

ELEX 3525 : Data Communications
Term 201730

MID-TERM EXAMINATION # 1
1:30 PM – 2:20 PM
October 31, 2017

This exam has two (2) questions on six (6) pages. The marks for each question are as indicated. There are a total of 9 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.

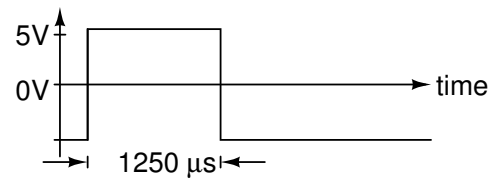
Name: _____

BCIT ID: _____

Signature: _____

Question	Mark	Max.
1		5
2		4
Total		9

Question 1 (5 marks)



- (a) Assuming a bit rate of 4800 bps, what value was transmitted by the RS-232 waveform shown above? Give your answer in hexadecimal. Show your work.
- (b) What was the corresponding Unicode character assuming a UTF-8 encoding?
- (c) If parity was being used, was it even or odd?

Question 2 (4 marks)

A line-of-sight wireless communication system transmits 1 W at a frequency of 3 GHz. The transmit and receive antennas have gains of 1 (0 dB). At what distance will the received power be $1 \mu\text{W}$?

- This page intentionally left blank. -

ELEX 3525 : Data Communications
Term 201730

MID-TERM EXAMINATION # 1
1:30 PM – 2:20 PM
October 31, 2017

This exam has two (2) questions on six (6) pages. The marks for each question are as indicated. There are a total of 9 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 2 A00123456

Each exam is equally difficult.
Answer your own exam.

Do not start until you are told to do so.

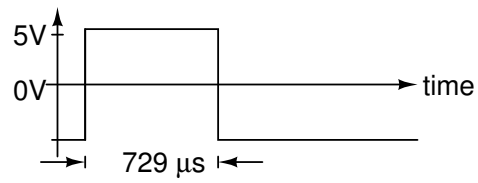
Name: _____

BCIT ID: _____

Signature: _____

Question	Mark	Max.
1		5
2		4
Total		9

Question 1 (5 marks)



- (a) Assuming a bit rate of 9600 bps, what value was transmitted by the RS-232 waveform shown above? Give your answer in hexadecimal. Show your work.
- (b) What was the corresponding Unicode character assuming a UTF-8 encoding?
- (c) If parity was being used, was it even or odd?

Question 2 (4 marks)

A line-of-sight wireless communication system transmits 10 W at a frequency of 300 MHz. The transmit and receive antennas have gains of 1 (0 dB). At what distance will the received power be 1 μ W?

- This page intentionally left blank. -