Practical 2: (Analysis) (20% of prac 2 marks) (PG students)

Due May 8 at 17:00 **Points** 7 **Questions** 7 **Available** until Jun 30 at 23:59 **Time Limit** None
Allowed Attempts 2

Instructions

In this quiz, you are asked to evaluate the throughput performance of alternating bit, go back n and selective repeat.

This **article** **(https://ntrs.nasa.gov/archive/nasa/casi.ntrs.nasa.gov/19840003285.pdf)** will assist you in answering the quiz questions (it is a technical paper, so give yourself time to understand it).

You have only 2 attempts at this quiz and your mark will be the mean of your attempts, so be sure to read ***carefully***, think and understand before answering. It is important that you pay close attention to the meaning of the technical words (look them up if not certain).

Attempt History

	Attempt	Time	Score
LATEST	Attempt 2	16 minutes	6 out of 7
	Attempt 1	10,371 minutes	5.67 out of 7

Score for this attempt: **6** out of 7
Submitted May 7 at 23:04
This attempt took 16 minutes.

Question 1 — 1 / 1 pts

Which of the following protocols can provide continuous transmission for applications such as satellite communications?

(select all that apply)

- [ ] None of the above
- [x] Go Back N — Correct!
- [x] Selective Repeat — Correct!
- [ ] Alternating Bit

Question 2

1 / 1 pts

Which of the following affects the ability of an Automatic Repeat Request (ARQ) protocol to provide continuous transmission over a satellite link?

(select all that apply)

- [x] the amount of data that can be buffered for possible resends — Correct!
- [x] the bandwidth of the network — Correct!
- [ ] errors

Correct!

- [x] the propagation delay in the network

Question 3

1 / 1 pts

In an error/loss/re-order free network, Alternating Bit, Selective Repeat and Go Back N will all have the same throughput.

- [ ] True

Correct!

- [x] False

Question 4

1 / 1 pts

In an error/loss/re-order free network, Selective Repeat and Go Back N will have the same throughput.

Correct!

- [x] True
- [ ] False

Question 5

1 / 1 pts

Selective repeat provides more reliable communication than Go Back N or Alternating Bit when errors are present.

- True
- Correct! False

Question 6

0 / 1 pts

Assume a network has an error probability of 0.1 and is sending 1000 bit words with a code rate of 1/2. The round trip delay is 700 ms and the bandwidth is 1Gb/s

What would be the throughput percentage for the Go Back N protocol? Please specify the answer in decimal format and round off to 2 decimal places (for example 1.23 or 0.04 etc)

(note: pay attention to details in this question. if you just try to put numbers into the equation without carefully considering them, you are likely to get this answer incorrect. Also remember to check your units. This is a percentage, so all units should cancel.)

You Answered: 8.99

Correct Answers: 0 (with margin: 0)

0.01 (with margin: 0)
0 (with margin: 0)

Question 7

1 / 1 pts

For a block length of 100, Go Back N will reduce to 50% efficiency at the bit error rate of 10^ -5 and Selective Repeat will reduce to 50% efficiency at the bit error rate of 10^ -4 .

Choose the ***nearest*** whole number. i.e. if the value is -3.2, answer -3. if the answer is -3.6 answer -4.

Answer 1:

Correct! -5

Answer 2:

Correct! -4

Correct Answer -3

Quiz Score: **6** out of 7