ELEX 3525 : Data Communications
2018 Fall Term

MIDTERM EXAM 2
1:30 PM – 2:20 PM
October 31, 2018

This exam has two (2) questions on one (1) pages. The marks for each question are as indicated. There are a total of ten (10) marks. Answer all questions. Write your answers and all rough work in this paper and nowhere else. Show your work. Draw a box around your final answer. Numerical answers must include units. Books and notes are allowed. No electronic devices other than calculators are allowed. **Show your work.**

This exam paper is for:

Exam 1   A00123456

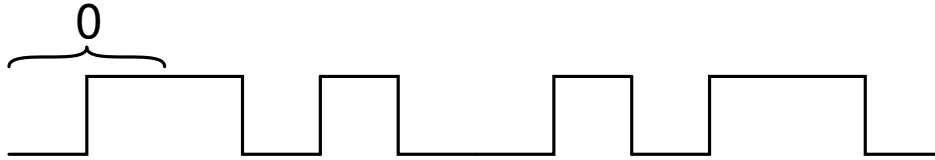Each exam is equally difficult.

Answer your own exam.

Do not start until you are told to do so.

Name: _____

BCIT ID: _____

Signature: _____

Question	Mark	Max.
1		5
2		5
Total		10

Question 1   5 marks

The following waveform shows a sequence of bits transmitted using a *differential* Manchester line code. The line code operates as described in the lectures. The waveform shown starts and ends at a bit interval and the first bit is a zero (0). What are the values of the transmitted bits? Include the value of the first bit (0) in your answer.

Question 2   5 marks

The following sequence of bytes, shown in hexadecimal notation, has been framed using PPP flag and escape bytes. What is the content of the frame, excluding the framing? Bytes that appear before or after the frame should not be included in your answer. Give your answer in hexadecimal and put a box around it.

7E FF 03 00 FF 7D 7E 7D 7D 3E 7E 22

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Exam 2   A00123456

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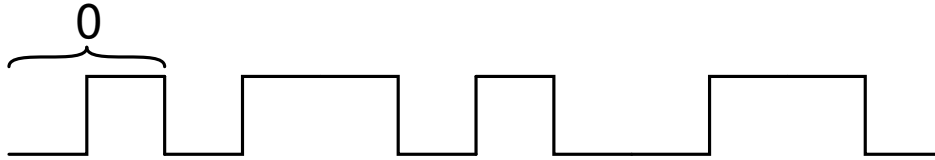Do not start until you are told to do so.

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Question	Mark	Max.
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Question 1   **5 marks**

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0

Question 2   **5 marks**

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11 7E FF 03 00 27 7D 7D 7D 7E 3E 7E