Started on	Monday, 4 August 2025, 4:59 PM
State	Finished
Completed on	Monday, 4 August 2025, 5:13 PM
Time taken	14 mins 33 secs
Marks	20.00/20.00
Grade	**100.00** 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.   /9
- b.   /10
- ◉ c.   /16
- d.   /24

Question 2

Complete

Mark 1.00 out of 1.00

How many hosts can a /29 subnet accommodate?

- a.   8
- b.   10
- 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.   4
- ◉ b.   16
- 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.   8

◯ c.   6

◯ d.   2

Question 5

Complete

Mark 1.00 out of 1.00

HTTP operates at which layer of the OSI model?

◯ a.   Presentation

◯ b.   Network

◯ c.   Transport

⦿ d.   Application

Question 6

Complete

Mark 1.00 out of 1.00

In which OSI layer do switches operate?

◯ a.   Transport

⦿ b.   Data Link

◯ c.   Network

◯ d.   Physical

Question 7

Complete

Mark 1.00 out of 1.00

The OSI model has how many layers?

◯ a.   5

◯ b.   8

◯ c.   6

⦿ d.   7

Question 8

Complete

Mark 1.00 out of 1.00

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

- ○ a.   192.168.10.128
- ○ b.   192.168.10.63
- ○ c.   192.168.10.65
- ◉ d.   192.168.10.127

Question 9

Complete

Mark 1.00 out of 1.00

What is the CIDR notation for the subnet mask 255.255.255.248?

- ◉ a.   /29
- ○ b.   /26
- ○ c.   /27
- ○ d.   /28

Question 10

Complete

Mark 1.00 out of 1.00

What is the network address of 192.168.1.75/27?

- ○ a.   192.168.1.96
- ◉ b.   192.168.1.64
- ○ c.   192.168.1.0
- ○ d.   192.168.1.128

Question 11

Complete

Mark 1.00 out of 1.00

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

- ○ a.   Frames
- ○ b.   Segments
- ◉ c.   Packets
- ○ d.   Bits

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. 255.255.255.224

◉ c. 255.255.255.192

○ 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. Session

○ b. Network

○ c. Application

○ d. Presentation

Question 14

Complete

Mark 1.00 out of 1.00

Which layer handles encryption and decryption of data?

○ a. Session

◉ b. Presentation

○ c. Transport

○ d. Physical

Question 15

Complete

Mark 1.00 out of 1.00

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

○ a. Physical

◉ b. Transport

○ c. Data Link

○ d. Network

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.   Transport

○ b.   Application

◉ c.   Network

○ 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.   Network

○ b.   Session

○ c.   Application

◉ d.   Transport

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.   192.168.1.255

◉ b.   192.168.1.1

○ c.   192.168.1.0

○ d.   192.168.2.1

Question 19

Complete

Mark 1.00 out of 1.00

Which of the following is a valid subnet mask?

◉ a.   255.255.255.252

○ b.   255.0.255.0

○ c.   255.255.0.255

○ d.   255.255.128.255

Question 20

Complete

Mark 1.00 out of 1.00

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

○ a.   Framing

○ b.   MAC Addressing

◉ c.   Routing

○ d.   Error Detection