Started on	Monday, 4 August 2025, 4:55 PM
State	Finished
Completed on	Monday, 4 August 2025, 5:08 PM
Time taken	12 mins 56 secs
Marks	18.00/20.00
Grade	**90.00** out of 100.00

Question 1

Complete

Mark 1.00 out of 1.00

A network 10.0.0.0/8 is split into 256 subnets. What is the new subnet mask?

- ○ a. /10
- ◉ b. /16
- ○ c. /24
- ○ d. /9

Question 2

Complete

Mark 0.00 out of 1.00

How many hosts can a /29 subnet accommodate?

- ○ a. 10
- ◉ b. 8
- ○ c. 14
- ○ d. 6

Question 3

Complete

Mark 1.00 out of 1.00

How many subnets can be created with a /28 prefix in a Class C network?

- ◉ a. 16
- ○ b. 4
- ○ c. 8
- ○ d. 2

Question 4

Complete

Mark 1.00 out of 1.00

How many total IP addresses are available in a /30 subnet?

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

Question 5

Complete

Mark 1.00 out of 1.00

HTTP operates at which layer of the OSI model?

- ○ a.   Application
- ○ b.   Network
- ○ c.   Transport
- ○ d.   Presentation

Question 6

Complete

Mark 0.00 out of 1.00

In which OSI layer do switches operate?

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

Question 7

Complete

Mark 1.00 out of 1.00

The OSI model has how many layers?

- ○ a.   5
- ○ b.   7
- ○ c.   6
- ○ d.   8

Question 8

Complete

Mark 1.00 out of 1.00

What is the broadcast address for the 192.168.10.64/26 subnet?

○ a.   192.168.10.65

○ b.   192.168.10.63

◉ c.   192.168.10.127

○ d.   192.168.10.128

Question 9

Complete

Mark 1.00 out of 1.00

What is the CIDR notation for the subnet mask 255.255.255.248?

○ a.   /28

○ b.   /27

◉ c.   /29

○ d.   /26

Question 10

Complete

Mark 1.00 out of 1.00

What is the network address of 192.168.1.75/27?

○ a.   192.168.1.128

◉ b.   192.168.1.64

○ c.   192.168.1.0

○ d.   192.168.1.96

Question 11

Complete

Mark 1.00 out of 1.00

What is the Protocol Data Unit (PDU) at the Network layer?

○ a.   Bits

◉ b.   Packets

○ c.   Segments

○ d.   Frames

Question 12

Complete

Mark 1.00 out of 1.00

What is the subnet mask for a /26 network?

○ a. 255.255.255.0

◉ b. 255.255.255.192

○ c. 255.255.255.224

○ d. 255.255.255.240

Question 13

Complete

Mark 1.00 out of 1.00

Which layer establishes, manages, and terminates sessions between applications?

○ a. Network

○ b. Application

◉ c. Session

○ d. Presentation

Question 14

Complete

Mark 1.00 out of 1.00

Which layer handles encryption and decryption of data?

○ a. Session

○ b. Physical

◉ c. Presentation

○ d. Transport

Question 15

Complete

Mark 1.00 out of 1.00

Which layer is responsible for end-to-end delivery of messages?

○ a. Network

○ b. Data Link

◉ c. Transport

○ d. Physical

Question 16

Complete

Mark 1.00 out of 1.00

Which layer of the OSI model is responsible for path determination and logical addressing?

- ⦿ a.   Network
- ○ b.   Application
- ○ c.   Transport
- ○ d.   Data Link

Question 17

Complete

Mark 1.00 out of 1.00

Which layer of the OSI model is responsible for reliable transmission of data segments between points on a network?

- ○ a.   Application
- ○ b.   Session
- ⦿ c.   Transport
- ○ d.   Network

Question 18

Complete

Mark 1.00 out of 1.00

Which of the following IPs is a valid host in the 192.168.1.0/24 network?

- ○ a.   192.168.1.0
- ○ b.   192.168.2.1
- ⦿ c.   192.168.1.1
- ○ d.   192.168.1.255

Question 19

Complete

Mark 1.00 out of 1.00

Which of the following is a valid subnet mask?

- ○ a.   255.0.255.0
- ○ b.   255.255.0.255
- ○ c.   255.255.128.255
- ⦿ d.   255.255.255.252

Question 20

Complete

Mark 1.00 out of 1.00

Which of the following is not a function of the Data Link Layer?

    ○ a.   Error Detection

    ○ b.   MAC Addressing

    ◉ c.   Routing

    ○ d.   Framing