

BT-4/JX

8317

Microprocessor and Interfacing

Paper : ECE-216E

Time : Three Hours]

[Maximum Marks : 100

Note :- Attempt any **FIVE** questions, selecting at least **ONE** question from each Unit. Make suitable assumptions wherever necessary.

UNIT-I

1. Draw the block diagram of 8085 and explain the function of each pin. 20
2. (a) What do you understand by Assembly language programming ? Explain various addressing modes with examples. 10
(b) Draw a suitable interface circuit to interface 16 chips of 4K. Only 3 to 8 line decoding are available. Derive addresses for each chip. 10

UNIT-II

3. Explain the following instructions :
 - (a) and AX, BX
 - (b) XLAT
 - (c) LEA addr
 - (d) PUSHF
 - (e) J condition addr

- (f) Loop back
- (g) Div aX, cL
- (h) IMUL CL
- (i) SAL aL, I
- (j) POPF. 2×10
4. (a) Write an Assembly language program in 8086 to find the maximum element in a given series of data. 10
- (b) Write an Assembly language program to arrange the list in ascending order. 10

UNIT-III

5. Draw the block diagram of 8255 and explain its various modes with example and control word and status word. 20
6. Draw a suitable circuit to transfer data from Master CPU to Slave CPU and vice-versa. 20

UNIT-IV

7. Draw the block diagram of 8257 DMA Controller. Write a program to transfer 2K bytes of data from secondary device to memory location 2000 onwards. 20
8. Draw the block diagram of 8253 and explain its various modes. 20