Reg. No. ....

Signature ....

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

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. Name any two processors in 8086 family.

2. Define Assembler.

3. List any two data transfer Instruction.

4. Expand PPI.

5. List the operating modes of 80386.

(5×2 = 10)

PART — B

(Maximum marks : 30)

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

1. Briefly describe memory segmentation in 8086 processor.

2. List jump instructions in 8086.

3. Write an assembly language program to display the message Welcome to ALP programming.

4. Write any three arithmetic instructions with example.

5. Differentiate between software interrupts and hardware interrupts.

6. Write short notes on MMX.

7. Discuss multi core processing.

(5×6 = 30)

[110]

[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) Explain different addressing modes of 8086.   10

   (b) Identify the use of instruction queue in 8086.   5

OR

IV (a) Differentiate between Bus interface unit and Execution unit in 8086.   10

   (b) List the different flags associated with data operations.   5

UNIT — II

V (a) Write an assembly language program to find the factorial of a number.   9

   (b) Explain string instructions with examples.   6

OR

VI (a) Write an assembly language program to read a character and display it in lower case, if it is in uppercase and vice versa.   8

   (b) Write an assembly language program to find whether the number is odd or not.   7

UNIT — III

VII (a) With a neat diagram, explain 8259 controller.   10

   (b) Briefly describe dedicated interrupts.   5

OR

VIII (a) Explain the control word and BSR mode of 8255.   12

   (b) Define Interrupt.   3

UNIT — IV

IX (a) Explain any one mode of operation of 80386.   7

   (b) Explain the features of 80386.   8

OR

X (a) Explain the superscalar architecture with an example.   9

   (b) Write short notes on pipelining hazards.   6