Started on	Tuesday, 5 August 2025, 4:03 PM
State	Finished
Completed on	Tuesday, 5 August 2025, 4:21 PM
Time taken	17 mins 58 secs
Marks	26.00/30.00
Grade	**86.67** out of 100.00

Question 1

Complete

Mark 1.00 out of 1.00

A client sends a request to download a file from a remote server. The transfer needs authentication and uses two separate connections (control and data). Which protocol is being used?

- ○ a.   HTTP
- ◉ b.   FTP
- ○ c.   SSH
- ○ d.   SMTP

Question 2

Complete

Mark 1.00 out of 1.00

A company has a website that must be accessed securely by users. Which protocol should be used to encrypt the communication?

- ○ a.   HTTP
- ○ b.   TCP
- ◉ c.   HTTPS
- ○ d.   DNS

Question 3

Complete

Mark 1.00 out of 1.00

A developer builds an email client that sends emails using port 25 and retrieves them using port 110. Which two protocols are being used?

- ○ a.   FTP and SNMP
- ○ b.   IMAP and POP3
- ○ c.   SMTP and IMAP
- ◉ d.   SMTP and POP3

Question 4

Complete

Mark 1.00 out of 1.00

A device on a network knows its MAC address but not its IP address. Which protocol helps it discover its own IP address?

○ a.   ICMP

◉ b.   RARP

○ c.   ARP

○ d.   DNS

Question 5

Complete

Mark 1.00 out of 1.00

A DNS recursive resolver queries an unknown domain. What does it do first?

○ a.   Broadcasts an ARP request

○ b.   Contacts the authoritative DNS server directly

○ c.   Looks in its local zone file

◉ d.   Sends the query to a root name server

Question 6

Complete

Mark 1.00 out of 1.00

A networked device wants to send a packet to another device on the same LAN. It knows the IP address but not the MAC address. What will it use?

◉ a.   ARP

○ b.   SNMP

○ c.   RARP

○ d.   DHCP

Question 7

Complete

Mark 1.00 out of 1.00

A server receives thousands of requests per second from different clients. It needs a fast and stateless protocol that minimizes handshake and overhead. Which is most suitable?

○ a.   TCP

○ b.   SMTP

◉ c.   UDP

○ d.   SSH

Question 8
Complete
Mark 1.00 out of 1.00

A system admin wants to monitor the CPU usage and disk status of multiple routers and switches remotely. Which protocol is most suitable?

○ a.   FTP

○ b.   IMAP

◉ c.   SNMP

○ d.   RARP

Question 9
Complete
Mark 0.00 out of 1.00

A TCP connection is established between Host A and Host B. Host A sends 3 packets, but only 2 ACKs are received. What happens next?

○ a.   Host B resets the connection.

◉ b.   Host A immediately resends all 3 packets.

○ c.   Host A retransmits only the missing packet after timeout or triple duplicate ACK.

○ d.   Host A terminates the connection.

Question 10
Complete
Mark 1.00 out of 1.00

A user accesses a secure website and sees the lock icon. Which of the following best describes what actually happens in the browser?

○ a.   The site is using HTTP and encrypted HTML

◉ b.   The server uses SSL/TLS to secure the TCP connection

○ c.   DNS resolution was skipped

○ d.   The TCP connection is encrypted using UDP fallback

Question 11
Complete
Mark 1.00 out of 1.00

A user reports that they can open websites using IP addresses but not using domain names. Which protocol is most likely failing?

○ a.   ARP

○ b.   FTP

○ c.   DHCP

◉ d.   DNS

Question 12

Complete

Mark 1.00 out of 1.00

An application needs to send a video stream with minimal delay, even if some packets are lost. Which protocol should it use?

- ○ a.   TCP
- ◉ b.   UDP
- ○ c.   FTP
- ○ d.   ICMP

Question 13

Complete

Mark 1.00 out of 1.00

ARP replies can be sent without receiving an ARP request. What is this called?

- ◉ a.   Gratuitous ARP
- ○ b.   Proxy ARP
- ○ c.   Reverse ARP
- ○ d.   Spoofed ARP

Question 14

Complete

Mark 0.00 out of 1.00

HTTP/1.1 keeps connections alive by default. Which header disables this behavior?

- ○ a.   Connection: close
- ○ b.   Cache-Control: no-cache
- ◉ c.   Keep-Alive: off
- ○ d.   Content-Length: 0

Question 15

Complete

Mark 1.00 out of 1.00

If a TCP packet is lost in transit, what mechanism ensures its retransmission?

- ◉ a.   TCP timer and ACK tracking
- ○ b.   ICMP redirect
- ○ c.   UDP checksum
- ○ d.   ARP request

Question 16

Complete

Mark 1.00 out of 1.00

In SNMP, a device is not responding to GET requests. However, it's sending TRAP messages. What does this indicate?

- ○ a. SNMP version mismatch
- ◉ b. SNMP agent is configured for push-only monitoring
- ○ c. Read-only community string is incorrect
- ○ d. Firewall is blocking SNMP port 162

Question 17

Complete

Mark 1.00 out of 1.00

In TCP's three-way handshake, what is the purpose of the SYN-ACK packet?

- ◉ a. To synchronize both parties' sequence numbers and acknowledge SYN
- ○ b. To acknowledge the receipt of the SYN and establish one-way communication
- ○ c. To terminate an existing session
- ○ d. To confirm port numbers are correct

Question 18

Complete

Mark 1.00 out of 1.00

In the DNS hierarchy, what role does a root name server play?

- ○ a. Stores cached records of all domains
- ○ b. Resolves all queries by itself
- ○ c. Assigns IP addresses to domain names
- ◉ d. Refers the resolver to the appropriate TLD server

Question 19

Complete

Mark 1.00 out of 1.00

In the TCP/IP model, which of the following is NOT part of the Application Layer?

- ○ a. HTTP
- ○ b. FTP
- ○ c. SMTP
- ◉ d. TCP

Question 20

Complete

Mark 1.00 out of 1.00

What is the role of the "Control Connection" in active FTP?

- ○ a. It handles the DNS resolution of the client
- ○ b. It transfers files between the server and the client
- ○ c. It encrypts the data sent during authentication
- ● d. It maintains a command link over TCP port 21

Question 21

Complete

Mark 1.00 out of 1.00

When an IP packet is fragmented, which header field helps the receiver reassemble the original packet?

- ● a. Fragment Offset
- ○ b. Header Length
- ○ c. Protocol
- ○ d. TTL

Question 22

Complete

Mark 1.00 out of 1.00

Which application-layer protocol allows full-duplex communication and is used for real-time updates (e.g., chat apps)?

- ○ a. FTP
- ○ b. HTTPS
- ○ c. SNMP
- ● d. WebSocket

Question 23

Complete

Mark 1.00 out of 1.00

Which field in the IP header is used to prevent packets from looping indefinitely in the network?

- ○ a. Fragment Offset
- ● b. TTL (Time To Live)
- ○ c. Flags
- ○ d. Identification

Question 24

Complete

Mark 1.00 out of 1.00

Which of the following accurately describes the function of SNMP's MIB?

- ◉ a. It defines the schema of managed objects in a database-like structure
- ○ b. It encrypts SNMP packets
- ○ c. It maps MAC addresses to IP addresses
- ○ d. It filters SNMP messages

Question 25

Complete

Mark 1.00 out of 1.00

Which of the following best describes the behavior of TCP when out-of-order packets arrive?

- ◉ a. TCP reorders packets and delivers them in sequence to the application
- ○ b. TCP buffers packets but delivers them in arrival order
- ○ c. TCP switches to UDP fallback
- ○ d. TCP drops the packets and requests retransmission

Question 26

Complete

Mark 0.00 out of 1.00

Which of the following scenarios would most likely cause UDP to fail but not TCP?

- ◉ a. The server takes time to respond.
- ○ b. A firewall blocks incoming connections.
- ○ c. A DNS query is delayed by 2 seconds.
- ○ d. A packet is dropped on the network path.

Question 27

Complete

Mark 0.00 out of 1.00

Which of the following statements correctly describes TCP congestion control?

- ○ a. It waits for NACKs before retransmission
- ○ b. It increases window exponentially during slow start
- ○ c. It uses fixed window size regardless of network conditions
- ◉ d. It retransmits packets on every timeout without window adjustment

Question 28

Complete

Mark 1.00 out of 1.00

Which protocol will succeed even if the destination host does not respond?

○ a.　SNMP GET

○ b.　TCP

◉ c.　UDP

○ d.　FTP

Question 29

Complete

Mark 1.00 out of 1.00

You're testing FTP in passive mode, but the connection is refused. What is the most probable cause?

○ a.　DNS server is misconfigured.

○ b.　TCP port 21 is blocked.

◉ c.　Server's data port range is not open in firewall.

○ d.　FTP client does not support encryption.

Question 30

Complete

Mark 1.00 out of 1.00

You're designing a messaging app. You want to ensure every message is delivered in order and without loss. Which protocol will you use for transport?

◉ a.　TCP

○ b.　ARP

○ c.　FTP

○ d.　UDP