

**BT-4/M-21**

**44184**

**MICROPROCESSOR INTERFACING AND APPLICATIONS**

Paper-PC-IT-208A

Opt. : (I)

Time : Three Hours]

[Maximum Marks : 75

**Note :** Attempt *five* questions in all, by selecting at least *one* question from each unit.

**UNIT-I**

1. (a) Explain the architecture, dataflow and instruction execution of 8085 microprocessor. 8
- (b) With timing diagram, explain the memory read operation in 8085 microprocessor. 7
2. (a) Draw the pin diagram of 8085 microprocessor. 8
- (b) Explain the operation of stack in 8085 microprocessor using an example. 7

**UNIT-II**

3. (a) Write an assembly language program based on 8085 microprocessor instruction set to search the smallest data in a set. 7
- (b) With suitable example, discuss about 8085 microprocessor instructions used for data manipulation. 8

4. (a) Draw the timing diagram for IN and OUT instruction of 8085 and explain. 9
- (b) Mention all the categories of instructions and give two example for each category. 6

### UNIT-III

5. (a) Compare the I/O mapped and memory mapped interfacing.
- (b) Explain in detail the 8085 interrupt structure.
6. Design a microprocessor system to interface an  $8K \times 8$  EPROM and  $8K \times 8$  RAM. 15

### UNIT-IV

7. Draw the block diagram of 8255 programmable peripheral interface and its working. Explain control word definition of the same. 15
8. (a) Write an assembly language program to interface a matrix keyboard with 8085 microprocessor. 8
- (b) Explain the microprocessor controlled temperature system. 7
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