Roll No. 270523 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/$\overline{MX}$, $\overline{RD}$, $\overline{TEST}$. 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 Microprocessor. 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