

Roll No. ....

**24230**

**B.Tech. 5th Sem. (Electrical Engg.)**

**Examination December, 2013**

**MICROPROCESSING & INTERFACING**

**'F' Scheme**

**Paper : EE-309-F**

***Time : Three hours ]***

***[ Maximum Marks : 100***

*Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.*

**Note :** Attempt *one* question from each Section and Q. No. 1. is *compulsory*.

1. (i) Why  $AD_0 - AD_7$  lines multiplexed in 8085. 4
- (ii) Write a Program to find 1's complement of the number. 4
- (iii) What is Pipeline flushing ? How does this occur. 4
- (iv) What is wrong with a MOV AX, DL Instruction ? 4
- (v) Explain following instructions with examples. 4
  - (a) SPHL (b) XTHL (c) RET (d) IN address

## SECTION – A

2. (i) Explain Pin diagram of 8085 microprocessor. 10
- (ii) Write a Program to calculate the sum of the series of even numbers. 10
3. (i) What is the functioning of timing and control unit in 8085 microprocessor ? Discuss all its signals in detail. 10
- (ii) Differentiate between vectored and Non-vectored interrupt. Also explain interrupt structure with proper diagram. 10

## SECTION – B

4. (i) Explain various addressing modes of 8086 microprocessor. 10
- (ii) If the first instruction of a program is to be fetched from 12340H. What should the value of CS register be ? The sixth instruction to be fetched is at memory location 1234FH. What should be the value of Ip register ? 10

(Hint : Assume Ip to be 000H for first part)

5. (i) Explain the block diagram of 8086 microprocessor. 10
- (ii) How Physical address is computed in 8086 microprocessor ? 10

### SECTION – C

6. (i) Explain directives used in assembly language program ? Why are simplified segment directives used. 10
- (ii) Write a simply assembly program to subtract two memory locations, where each memory location is one byte wide. 10
7. (i) Explain NOP and HLT instructions 10
- (ii) Write a 8086 assembly language program to find largest number in a data array. 10

### SECTION – D

8. (i) Explain Pin diagram of 8237 DMA controller. 10
- (ii) Explain BSR and I/O modes of 8255 PPI chip. 10
9. Explain (Any two): 20
- (i) Interrupt register and Priority Resolver.
- (ii) 8259-A Programmable interrupt controller.
- (iii) 8253/8254 programmable Interval timer.