

Started on Wednesday, 14 August 2024, 9:01 AM

State Finished

Completed on Wednesday, 14 August 2024, 9:05 AM

Time taken 3 mins 25 secs

Grade 6.00 out of 10.00 (60%)

Question 1

Correct

Mark 2.00 out of 2.00

Given m number of nodes, each transmitting in a slot with probability p , then probability that a given node k has success in a slot is?

Select one or more:

- ☒ a. $p(1-p)^{m-1}$ ✓
- ☐ b. $p(1-m)^{p-1}$
- ☐ c. mp
- ☐ d. $mp(1-p)^{m-1}$

Your answer is correct.

The correct answer is: $p(1-p)^{m-1}$

Question 2

Correct

Mark 3.00 out of 3.00

Let the message that we want to send is 11001 and $C(x)$ is 1011. Calculate CRC bits.

Answer: ✓

The correct answer is: 111

Question 3

Correct

Mark 1.00 out of 1.00

A maximum of two unacknowledged frames can be in transit simultaneously in stop and wait ARQ protocol

Select one:

- ☐ True
- ☒ False ✓

The correct answer is 'False'.

Question 4

Incorrect

Mark 0.00 out of
2.00

Select all cases that can lead to unnecessary duplicate frames (i.e., when original frame is correctly received) in stop-and-wait ARQ protocol?

Select one or more:

- ☐ a. Timeout is $0.5 \times \text{RTT}$
- ☒ b. Timeout is $2 \times \text{RTT}$ ❌
- ☐ c. Original frame has bit errors
- ☒ d. Acknowledgement is lost ✅

Your answer is incorrect.

The correct answers are: Timeout is $0.5 \times \text{RTT}$, Acknowledgement is lost

Question 5

Incorrect

Mark 0.00 out of
2.00

Which of the following statements are correct about slotted ALOHA:

S1: The efficiency increases as the number of nodes with data to transmit increase

S2: A single active node can transmit at channel bandwidth

Select one or more:

- ☒ a. Both are correct ❌
- ☐ b. S1 is correct but S2 is incorrect
- ☐ c. S2 is correct but S1 is incorrect
- ☐ d. Neither are correct

Your answer is incorrect.

The correct answer is: S2 is correct but S1 is incorrect

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