

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/  
MANAGEMENT/COMMERCIAL PRACTICE, NOVEMBER – 2021**

**MICROPROCESSORS AND INTERFACING**

[Maximum Marks: 75]

[Time: 2.15 Hours]

**PART-A**

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

- I. 1. List the four segment registers.  
2. Write use of MN/MX pin of 8086.  
3. Give syntax for a macro definition.  
4. Define interrupt.  
5. List any two features of 80386 processors. (3 x 2 = 6)

**PART-B**

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

- II. 1. Explain memory segmentation of 8086 microprocessors.  
2. Explain the use of Loop instruction with an example.  
3. Discuss the various logical instructions used in 8086.  
4. Explain the interrupt response of 8086 microprocessor.  
5. Discuss different operating modes of 8255.  
6. Discuss the following.  
    (i) MMX   (ii) Hyper threading  
7. Explain cache coherence. (4 x 6 = 24)

**PART-C**

(Answer *any of the three units* from the following. Each full question carries 15 marks)

**UNIT – I**

- III. (a) Explain any four addressing modes with example. (8)  
(b) Explain different features of 8086 microprocessors. (7)

**OR**

- IV. (a) Explain the internal architecture of 8086 microprocessor with block diagram. (15)

## UNIT – II

- V. (a) Explain the use of procedures with an example. (8)  
(b) Write an assembly language program to find square of any numbers. (7)

**OR**

- VI. (a) Discuss any four data transfer instructions with examples. (8)  
(b) Write an assembly language program to compare two strings. (7)

## UNIT- III

- VII. (a) Explain the functional blocks of 8255 with a block diagram. (8)  
(b) Discuss various dedicated interrupt types. (7)

**OR**

- VIII.(a) Explain the architecture of programmable interrupt controller with block diagram. (15)

## UNIT - IV

- IX. (a) Explain the features of Pentium microprocessor. (8)  
(b) Discuss pipeline hazards. (7)

**OR**

- X. (a) Describe the different operating modes of 80386. (8)  
(b) Explain multicore processing architecture with a diagram. (7)

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