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

MICROPROCESSOR

[*Time* : 3 hours

(Maximum marks : 100)

Marks

PART — A

(Maximum marks : 10)

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)

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Marks

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.

(i) LOOPE (ii) CMC

(iii) XCHG (iv) STI 8

(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

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