Assignment 9

Due November 26, 1996

1 Question 1

Draw the waveform used for serial transmission of the ASCII character U at 9600 bps with 8 data bits and no parity. Label the time and voltage axes.

2 Question 2

You are trying to figure out why one computer won't send data to another. You measure the CTS pin on the computer and find it is putting out +5 volts. Is this computer wired up as a DTE or DCE? You check the other computer's interface and its DSR pin is at +9 volts. What is likely the cause of the problem? How could it be resolved?

3 Question 3

The following sequence of bits contains two HDLC frame sync sequences framing a number of bits. List the data bits contained within the frame. Group the resulting bits into sets of 4 from right to left and give the corresponding hexadecimal digits.

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0111 1110 1011 1010 1011 1111 1011 1011 1111 0000
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4 Question 4

Write an 8088 assembly language program that drives the LPT1 printer interface directly (i.e. not through BIOS or DOS routines).

Print a line on the printer with your name and student number followed by a carriage return and line feed. Make sure you assert all of the available handshaking lines and meet the timing requirements listed in the lecture notes.

Submit your assembly language code and .COM file electronically using the keys 9asm and 9com respectively