

Roll No. ....

24230

**B. Tech. 5th Semester (CSE)**  
**Examination – December, 2016**  
**MICROPROCESSING & INTERFACING**

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 :** Question No. 1 is compulsory. Attempt five questions by select *one* question from each Section.

1. (a) Write a program of find 1's complement of the number. 5 × 4 = 20
- (b) What are NOP and HLT instructions ?
- (c) What is programmable interval timer ?
- (d) Explain direct memory access.

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### SECTION – A

2. (a) Define interrupts ? Explain 8085 interrupts. 10  
(b) Describe various arithmetic instructions with examples in 8085. 10
3. (a) Explain Pin diagram of 8085 microprocessor. 10  
(b) What is the functioning of timing and control unit in 8085 microprocessor ? Discuss all its signals in details. 10

### SECTION – B

4. (a) Explain BIU and EU of 8086 microprocessor. 15  
(b) Discuss Pipelining. 05
5. (a) Explain the block diagram of 8086 microprocessor. 10  
(b) How physical address is computed in 8086 microprocessor ? 10

### SECTION – C

6. (a) Explain directives and identifiers used in 8086 microprocessor. 10  
(b) Write a simple assembly program to subtract two memory location, where each memory location is one byte wide. 10

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7. (a) Write short notes on directives and operators. 10  
(b) Write a 8086 assembly language program to find largest number in data array. 10

### SECTION – D

8. Explain 8259 interrupt controller with the help of block diagram. 20
9. Explain the following : 20  
(a) 8253/8254 programmable interval time.  
(b) Instruction register and priority resolver.

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