



Reg. No. : .....

Name : .....



**Sixth Semester B.Tech. Degree Examination, April 2014  
(2008 Scheme)**

**Branch : Electrical & Electronics**

**08.602 : MICROPROCESSORS AND APPLICATIONS**

Time : 3 Hours

Max. Marks : 100

**Instruction :** Answer *all* questions from Part – A and *one* question from *each* Module of Part – B.

**PART – A**

1. Explain the following instructions :
  - a) PCHL
  - b) XRA A
  - c) XCHG
  - d) SPHL
2. What is meant by demultiplexing of AD bus ?
3. Explain the terms machine cycle, T-states and instruction cycle.
4. Differentiate between vectored and non-vectored interrupts.
5. Explain the function of SIM and RIM instructions.
6. Show the interfacing of one 7-segment display unit with 8085 microprocessor.
7. What is the difference between SUB  $\mu$  and CMP M ?
8. Differentiate between maskable and non-maskable interrupts.
9. What are the advantages of memory segmentation ?
10. What is meant by pipe lining ?

**(10x4= 40 Marks)**



## PART – B

## Module – I

11. a) Draw the internal architecture of Intel 8085 microprocessor and explain each block. 12
- b) Explain the classification of instructions used in Intel 8085 with examples. 8
12. a) Draw and explain the timing diagram of instruction LXI H, 4050. 12
- b) Write an ALP to find the largest element from the given array. 8

## Module – II

13. a) Explain the interrupt structure of 8085 microprocessor with the help of diagram. 10
- b) Show the interfacing of 8085 microprocessor with 4 K bytes of ROM using 1K × 8 bit chips. 10
14. a) Explain the DMA mode of data transfer used in 8085 with the help of flow charts. 10
- b) Explain a microprocessor based temperature control system with the help of block diagram. 10

## Module – III

15. a) Draw the block diagram of 8086 and explain each block. 12
- b) Explain the different flags used in 8086 microprocessor. 8
16. a) Draw the pin out diagram of 8086 for minimum and maximum modes of operation and explain the function of each pin. 15
- b) Explain how 20 bit physical address get generated from 16 bit EA. 5