TED (15) – 6041

(REVISION — 2015)

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/ MANAGEMENT/COMMERCIAL PRACTICE — OCTOBER, 2019

ADVANCED MICROPROCESSORS

[*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. Define an assembler directive.

2. List any two disadvantages of single core processor.

3. Define hyper threading.

4. How can we configure the 8086 processor in Maximum mode ?

5. Explain the term pipelining.   (5×2 = 10)

PART — B

(Maximum marks : 30)

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

1. Explain the paging mechanism in 80386.

2. Discuss the generation of 20 bit physical address in 8086.

3. Draw the block diagram of the internal architecture of Core 2 duo processor.

4. Explain : (a) Immediate addressing mode (b) Register Addressing mode and (c) Direct Addressing modes with examples.

5. Explain the Assembler Directives

   (a) EQU   (b) INCLUDE   (c) EVEN

6. Write the features of Pentium Pro processor.

7. Describe the pins

   (a) DEN   (b) ALE   (c) READY   (5×6 = 30)

[220]

[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)   Draw the flag register structure of 8086. Explain the functionality of each flag.   8

     (b)   Draw the architecture of 8086.   7

OR

IV   (a)   Explain the minimum mode configuration in 8086.   8

     (b)   Explain memory segmentation in 8086.   7

UNIT — II

V   (a)   Explain the interrupt handling procedure in 8086.   7

     (b)   Explain different types of interrupts in 8086.   8

OR

VI   (a)   Mention what each of the following instruction performs, with examples if needed.
       (i) DAA   (ii) ROR   (iii) REP   (iv) JNE/JNZ   (v) CMC   (vi) IRET   (vii) LOOP   7

     (b)   Write an 8086 ALP program to multiply two 8 - bit numbers.   8

UNIT — III

VII   Explain the operating modes of 803886. Draw diagrams where ever needed.   15

OR

VIII   (a)   Draw the architecture of Pentium Processor.   7

      (b)   Explain the features of Pentium Processor.   8

UNIT — IV

IX   (a)   Specify any four advantages and disadvantages of multi-core technology.   8

     (b)   Compare single and multi-core processors with block diagram.   7

OR

X   (a)   List the important technological features of IA processors.   8

     (b)   Compare core i3, i5 and i7 processors.   7