CCS 3024 / CCS 3011 – Microprocessor
Assignment-2

Second Semester 2020/2021

Grade

Name, Family Name: _____

ID: _____ **Section:** **Signature:** _____

Question 1(a)
A bus transaction on the 8086 system takes 4 clock cycles. If the instruction *In AX,DX* is executed, explain the bus transactions that are needed to execute the instruction assuming DX=2AB4h.

Question 1(b)

    i.   Consider the operation of PPI 8255. What is the advantages of the 8255 PPI?

    ii.   If the base address of the 8255 is AC10h, program port A as input port with handshaking, port B as output port with handshaking and C as simple input port.

    iii.   Show the connections between the CPU and the 8255 PPI.

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Question 2(a) Show the advantage of serial communication over parallel communication.

Question 2(b) Assume serial communication with 6 bits data, even parity, 1 stop bit and consider the following bit stream

111000011101111111101100011010 11000111 $\rightarrow$

    i.   **Show** the actual data sent by the sender.

    ii.   **Show** the error associated with each character if any occur.

    iii.   **Show** how long does it take to send each character if the baud rate is 9600bps