

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/
COMMERCIAL PRACTICE, APRIL- 2023**

MICROPROCESSORS AND INTERFACING

[Maximum marks: 100]

(Time: 3 Hours)

PART – A

Maximum marks : 10

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

1. List any two features of 8086.
2. Name the segment registers of 8086.
3. Write any four arithmetic instructions of 8086.
4. Define Interrupt Service Routine (ISR).
5. Name the two memory addressing modes of 80386.

(5 x 2 = 10)

PART – B

Maximum marks : 30

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

1. Sketch the format of 8086 flag register and designate the bits.
2. List and explain any three addressing modes of 8086.
3. Explain the conditional branching instructions of 8086.
4. Write short notes on Interrupt Vector Table (IVT).
5. List the modes of operation of 8255.
6. Give any four important features of 80386.
7. Explain multicore processing.

(5 x 6 = 30)

PART – C

Maximum marks : 60

(Answer one full question from each unit. Each full question carries 15 marks)

UNIT –I

III. Describe the internal architecture of 8086 with a block diagram.

(15)

OR

- IV. (a) Explain the register organization of 8086. (8)
(b) Explain the advantages of segmentation. (7)

UNIT-II

- V. (a) Explain the data transfer instructions of 8086. (8)
(b) Write an assembly language program to add two 16-bit numbers. (7)

OR

- VI. (a) Write an assembly language program to convert a packed BCD byte to two unpacked BCD bytes. (8)
(b) Compare macro and procedure. (7)

UNIT-III

- VII.(a) List and explain the predefined interrupts of 8086. (8)
(b) Describe the priority of interrupts in 8086. (7)

OR

- VIII.(a) Draw the block diagram of 8259 and explain the functions of each block. (8)
(b) Draw the schematic diagram showing the pins and signals of 8279. (7)

UNIT-IV

- IX. (a) Explain the architecture of Pentium processor. (8)
(b) Explain PVAM of 80386. (7)

OR

- X. (a) Explain the superscalar architecture of Pentium. (8)
(b) Write short notes on MMX technology (7)
