

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/  
MANAGEMENT/COMMERCIAL PRACTICE — APRIL, 2018

**MICROPROCESSOR**

[Time : 3 hours]

(Maximum marks : 100)

PART — A

(Maximum marks : 10)

Marks

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

1. List the main features of 8086 processors.
2. What is meant by LEA instruction ?
3. What is meant by software interrupt ?
4. What is MMX processors ?
5. List the major blocks of Pentium processors.

(5×2 = 10)

PART — B

(Maximum marks : 30)

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

1. Explain the minimum mode operation of 8086 processors.
2. Explain any three control transfer instructions.
3. What are predefined interrupts ?
4. Explain superscalar architecture of Pentium processor.
5. Explain the operating modes of 8257
6. Differentiate isolated i/o and memory mapped i/o in 8086.
7. Explain the registers in Pentium processor.

(5×6 = 30)



## PART — C

(Maximum marks : 60)

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

## UNIT — I

- III (a) Explain about the functional units of 8086 processor. 9  
 (b) How 20 bit physical address is calculated in 8086 ? 6

OR

- IV (a) Explain the addressing modes of 8086. 8  
 (b) Explain the register organization of 8086 processor. 7

## UNIT — II

- V (a) Explain about the following instructions. 8  
     (i) LOOPE                      (ii) CMC  
     (iii) XCHG                    (iv) STI  
 (b) Write program to add two 8 bit numbers. 7

OR

- VI (a) List and explain any 4 processor control instructions. 8  
 (b) Write a program to read and display a string. 7

## UNIT — III

- VII (a) Explain the keyboard display interfacing in 8279. 7  
 (b) Draw and explain the functional block diagram of 8255. 8

OR

- VIII (a) Explain the features of 8257. 6  
 (b) Explain about the operating modes of 8255. 9

## UNIT — IV

- IX (a) Describe the data types in MMX processors. 6  
 (b) Explain the instructions used in MMX processor. 9

OR

- X (a) Describe HT technology. 6  
 (b) Explain the integer pipeline unit in Pentium processor. 9