TED (15) – 5131

(REVISION – 2015)

Reg. No. [redacted]

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DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/ MANAGEMENT/COMMERCIAL PRACTICE – OCTOBER, 2017

MICROPROCESSORS AND INTERFACING

[*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 segment registers of 8086.
2. What is ALE ?
3. Define PUSHF and POPF
4. Write two major interfaces provided by 8279.
5. Write any two features of Pentium. (5×2 = 10)

PART – B

(Maximum marks : 30)

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

1. Explain various flags in 8086.
2. Write about minimum mode configuration of 8086.
3. How macros are defined and used in 8086.
4. Explain how a 2-digit packed BCD number is converted to unpacked BCD digits.
5. Define interrupt service routine and interrupt vector. Draw the format of interrupt vector in 8086.
6. List the internal registers in 8259 and explain how interrupts are handled in 8259.
7. Explain the three types of pipeline hazards. (5×6 = 30)

Marks

PART — C

(Maximum marks : 60)

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

UNIT — I

III Draw and explain the internal architecture of 8086. 15

OR

IV (a) Explain any four addressing modes of 8086 with examples. 8

(b) Describe the register organization of 8086. 7

UNIT — II

V (a) Explain any four conditional jump instructions in 8086. 8

(b) Write an assembly language program to find the factorial of a number. 7

OR

VI (a) Explain shift and rotate instructions in 8086. 8

(b) Write an assembly language program to divide two single digit numbers. 7

UNIT — III

VII (a) Describe hardware and software interrupts. 8

(b) Explain the steps in processing an interrupt request. 7

OR

VIII (a) Draw the internal diagram of 8255 and briefly explain each block. 8

(b) Explain three modes of operation of 8255. 7

UNIT — IV

IX (a) Draw the diagram of a multicore processor and explain mutticore processing concept. 8

(b) Draw and explain a five stage pipeline. 7

OR

X (a) Explain the features of 80386. 8

(b) Explain the superscalar architecture with suitable diagram. 7

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