

|                     |                                     |
|---------------------|-------------------------------------|
| <b>Started on</b>   | Monday, 15 September 2025, 11:30 AM |
| <b>State</b>        | Finished                            |
| <b>Completed on</b> | Monday, 15 September 2025, 11:42 AM |
| <b>Time taken</b>   | 11 mins 4 secs                      |
| <b>Marks</b>        | 5.00/10.00                          |
| <b>Grade</b>        | <b>50.00</b> out of 100.00          |

### Question

**1**

Complete

Mark 1.00 out of 1.00

Which type of multiplexing allows combining signals based on frequency ranges?

Select one:

- ☐ a. TDM
- ☒ b. FDM
- ☐ c. WDM
- ☐ d. CDMA

### Question

**2**

Complete

Mark 1.00 out of 1.00

Which ARQ mechanism requires retransmission of only the erroneous frame?

Select one:

- ☐ a. Stop-and-Wait
- ☐ b. Sliding Window
- ☐ c. Go-Back-N
- ☒ d. Selective Repeat

### Question

**3**

Complete

Mark 0.00 out of 1.00

In Stop-and-Wait ARQ, if transmission time = 1 ms and propagation delay = 4 ms, channel utilization is approximately:

Select one:

- ☒ a. 20%
- ☐ b. 50%
- ☐ c. 80%
- ☐ d. 25%

## Question 4

Complete

Mark 0.00 out of 1.00

In WDM, increasing the number of channels primarily increases:

Select one:

- ☐ a. Signal-to-noise ratio
- ☒ b. Propagation delay
- ☐ c. Bandwidth utilization
- ☐ d. Error rate

## Question 5

Complete

Mark 1.00 out of 1.00

What does bit stuffing in data transmission help prevent?

Select one:

- ☐ a. Collisions in Ethernet
- ☒ b. Misinterpretation of control flags
- ☐ c. Propagation delay
- ☐ d. Channel noise

## Question 6

Complete

Mark 1.00 out of 1.00

In packet switching, which issue does store-and-forward delay directly depend on?

Select one:

- ☐ a. Propagation speed of the medium
- ☐ b. Queuing policy of the router
- ☒ c. Packet length and transmission rate
- ☐ d. Processing speed of the router

## Question 7

Complete

Mark 1.00 out of 1.00

In a sliding window protocol with a window size of 4, how many unacknowledged frames can the sender transmit before stopping?

Select one:

- ☐ a. 3
- ☒ b. 4
- ☐ c. 5
- ☐ d. 2

## Question 8

Complete

Mark 0.00 out of  
1.00

Which of the following is true about Stop-and-Wait ARQ?

Select one:

- ☐ a. It eliminates retransmissions completely.
- ☒ b. It introduces high utilization on long-delay links.
- ☐ c. It has higher throughput compared to Go-Back-N.
- ☐ d. It requires sequence numbers modulo 2.

## Question 9

Complete

Mark 0.00 out of  
1.00

Which parameter mainly influences jitter in real-time applications?

Select one:

- ☒ a. Transmission delay
- ☐ b. Variation in packet arrival time
- ☐ c. Window size in flow control
- ☐ d. Bandwidth

## Question 10

Complete

Mark 0.00 out of  
1.00

Which of the following is a limitation of CSMA/CD?

Select one:

- ☐ a. It cannot be used in half-duplex channels
- ☒ b. It is inefficient at low traffic
- ☐ c. It cannot be used in wireless networks
- ☐ d. It ensures no collisions occur