

9527

BT-5/D08

MICROPROCESSOR AND INTERFACING

PAPER - ECE-311E

Time : 3 Hrs.

Maximum Marks : 100

Note : Attempt any five questions by selecting at least one question from each unit.

UNIT-I

1. a. Explain the overview of microcomputer structure and operation with the help of a block diagram of a simple microcomputer. 7
- b. Explain the technological trends in microprocessor development. 6
- c. Explain Intel family tree. 7
2. a. Explain the special purpose of Pointer and Index register with the help of suitable examples. 6
- b. Differentiate between Minimum and Maximum modes of operation of 8086. 7
- c. Explain the functions of IC 8284 in 8086 based systems. 7

UNIT-II

3. a. What do you mean by an Instruction format ? Explain the following instructions with the help of suitable examples :
ADC, LEA, PUSH, INC, JNZ 10
- b. What is the use of assembler directives and macros.

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Explain the following with suitable examples :

- ASSUME, SEGMENT 10
4. a. Write a delay loop which produces a delay of 500 μ sec. on an 8086 with a 5 MHz clock. 10
 - b. Write a program that adds a profit factor PROFIT = 15 to each out of six elements in COST array and stores the result in PRICES array. 10

UNIT-III

5. a. What are the advantages of DRAM over SRAM ? Explain the concept of interfacing and refreshing of DRAM with the help of a functional block diagram of DRAM. 12
- b. What are the different functions of an address decoder? Explain with the help of an example. 8
6. a. Draw and explain the timing waveforms for read operation of 8086 in minimum mode. 14
- b. What are the different types of memory devices available and their advantages ? 6

UNIT - IV

7. Explain the operation, characteristics, specifications, applications and interfacing of D/A converters with 8086. 20
8. Write short notes on any two :
 - i. DMA controller interfacing with 8086 10
 - ii. 8255 description and Interfacing with 8086 10
 - iii. Interfacing alphanumeric displays 10

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