| A22 – 07789 |

## DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/ MANAGEMENT/COMMERCIAL PRACTICE, APRIL – 2022

## MICROPROCESSORS AND INTERFACING

[Maximum Marks: **100**]                                                                 [Time: **3** Hours]

### PART-A

I.      (Answer **all** questions in one or two sentences.  Each question carries **2** marks)

1. State the use of ALE in 8086 microprocessor.

2. Mention the use of AAM instruction in 8086.

3. Give the name of keyboard or display interface chip with 8086.

4. Define interrupt.

5. What is SSE.                                                                                 (5 x 2 = 10)

### PART-B

II.      (Answer **any five** of the following questions.   Each question carries **6** marks)

1. List any six features of 8086.

2. Give the role of microprocessor in microcomputers.

3. Describe macro and its syntax with its advantages and directives.

4. Describe any three String instructions.

5. Discuss about priority of interrupts in 8086.

6. Mention any six features of 80386 microprocessor.

7. Describe about Hyper threading and MMX technology.                     (5 x 6 = 30)

### PART-C
(Answer **one** full question from each Unit.  Each full question carries **15** marks)

### UNIT – I

III.  Explain the functioning Units of 8086 microprocessor with neat diagram.                     (15)

### OR

IV.  (a) List and explain addressing modes of 8086 with examples.                                   (9)

   (b) Describe the maximum mode operation of 8086.                                               (6)

## UNIT – II

V.  (a) Describe branch instruction of 8086 in detail. (9)

(b) Describe any six Data transfer instructions in 8086. (6)

**OR**

VI. (a) Illustrate addition, multiplication and division operation with examples using 8086 instructions. (9)

(b) Describe shift and rotate instruction in 8086. (6)

## UNIT- III

VII.  (a) Outline the importance and features of interrupt controller. (5)

(b) Explain organization of interrupt controller with a block diagram. (10)

**OR**

VIII. Explain the organization of Programmable peripheral interface block diagram. (15)

## UNIT - IV

IX.  (a) Describe Pipelining, Pipelining Hazards and types of pipelining hazards. (9)

(b) Describe features of Pentium processors. (6)

**OR**

X.  (a) Discuss Cache coherence problem and its solutions. (9)

(b) Describe modes of operation of 80386. (6)

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