

**B.TECH.****THEORY EXAMINATION (SEM-IV) 2016-17****INTRODUCTION TO MICROPROCESSOR****Time : 3 Hours****Max. Marks : 100****Note : Be precise in your answer. In case of numerical problem assume data wherever not provided.****SECTION – A****1. Explain the following:****10 x 2 = 20**

- (a) What is a microprocessor? What is the technology used in microprocessors?
- (b) What are the different buses and what jobs they do in a microprocessor?
- (c) Draw the basic block diagram of microprocessors and discuss the same.
- (d) The address capability of 8085 is 64 KB. Explain.
- (e) How many instructions 8085 can support?
- (f) Mention the addressing modes of 8085.
- (g) Explain the concept of Memory segmentation in 8086 microprocessor.
- (h) How many hardware interrupts 8085 supports?
- (i) How many I/O ports can 8085 access?
- (j) Why the lower byte addresses bus (A0 – A7) and data bus (D0 – D7) are multiplexed?

**SECTION – B****2. Attempt any five of the following questions:****5 x 10 = 50**

- (a) Draw the architecture of 8085 and mention its various functional blocks.
- (b) Explain different types of interrupts in 8085 Microprocessors.
- (c) Draw the pin diagram and functional block diagram of 8254.
- (d) Explain the difference between IO mapped IO and Memory Mapped IO interfacing technique.
- (e) Explain PPI (8255) with its block diagrams. Also explain its operating modes.
- (f) Ten number 8-bit data are stored starting from memory location 2100 H. Transfer this entire block of data to memory location starting from 3100 H.
- (g) Explain different types of software and hardware interrupts of 8085.
- (h) What is addressing mode? Explain the types of the addressing modes of 8085.

**SECTION – C****Attempt any two of the following questions:****2 x 15 = 30**

- 3. Explain the features and architecture of 8086 Microprocessors. Mention the jobs performed by BIU and EU.
- 4. Draw the block diagram of 8251 USART and explain each block. Also draw its interfacing with 8086.
- 5. With the help of a functional block diagram and working of 8257 DMA controller.