

(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.

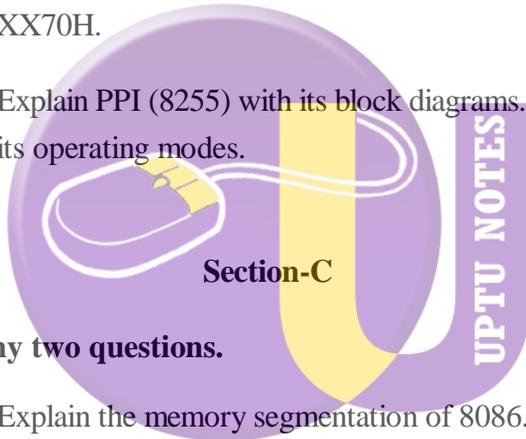
- (f) List the two DMA function HOLD and HLDA.
- (g) List the Difference between Memory Mapped I/O and peripheral I/O.
- (h) What do you mean by maskable and non maskable interrupts?
- (i) Draw flag register of 8086 microprocessor showing the status of each flag at its proper position.
- (j) Explain the requirement of peripheral devices with the microprocessor.

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.



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.

