QUIZ Chapter 5

1. An IPv6 address is made up of how many bits?
    a. 32
    b. 48
    c. 64
    d. 128
    e. 256

2. Which Application-layer protocol provides remote access to a Windows computer via a GUI?
    a. Telnet
    b. RDP
    c. SSH
    d. FTP

3. If a protocol is routable, which TCP/IP layer does it operate at?
    a. Network access
    b. Internetwork
    c. Transport
    d. Application

4. Which Application-layer protocol is used to monitor and manage network devices, and what Transport-layer protocol does it use?
    a. SMTP, UDP
    b. SNMP, TCP
    c. SMTP, TCP
    d. SNMP, UDP

5. Which TCP/IP model layer takes a large chunk of data from the Application layer and breaks it into smaller segments?
    a. Network access
    b. Internetwork
    c. Transport
    d. Application

6. Which of the following protocols resolves logical addresses to physical addresses?
    a. DHCP
    b. TCP
    c. IP
    d. DNS
    e. ARP

7. Which of the following protocols provides connectionless service? (Choose all that apply.)
    a. IP
    b. UDP
    c. TCP
    d. HTTP

8. If you want to design an Application-layer protocol that provides fast, efficient communication and doesn't work with large amounts of data, what Transport-layer protocol would you design it to use?

9. Which of the following is the term for identifying packets used by TCP to establish a connection?
       a. Port number indicators
       b. Multiwindow agreement
       c. Three-way handshake
       d. Sequencing establishment

10. What element of a DHCP server uses the client MAC address to ensure that the client is leased the same address each time it requests an IP address?
       a. IP address scope
       b. Address exclusion
       c. Reservation
       d. ARP mapping

11. Which of the following is the first packet sent when a computer wants to lease an IP address?
       a. DHCPAck
       b. DHCPDiscover
       c. DHCPRequest
       d. DHCPOffer

12. Which of the following IPv6 features is an enhancement to IPv4? (Choose all that apply.)
       a. Larger address space
       b. Works at the Internetwork and Transport layers
       c. Built-in security
       d. Connectionless communication

13. Which protocol can configure a computer's IP address and subnet mask automatically?
       a. TCP
       b. IP
       c. ARP
       d. DNS
       e. DHCP

14. What type of packets are transmitted between DHCP client and server when a client is initially leasing an IP address?
       a. Broadcast
       b. Multicast
       c. Unicast
       d. Anycast

15. Which of the following accurately describes the .edu in the FQDN www.yc.edu?
       a. Fully qualified domain name

       b. Top-level domain

       c. Root domain

       d. Second-level domain

16. What's another name for a DNS client?

       a. Alias

       b. Reservation

       c. DDNS

       d. Resolver

17. What type of resource record is an alias for another record?

       a. MX

       b. AAAA

       c. CNAME

       d. PTR

18. When a Windows computer is configured to use DHCP but no DHCP server is available, what type of address is configured automatically for it?

       a. PAT

       b. APIPA

       c. NAT

       d. Static

19. Where does a DNS server look when it can't resolve a query from its zone records or cache?

       a. Root hints

       b. Alternate server

       c. Top-level domain

       d. BIND

20. What does the Transport layer use to identify source and destination Application-layer protocols?

       a. Checksum

       b. TCP address

       c. Port number

       d. Root hints

21. Which of the following Application-layer protocols typically uses the UDP Transportlayer protocol? (Choose all that apply.)

       a. HTTP

       b. DNS

       c. DHCP

       d. FTP

22. Which is the correct order of headers, from left to right, in a completed frame?

       a. Frame, TCP, IP

       b. UDP, frame, IP

       c. TCP, IP, frame

       d. Frame, IP, UDP

23. Which of the following is a task performed by the Network access layer? (Choose all that apply.)

       a. Verifies that incoming frames have the correct destination MAC address

       b. Defines and verifies IP addresses

c. Transmits and receives bit signals

d. Resolves MAC addresses by using IP addresses

e. Delivers packets efficiently

24. What field of the IP header does the tracert program use to get the IP address of routers in the path?

a. Version

b. TTL

c. Checksum

d. Protocol

25. Which of the following is not found in a connectionless Transport-layer protocol? (Choose all that apply.)

a. Three-way handshake

b. Port numbers

c. Checksum

d. Acknowledgements

Case Project 5-1

You work at a help desk and have just received a call from an employee who says she can't access network resources. You want the employee to view her IP address configuration. Write an e-mail to the employee, explaining what command-line program to use and how she can use it to find the information you need. After following your instructions, the employee tells you that her IP address is 169.254.14.11 with the subnet mask 255.255.0.0. What conclusion can you make from this information?

Case Project 5-2

You have configured a LAN with 25 workstations, three network printers, and two servers. The workstations and printers will have dynamically assigned IP addresses, and the printers always need to have the same IP address assigned. The servers will have static IP addresses. What should you install on one of the servers, and what are some of the configuration options?

1.	An IPv6 address is made up of how many bits?
	o d. 128
2.	Which Application-layer protocol provides remote access to a Windows computer via a GUI?
	o b. RDP
3.	If a protocol is routable, which TCP/IP layer does it operate at?
	o b. Internetwork
4.	Which Application-layer protocol is used to monitor and manage network devices, and what Transport-layer protocol does it use?
	o d. SNMP, UDP

5. Which TCP/IP model layer takes a large chunk of data from the Application layer and breaks it into smaller segments?
    - c. Transport
6. Which of the following protocols resolves logical addresses to physical addresses?
    - e. ARP
7. Which of the following protocols provides connectionless service? (Choose all that apply.)
    - a. IP
    - b. UDP
8. If you want to design an Application-layer protocol that provides fast, efficient communication and doesn't work with large amounts of data, what Transport-layer protocol would you design it to use?
    - UDP
9. Which of the following is the term for identifying packets used by TCP to establish a connection?
    - c. Three-way handshake
10. What element of a DHCP server uses the client MAC address to ensure that the client is leased the same address each time it requests an IP address?
    - c. Reservation
11. Which of the following is the first packet sent when a computer wants to lease an IP address?
    - b. DHCPDiscover
12. Which of the following IPv6 features is an enhancement to IPv4? (Choose all that apply.)
    - a. Larger address space
    - c. Built-in security
    - d. Connectionless communication
13. Which protocol can configure a computer's IP address and subnet mask automatically?
    - e. DHCP
14. What type of packets are transmitted between DHCP client and server when a client is initially leasing an IP address?
    - b. Multicast
15. Which of the following accurately describes the .edu in the FQDN www.yc.edu?
    - d. Second-level domain
16. What's another name for a DNS client?
    - d. Resolver
17. What type of resource record is an alias for another record?

- o c. CNAME

18. When a Windows computer is configured to use DHCP but no DHCP server is available, what type of address is configured automatically for it?
    - o b. APIPA

19. Where does a DNS server look when it can't resolve a query from its zone records or cache?
    - o a. Root hints

20. What does the Transport layer use to identify source and destination Application-layer protocols?
    - o c. Port number

21. Which of the following Application-layer protocols typically uses the UDP Transport-layer protocol? (Choose all that apply.)
    - o b. DNS
    - o c. DHCP

22. Which is the correct order of headers, from left to right, in a completed frame?
    - o d. Frame, IP, UDP

23. Which of the following is a task performed by the Network access layer? (Choose all that apply.)
    - o a. Verifies that incoming frames have the correct destination MAC address
    - o c. Transmits and receives bit signals
    - o d. Resolves MAC addresses by using IP addresses

24. What field of the IP header does the tracert program use to get the IP address of routers in the path?
    - o b. TTL

25. Which of the following is not found in a connectionless Transport-layer protocol? (Choose all that apply.)
    - o a. Three-way handshake
    - o d. Acknowledgements