

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/
MANAGEMENT/COMMERCIAL PRACTICE, APRIL - 2026**

MICROPROCESSORS AND INTERFACING

[Maximum Marks: 100]

[Time: 3 Hours]

PART-A

[Maximum Marks: 10]

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

1. Define Assembler.
2. List any four general-purpose registers in 8086.
3. List any two-string instructions.
4. Name two hardware interrupts of 8086
5. Name the operating 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. List the features of 8086.
2. Write any six data transfer instructions with format and examples.
3. Describe the flag register in 8086.
4. Explain the steps in processing an interrupt.
5. Explain the different modes of operation of 8255.
6. List the features of the 80386 processor.
7. List the features of Pentium.

(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. Explain the architecture of 8086 with a neat block diagram. (15)

OR

- IV. a. Explain the addressing modes of 8086. (8)
b. Describe the registers of 8086. (7)

UNIT – II

- V. a. Explain the arithmetic instructions of 8086. (8)
b. Write an assembly language program to find the factorial of a number. (7)

OR

- VI. a. Explain shift and rotate instructions. (8)
b. Write an assembly language program to add two 16-bit numbers. (7)

UNIT- III

- VII. a. Explain 8259 controller with a neat diagram. (10)
b. Explain the keyboard and display interface mechanism. (5)

OR

- VIII. a. Explain the internal block diagram of 8255. (10)
b. Describe the different types of interrupts of 8086. (5)

UNIT - IV

- IX. a. Describe the different modes of operation of 80386. (10)
b. Explain the different stages of Pipelining. (5)

OR

- X. a. Explain the features of 80386. (10)
b. Explain Superscalar Architecture. (5)
