CSE-3105 (Microprocessors and Micro-controller)

Date: 09 July 2020

Topics of Lecture 24, Lecturer 25 and Lecture 26:

Q1. Draw the internal block diagram of 8255A PPI and describe briefly the functions of each component.

Q2. How many modes are available of 8255A PPI? Which ports can work in which mode? Explain.

Q3. How can you interface 8255A PPI with a microprocessor? Draw the circuit diagram of it.

Q4. How many types of command bytes are available in command register of 8255A PPI? What are the necessities of using command bytes of programming the 8255A PPI?

Q5. Draw the figure of Command Byte A and Command Byte B and explain the operations of each of them with proper example.

Q6. What will be the value of commend register for the following configurations:

- **(i)** Mode 0, Port A and Port B are selected as inputs and Post C is selected as output
- **(ii)** Mode 1, Port A and Port B are selected as output and input respectively

Q7. Draw the circuit diagram of LEDs display interfaced to the 8086 Microprocessor with 82C55 PPI. Also write the necessary assembly instructions to activate the circuit.

Q8. How can you interface 7 segment displays with 8086 microprocessor through 8255A PPI? Draw the circuit diagram and explain the operation with assembly codes.

Q9. Explain the operation of interfacing a 4X4 keyboard with 8086 microprocessor and 8255A Programmable Peripheral Interface. Write also the necessary assembly instructions with circuit diagram.