Printed Pages : 3

EEC406

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

PAPER ID : 110408

Roll No.

B. Tech.

(SEM. IV) THEORY EXAMINATION, 2014-15

INTRODUCTION TO MICROPROCESSORS

Time : **3** Hours] [Total Marks : **100**

Note : (1) Attempt all questions .
(2) All questions carry equal marks.

1 Attempt any four questions. **5×4=20**

(a) Explain the various functions performed by microprocessor.

(b) Draw and explain the architecture of 8085 Microprocessor.

(c) Explain the addressing modes of 8085.

(d) Draw the timing diagram for OUT instruction.

(e) Differentiate between Memory Mapped and 1/0 Mapped.

(f) Explain the generation of control signal in 8085 microprocessor.

2 Attempt any four questions. **5×4=20**

(a) Explain all stack related. instructions.

(b) Describe the function of following pins:

(i) $\overline{\text{RESETIN}}$

(ii) READY

(iii) CLK OUT

(iv) HOLD

(c) Specify the register contents and the flag status as the following instructions are executed.

A	B	S	Z	CY
XX	XX	X	X	X

```
SUB A
MOV B, A
INR B
SUI 01H.
HLT
```

(d) What is subroutine? How is it useful? Explain the use of stack in CALL and RETURN instruction.

(e) Give the difference between CALL-RETURN and PUSH-POP.

(f) Write a program to divide 17 by 4.

3 Attempt any two questions : **10×2=20**

(a) Classify the Interrupts of 8085 and explain all interrupts in detail.

(b) Explain the concept of Pipelining in 8086. Also describe the register organization of 8086.

(c) Explain the concept of segmented memory in 8086. Also list its advantages.

4 Attempt any two questions : **10×2=20**

(a) A Binary number is stored at memory location 2000H.Write a program to convert this Binary number to its-BCD equivalent.

(b) Write a program using 8085 to multiply two 2-Digit BCD numbers.

(d) Write a program to generate a continuous square wave with the period of 250 μs: Assume the system clock period is 325 ns, and use bit D_o to output the square wave.

5 Attempt any two questions : **10×2=20**

(a) Briefly describe the command words of 8259 and also draw a neat interfacing diagram.

(b) Give different modes of operation of 8253.

(c) Explain various Handshaking signals in 8255. Also Describe its operating modes.