

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

Paper ID : 131409

Roll No.

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B.TECH.**Theory Examination (Semester-IV) 2015-16****INTRODUCTION TO MICROPROCESSOR***Time : 3 Hours**Max. Marks : 100***Section-A****Q1. Attempt all questions from this section. (2×10=20)**

- (a) What is the size of data bus in the following microprocessor(s):
- (i) 8-bit
 - (ii) 16-bit
 - (iii) 32-bit
 - (iv) 64-bit

- (b) How the microprocessor behaves when the interrupt is generated through interrupt pin of 8085 (TRAP, RST 7.5, RST 6.5, RST 5.5) and DMA interrupt?
- (c) Define subroutine.
- (d) Describe the following 8085 instructions:
- (i) DAA
 - (ii) JPE 3040H
- (e) Define microprocessor, computer and microcontroller.
- (f) What are the various operations performed by microprocessor?
- (g) Write down the use of control line A0 and A1 in 8255.
- (h) Write down the difference between 8253 and 8254.
- (i) Find out the physical memory location in 8086 memory when the CS register consist of 7450H and offset register consists 1750H.
- (j) Discuss about the difference between 8085 and 8086 microprocessor.

(2)

Section-B

Q2. Attempt any five questions from this section.

(10×5=50)

- (a) Draw a logic diagram of complete interfacing of 8085 microprocessor with memory of size 4K bytes.
- (b) Draw a functional diagram of 8085 microprocessor and also discuss its various pins.
- (c) What is the need of de-multiplexing of 8085? Discuss the microprocessor architecture and its operation.
- (d) Write an assembly language program to find the largest number in a block of data. The length of block is in memory location 2200H and the block itself begins from location 2201 H. Store the maximum number in 2300H.
- (e) Explain the addressing with suitable example in detail.
- (f) What are the various types instructions used in assembly language programming. Explain one of them in detail.
- (g) Explain the interfacing of keyboard and seven segment display.

(3)

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- (h) Write a delay routine to produce a time delay of 0.5 msec in 8085 processor-based system whose clock source is 6 MHz quartz crystal.

Section-C

Note: Attempt any two questions from this section.

(15×2=30)

- Q3. Write an assembly language program to convert a 2 digit BCD number stored at memory address 2200H into its binary equivalent number and store the result in memory location 2300H. Also draw the flow chart of it.
- Q4. Draw and explain in detail the architecture of 8086 (pin and functional block diagram).
- Q5. Write short notes on the followings:
- (a) Direct Memory Access(DMA) Controller
 - (b) The 8085 interrupts
 - (c) Logic devices for interfacing