

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/
COMMERCIAL PRACTICE, APRIL - 2024**

MICROPROCESSOR 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. Define data pipelining.
2. List pointer and index registers of 8086.
3. Write the functions of interrupt.
4. What is the use of XCHG instruction?
5. List any two features of 8086 processor.

(5 x 2 = 10)

PART – B

Maximum marks: 30

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

1. Explain about memory segmentation in 8086.
2. Illustrate with example how cmp instruction is used.
3. Explain about shift and rotate instructions.
4. Write the features of Pentium processor.
5. Differentiate hardware and software interrupts.
6. Explain the issues regarding multicore processors.
7. Explain about the pins related to minimum mode configuration of 8086.

(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.** (a) List and explain the general purpose registers in 8086. (6)
- (b) Explain the flag register organisation. (9)

OR

- IV.** With the help of block diagram explain the architecture of 8086. (15)

UNIT - II

- V.** (a) Explain addressing modes of 8086. (7)
(b) Demonstrate any 4 arithmetic instructions. (8)

OR

- VI.** (a) List and explain conditional branch instructions of 8086. (7)
(b) Differentiate procedure and macro. (8)

UNIT - III

- VII.** (a) With the help of a figure explain the block diagram of 8255. (9)
(b) Write the steps in interrupt handling. (6)

OR

- VIII.** (a) Illustrate the block diagram of 8259. (9)
(b) Explain the keyboard section of 8279. (6)

UNIT – IV

- IX.** (a) Explain the pipeline stages of Pentium processor. (9)
(b) Write brief notes on HT technology. (6)

OR

- X.** (a) Describe about MMX processors. (8)
(b) Explain about superscalar architecture. (7)
