

Started on Monday, 1 December 2025, 12:21 PM

State Finished

Completed on Monday, 1 December 2025, 12:31 PM

Time taken 10 mins 24 secs

Marks 29.00/38.00

Grade **76.32** out of 100.00

Question 1

Complete

Mark 0.00 out of 1.00

A /30 subnet mask is typically used for:

- a. Multicast networks
- b. DHCP pools
- c. LAN segments
- d. WAN point-to-point links

Question 2

Complete

Mark 1.00 out of 1.00

A network with subnet mask 255.255.255.192 belongs to which prefix?

- a. /25
- b. /28
- c. /26
- d. /27

Question 3

Complete

Mark 1.00 out of 1.00

How many hosts are usable in a /29 network?

- a. 4
- b. 8
- c. 2
- d. 6

Question 4

Complete

Mark 1.00 out of 1.00

In the OSI model, which layer provides end-to-end process-to-process delivery?

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

Question 5

Complete

Mark 1.00 out of 1.00

In the TCP/IP model, which layer includes HTTP, DNS, and FTP?

- a. Transport Layer
- b. Application Layer
- c. Link Layer
- d. Internet Layer

Question 6

Complete

Mark 0.00 out of 1.00

The maximum size of an Ethernet MAC address is:

- a. 32 bits
- b. 64 bits
- c. 128 bits
- d. 48 bits

Question 7

Complete

Mark 1.00 out of 1.00

What is the total number of subnets created when borrowing 3 bits from the host portion?

- a. 8
- b. 4
- c. 16
- d. 6

Question 8

Complete

Mark 0.00 out of 1.00

What type of NAT allows multiple private IPs to share a single public IP?

- a. Static NAT
- b. One-to-One NAT
- c. Dynamic NAT
- d. PAT (Port Address Translation)

Question 9

Complete

Mark 0.00 out of 1.00

Which congestion control mechanism triggers retransmission before timeout?

- a. Fast Retransmit
- b. Slow Start
- c. Congestion Avoidance
- d. Fast Recovery

Question 10

Complete

Mark 1.00 out of 1.00

Which error correction technique can correct single-bit errors?

- a. LRC
- b. CRC
- c. VRC
- d. Hamming Code

Question 11

Complete

Mark 0.00 out of 1.00

Which error detection method can detect all single-bit errors and most multi-bit errors?

- a. CRC
- b. LRC
- c. Parity
- d. Checksum

Question 12

Complete

Mark 1.00 out of 1.00

Which error detection technique uses polynomial division on data bits?

- a. VRC
- b. Checksum
- c. LRC
- d. CRC

Question 13

Complete

Mark 1.00 out of 1.00

Which ICMP message is used by the ping command?

- a. Time Exceeded
- b. Redirect
- c. Echo Request / Echo Reply
- d. Destination Unreachable

Question 14

Complete

Mark 1.00 out of 1.00

Which interior routing protocol uses Dijkstra's SPF algorithm?

- a. BGP
- b. EIGRP
- c. OSPF
- d. RIP

Question 15

Complete

Mark 1.00 out of 1.00

Which IPv4 header field is decremented at every router hop?

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

Question 16

Complete

Mark 1.00 out of 1.00

Which IPv6 feature removes the need for NAT?

- a. Link-local addressing
- b. Flow Label Field
- c. Stateless Autoconfiguration
- d. Unique Global Addresses

Question 17

Complete

Mark 1.00 out of 1.00

Which of the following is a valid Class C IP address?

- a. 172.16.10.20
- b. 192.168.12.1
- c. 10.23.4.5
- d. 224.1.2.3

Question 18

Complete

Mark 0.00 out of 1.00

Which of the following uses AS-PATH as its primary metric?

- a. EIGRP
- b. RIP
- c. OSPF
- d. BGP

Question 19

Complete

Mark 1.00 out of 1.00

Which OSI layer adds physical addresses and performs framing?

- a. Transport Layer
- b. Network Layer
- c. Presentation Layer
- d. Data Link Layer

Question 20

Complete

Mark 1.00 out of 1.00

Which OSI layer breaks data into segments?

- a. Data Link Layer
- b. Application Layer
- c. Transport Layer
- d. Network Layer

Question 21

Complete

Mark 1.00 out of 1.00

Which OSI layer is responsible for encryption and data representation?

- a. Transport Layer
- b. Application Layer
- c. Presentation Layer
- d. Session Layer

Question 22

Complete

Mark 1.00 out of 1.00

Which OSI layer is responsible for synchronizing dialog control and managing checkpoints during communication sessions?

- a. Session Layer
- b. Presentation Layer
- c. Data Link Layer
- d. Transport Layer

Question 23

Complete

Mark 1.00 out of 1.00

Which part of the IPv4 header ensures integrity of the header fields?

- a. Identification Field
- b. Version Field
- c. Header Checksum
- d. Options Field

Question 24

Complete

Mark 1.00 out of 1.00

Which process converts domain names to IP addresses?

- a. NAT
- b. DNS
- c. DHCP
- d. ARP

Question 25

Complete

Mark 1.00 out of 1.00

Which protocol automatically assigns IP, subnet mask, and default gateway to hosts?

- a. ARP
- b. DHCP
- c. ICMP
- d. SNMP

Question 26

Complete

Mark 1.00 out of 1.00

Which protocol is used for error reporting and network diagnostics?

- a. ARP
- b. DHCP
- c. SMTP
- d. ICMP

Question 27

Complete

Mark 1.00 out of 1.00

Which protocol maps an IPv4 address to a MAC address on a LAN?

- a. RARP
- b. DNS
- c. ARP
- d. ICMP

Question 28

Complete

Mark 1.00 out of 1.00

Which protocol traces the route taken by packets across routers?

- a. DNS
- b. DHCP
- c. ARP
- d. ICMP Time Exceeded

Question 29

Complete

Mark 1.00 out of 1.00

Which routing protocol is used for inter-domain (between AS) routing?

- a. RIP
- b. EIGRP
- c. BGP
- d. OSPF

Question 30

Complete

Mark 0.00 out of 1.00

Which routing protocol uses both distance-vector and link-state features (hybrid)?

- a. OSPF
- b. RIP
- c. BGP
- d. EIGRP

Question 31

Complete

Mark 0.00 out of 1.00

Which routing protocol uses Distance Vector and a maximum hop count limitation?

- a. BGP
- b. RIP
- c. IS-IS
- d. OSPF

Question 32

Complete

Mark 1.00 out of 1.00

Which subnet mask corresponds to exactly 512 hosts?

- a. /22
- b. /24
- c. /23
- d. /25

Question 33

Complete

Mark 1.00 out of 1.00

Which TCP mechanism ensures reliable connection establishment before data transfer begins?

- a. Fast Retransmit
- b. Slow Start
- c. Three-Way Handshake
- d. Sliding Window

Question 34

Complete

Mark 1.00 out of 1.00

Which TCP mechanism is used to prevent overwhelming the receiver?

- a. Congestion Window
- b. Flow Control (Sliding Window)
- c. Maximum Segment Size
- d. Checksum

Question 35

Complete

Mark 1.00 out of 1.00

Which TCP/IP layer is responsible for logical addressing and routing decisions?

- a. Network (Internet) Layer
- b. Link Layer
- c. Transport Layer
- d. Application Layer

Question 36

Complete

Mark 1.00 out of 1.00

Which technique is used by CRC to detect burst errors?

- a. Exponential Backoff
- b. Parity Check
- c. Hamming Distance
- d. Polynomial Modulo-2 Division

Question 37

Complete

Mark 1.00 out of 1.00

Which transport layer protocol is connectionless and best suited for real-time applications?

- a. ICMP
- b. SCTP
- c. UDP
- d. TCP

Question 38

Complete

Mark 0.00 out of 1.00

Which type of switching is used in modern IP networks?

- a. Circuit Switching
- b. Packet Switching
- c. Virtual Channel Switching
- d. Message Switching