TED (10) – 4046

(REVISION — 2010)

Reg. No..

Signature ....

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

MICROPROCESSORS AND MICROCONTROLLERS

[*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 different modes of operations of 8086.

2. Explain pipelining.

3. Necessity of interfacing ICs.

4. Size of RAM and ROM in 8051.

5. Define editor.

(5×2 = 10)

PART — B

(Maximum marks : 30)

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

1. Explain different segment registers in 8086.

2. Draw the pin diagram of 8051 IC.

3. Explain the functions of BIU in 8086.

4. Draw and explain TCON register.

5. Explain addressing modes of 8051.

6. Draw the pin diagram of 8253 IC.

7. Draw and explain IF register.

(5×6 = 30)

[295]

[P.T.O.

Marks

PART — C

(Maximum marks : 60)

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

Unit — I

III   (a)   Briefly explain the instruction set of 8086 microprocessor IC.   10

    (b)   Explain the features of 8086 microprocessor IC.   5

Or

IV   (a)   Draw the pin diagram of 8086 IC and explain.   10

    (b)   Explain how the 20 bit physical address is generated by 8086.   5

Unit — II

V   Draw and explain the internal architecture of 8051 microcontroller IC.   15

Or

VI   (a)   Explain internal RAM structure of 8051.   10

    (b)   What is SFR ? Explain briefly.   5

Unit — III

VII   Explain different modes of operations of 8051 timer.   15

Or

VIII   (a)   Draw and explain IP registers.   7

    (b)   Explain 8051 interrupts.   8

Unit — IV

IX   (a)   Draw and explain internal diagram of 8253 IC   10

    (b)   Draw the pin diagram of 8279 IC.   5

Or

X   (a)   Draw the schematic diagram, to interface 8051 with external memory and explain.   10

    (b)   Draw the schematic diagram to interface 8051 with DAC.   5