SCHOOL OF ENGINEERING AND TECHNOLOGY

D.C. COURT JUNCTION, DIMAPUR

END TERM EXAMINATIONS, June 2017

Course Code:	EC4T03	**Semester:**	IV	**TotalMarks**	60
Course Name:	Microprocessor			**Time:**	3 hr

Part A

I. Choose the correct options: 5X1=5

1. After the execution of the RIM instruction, the content of accumulator is 1C H. The pending interrupt is
   a. RST 7.5 b. RST6.5 c. RST 5.5 d. All of the above
2. An instruction cycle is made up of
   a. One or more machine cycle
   b. One or more fetch cycle
   c. One opcode and one machine cycle
   d. None of the above
3. The synchronization between the processor and the input output device is done by
   a. ALE signal b. HOLD signal c. READY signal d. None
4. Program counter is used to
   a. Store address of the next instruction to be executed.
   b. Store temporary data
   c. Store the status of the processor
   d. None of the above
5. PSW stands for

a. Accumulator content
b. Flag byte
c. Accumulator and flag content
d. Accumulator and temporary register content

II. Fill up the blanks: 5X1=5

1. 8255 contains _____number of programmable I/O pins.
2. In 8253/54 mode 1 is known as_____
3. USART stands for _____
4. The number of address lines for a memory of 512 TB is_____
5. Instruction register is a ____ bit register.

Part B

Answer any four 4X2=8

1. Find the content of Flag register if the value 84H and 7CH are added.
2. Find the content of stack pointer after the execution of the following instructions
   LXISP, FF00H
   LXIH, E906H
   SPHL
   PUSH H
   HLT
3. Define SHLD and CMP instructions.
4. Define DAD and ANI data instructions
5. Define Instruction cycle, machine cycle and T state.

Answer any Three 3X4=12

1. Differentiate between memory mapped and input output mapped technique.
2. Define addressing mode. Explain about the different addressing modes with examples.
3. Explain about jump and return instruction
4. Write an Assembly language program to find the largest number from 5 blocks of number.

Part C

Answer the following 6x5=30

1. a. With a neat sketch explain the pin configuration of 8085.

OR

b. Explain about the architecture of 8085.

2. Explain the operating modes of 8255 in MODE 0 and MODE1

OR

c. Explain the operating modes of MODE 3 and MODE 5 of 8253/8254

3. Explain about the different Data transfer techniques?
4. Designs a memory system for 8085 to have 8KB of EPROM and 2KB of RAM. Implement using 2764 chip and 6116 chip. Draw the memory map, address bit and decoding logic.
5. Draw the interfacing of DAC 0808 with 8085 through 8255. Write a program to generate a square wave of 50 Hz. Assume port address as 08H,09H,0AH and 0B H.

OR

Draw the interfacing of 8251 with 8085 in I/O mapped I/O mode. Select 8251 in synchronous mode as a receiver with 6 bit character
Odd parity
One sync character E0

Active DTR

Write an ALP to receive 300 bytes of data and store it in memory location A000H onwards.