Started on	Tuesday, 5 August 2025, 4:03 PM
State	Finished
Completed on	Tuesday, 5 August 2025, 4:20 PM
Time taken	17 mins 27 secs
Marks	23.00/30.00
Grade	**76.67** 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.   SMTP
- ○ b.   SSH
- ○ c.   HTTP
- ◉ d.   FTP

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.   TCP
- ◉ b.   HTTPS
- ○ c.   HTTP
- ○ 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.   SMTP and IMAP
- ◉ b.   SMTP and POP3
- ○ c.   IMAP and POP3
- ○ d.   FTP and SNMP

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.   ARP
- ◉ b.   RARP
- ○ c.   DNS
- ○ d.   ICMP

Question 5

Complete

Mark 0.00 out of 1.00

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

- ○ a.   Broadcasts an ARP request
- ○ b.   Sends the query to a root name server
- ○ c.   Contacts the authoritative DNS server directly
- ◉ d.   Looks in its local zone file

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.   SNMP
- ○ b.   RARP
- ○ c.   DHCP
- ◉ d.   ARP

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.   UDP
- ○ b.   SMTP
- ○ c.   SSH
- ○ d.   TCP

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. RARP
- ○ b. IMAP
- ○ c. FTP
- ◉ d. SNMP

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 A immediately resends all 3 packets.
- ○ b. Host A retransmits only the missing packet after timeout or triple duplicate ACK.
- ○ c. Host A terminates the connection.
- ○ d. Host B resets 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 server uses SSL/TLS to secure the TCP connection
- ○ b. DNS resolution was skipped
- ○ c. The TCP connection is encrypted using UDP fallback
- ○ d. The site is using HTTP and encrypted HTML

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

Question 13

Complete

Mark 0.00 out of 1.00

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

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

Question 15

Complete

Mark 1.00 out of 1.00

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

- ○ a.   UDP checksum
- ○ b.   ICMP redirect
- ◉ c.   TCP timer and ACK tracking
- ○ 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 agent is configured for push-only monitoring
- ○ b. Read-only community string is incorrect
- ○ c. SNMP version mismatch
- ○ 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 confirm port numbers are correct
- ○ c. To terminate an existing session
- ○ d. To acknowledge the receipt of the SYN and establish one-way communication

Question 18

Not answered

Marked out of 1.00

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

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

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. TCP
- ○ d. SMTP

Question 20

Complete

Mark 1.00 out of 1.00

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

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

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

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

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 maps MAC addresses to IP addresses
- ○ c. It encrypts SNMP packets
- ○ 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 drops the packets and requests retransmission
- ○ c. TCP buffers packets but delivers them in arrival order
- ○ d. TCP switches to UDP fallback

Question 26

Complete

Mark 1.00 out of 1.00

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

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

Question 27

Complete

Mark 0.00 out of 1.00

Which of the following statements correctly describes TCP congestion control?

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

Question 28

Complete

Mark 1.00 out of 1.00

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

- ◉ a.   UDP
- ○ b.   FTP
- ○ c.   SNMP GET
- ○ d.   TCP

Question 29

Complete

Mark 0.00 out of 1.00

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

- ○ a.   FTP client does not support encryption.
- ○ b.   Server's data port range is not open in firewall.
- ○ c.   DNS server is misconfigured.
- ◉ d.   TCP port 21 is blocked.

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.   ARP
- ◉ b.   TCP
- ○ c.   FTP
- ○ d.   UDP