

(b) Describe the operation performed by the following instruction :

- (i) MOV [SI], BX.
- (ii) AND BX, [SI].
- (iii) AAA.
- (iv) IMUL CL.
- (v) SBB BX, CX. 10

- (a) Write an 8086 assembly language program to complement the LSB of flag register using LAHF and SAHF instructions. 10
- (b) Explain the different addressing modes of 8086 with the help of suitable examples. 10

UNIT-III

- (a) Draw and explain the timing waveforms for read operation of 8086 in minimum mode. 10
- (b) Compare the features of DRAM and SRAM. 5
- (c) Explain the concept of Refreshing of DRAM. 5
- (a) Explain the features and functions of DRAM controller TMS-4500 with the help of its functional block diagram. 10
- (b) Explain in detail the features and functions of different types of Memory devices. 10

UNIT-IV

- (a) Sketch and explain the interfacing of PPI 8255 to the 8086 microprocessor in minimum mode. 12

Roll No.

Total Pages : 3

8524

BT-5/D09
MICROPROCESSOR AND INTERFACING

Paper : ECE-311(E)

Time : Three Hours]

[Maximum Marks : 100

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

UNIT-I

- 1. (a) What are Von-Neumann architecture of computers ? Give the examples and explain technological trends in microprocessors development. 8
- (b) Define what is a Tristate logic. What do you mean by tristating of buses ? 6
- (c) Write the features and specifications of microprocessor 8086. 6
- 2. (a) Draw the functional block diagram and explain the features of clock generator 8284 used with 8086. 7
- (b) What is the role of Pointer and Index register in 8086 ? How they can used, explain with the help of examples. 6
- (c) Explain the programming model of 8086. 7

UNIT-II

- 3. (a) Explain the function of the following pins :
NMI, TEST, DEN BHE; Ready. 10

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(b) Define an Interrupt and give the different types of interrupt present in 8086. 8

8. Write short notes on any *two* of the following:

(a) Description and interfacing of 8251. 10

(b) Interrupt vector table. 10

(c) Interfacing of 8×8 key board. 10

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