What is the name of the address that is used by a switch to identify specific devices?

a. MAC

b. IP

c. LLC

d. ARP

25 Answer: A

Explanation: The Media Access Control (MAC) address is used by switches (at Layer 2) to identify specific devices. This address is typically set by the hardware manufacturer. This address is used for LAN communications only and is not used across routed (routers) devices (that is, the MAC addresses change when traffic flows through a router). It is possible to figure out the manufacturer of a network interface card (NIC) on a network by performing an analysis of the MAC address it is using to communicate.

26. Which option is a benefit of implementing a client/server arrangement over a peer-to-peer arrangement? (Choose two.)

a. Easy installation

b. Cheaper

c. Centralized administration

d. Scalability

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26 Answer: C, D

Explanation: There are a number of advantages and disadvantages of implementing a client/server arrangement over a peer-to-peer arrangement. Some of the advantages include centralized administration and scalability. Disadvantages include cost and difficulty to install.

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