Printed Pages : 2 EEC406

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

PAPER ID : 0109 Roll No. | | | | | | | | | | |

B.Tech.

(SEMESTER-IV) THEORY EXAMINATION, 2011-12

INTRODUCTION TO MICROPROCESSOR

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

Note : Attempt **all** Sections.

Section – A

1. Attempt **all** of following : **10 × 2 = 20**

   (a) Define Memory-Mapped I/O and Peripheral I/O.

   (b) What do you understand by address and data buses ?

   (c) Write important applications of 8085.

   (d) Why ALU is so important ?

   (e) Define PUSH and POP operation.

   (f) What do you understand by Pipelining ?

   (g) What are operating modes of 8086 ?

   (h) Define software interrupts.

   (i) What is subroutine ?

   (j) What is role of RS232C ?

Section – B

2. Attempt any **three** of following : **3 × 10 = 30**

   (a) Explain addressing modes of microprocessor. How flow of data and instruction occurs in typical Intel microprocessors ?

   (b) Draw the internal architecture of microprocessor 8085 and describe it in brief.

   (c) Discuss the register organization of 8086 microprocessor and explain the function of each register. How they make a programmer's job easier ?

   (d) Write a 8085 assembly language program for multi byte addition in BCD mode.

   (e) Define DMA. Draw and explain the block diagram of 8237 DMA controller.

Section – C

Attempt **all** of the following : **5 × 10 = 50**

3. Discuss about typical microprocessor development schemas in details.

OR

Explain recent architectural advancements of microprocessor industry.

4. What are different registers available in 8085 ? Explain them with their important applications.

OR

Explain arithmetic operations, logical operations and branching operations for 8085 microprocessor.

5. Define and explain instruction sets available in 8086. What are instruction formats used by 8086 ?

OR

Draw the internal architecture of microprocessor 8086 and describe its function in detail.

6. Explain conditional call and return instructions used in microprocessor programming.

OR

What will be the register contents of program counter in Register A and Register B after execution of each step of following program ?

MVI A, 23 H

MVI B, 32 H

XRA B

ADI 88 H

HLT

7. What are pending interrupts ? How RIM sense these pending interrupts ? Draw and discuss various modes of operation of 8259.

OR

Explain 8255 programmable peripheral interfaces in detail.
