Printed Pages: 4 **EEC 406**

(Following Paper ID and Roll No. to be filled in your Answer Books)	
Paper ID : 110408	**Roll No.**

B.TECH.

Theory Examination (Semester-IV) 2015-16

INTRODUCTION TO MICROPROCESSOR

Time : 3 Hours ***Max. Marks : 100***

Section-A

1. Attempt all parts of this question. Each question carries 2 marks. (2×10 = 20)

(a) What do you understand by addressing mode in 8085?

(b) Explain the concept of Memory segmentation in 8086 microprocessor.

(c) How does BIU generate 20 bit address to access external memory?

(d) Draw the basic block diagram of microprocessors.

(e) Explain why AD0-AD7 lines are multiplexed and A8 to A15 are not multiplexed.

(f) List the two DMA function HOLD and HLDA.

(g) List the Difference between Memory Mapped I/O and peripheral I/O.

(h) What do you mean by maskable and non maskable interrupts?

(i) Draw flag register of 8086 microprocessor showing the status of each flag at its proper position.

(j) Explain the requirement of peripheral devices with the microprocessor.

Section-B

2. Attempt any FIVE questions. Each part carries 10 marks. [10×5=50]

(a) With a neat diagram describe the internal architecture of 8085. State the function of each block shown.

(b) Explain different types of interrupts in 8085 Microprocessors.

(c) Explain the features and architecture of 8086 Microprocessors.

(d) Design a system for 8085 such that it contain 4KB of EPROM and 2KB of RAM using two 2KB of EPROM and two 1KB of RAM. Draw the complete interfacing diagram.

(e) Explain different call and jump instruction used in 8085.

(f) Sixteen bytes of data are stored in memory locations at XX50H to XX5FH. Write a program to transfer the entire block of data to new memory locations starting at XX70H.

(g) Explain PPI (8255) with its block diagrams. Also explain its operating modes.

Section-C

Attempt any two questions. (15×2=30)

3. (i) Explain the memory segmentation of 8086.

   (ii) Write a program for 8085 to generate a continuous square wave with the period of 500μ sec. Assume system clock period is 325ns and use bit D to output to square wave.

4. Write a program to count from 0 to 9 using delay of 10 msec between each count. At the count of 9, the counter should reset itself to 0 and repeat the sequence continuously. Display each count at one of the output ports.

5. (i) Explain briefly DMA mode of data transfer. Why is hand-shaking required between a CPU and I/O device? Describe briefly.

(ii) Explain the Classification of instruction of 8085 with suitable example.