Roll No. 270S123

Total Pages : 2

8845

BT-5/D07

MICROPROCESSOR AND INTERFACING
Paper – ECE-311E, (ii)

Time : Three Hours] [Maximum Marks : 100

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

UNIT–I

1. (a) Explain the following pins of 8086 Microprocessor :
        $\overline{BHE}$ /S7, $\overline{RQ}$/$\overline{GT}$, MN/$\overline{MX}$, $\overline{RD}$, TEST . 10

    (b) Explain at least 10 advantages of RISC over CISC architecture. 10

2. (a) What are the functions of IC8284 in the 8086 systems ? 5

    (b) Draw the functional block diagram of 8086 Micro-processor. 5

    (c) Explain minimum and maximum modes in 8086 system. 10

UNIT–II

3. (a) Explain the following instructions :
        SAR, POPF, XLAT, JNP/JPO, STD. 10

    (b) Explain the following Assembler directives :
        ASSUME, SEGMENT. 10

4. (a) Write a program to compute factorial for a number N between 1 and 8. 10

    (b) What are addressing modes available in Intel 8086 processor ? Give example. 10

UNIT–III

5. (a) Interface two 4 K × 8 EPROMS and two 4K × 8 RAM chips with 8086 Microprocessor and draw the suitable circuit showing their interfacing. **15**

   (b) Describe the Memory mapped I/O and Direct I/O. Give the main advantage and disadvantage of each. **5**

6. (a) Draw a timming diagram for RD/WR cycle in MN mode by introducing a wait state for 5ms in the processor cycle. **15**

   (b) Explain the concept of Segmented memory. What are its advantages ? **5**

UNIT–IV

7. (a) Interface an 8255 with 8086 at 80H as an I/O address of Port A. Interface five 7 segment displays with the 8255. Write an ALP to display 1, 2, 3, 4 and S over the 5 displays continuously as per their positions starting with 1 at least significant position. **10**

   (b) What is intel 8259 chip ? Discuss its use and operation in a 8086 Microprocessor based system. **10**

8. (a) Define an Interrupt. Describe the interrupt response of an 8086 processor. **10**

   (b) Draw the block diagram of 8251 and explain the function of each block. **10**