TED (15) 5131

(Revision-2015)

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Reg.No.....

Signature.....

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/
MANAGEMENT/COMMERCIAL PRACTICE, NOVEMBER-2020

MICROPROCESSOR AND INTERFACING

[Maximum marks: 75] (Time: 2.15 Hours)

PART – A

I. Answer any ***three*** questions in one or two sentences. Each question carries 2 marks

1. What are the applications of 8279 IC?
2. What is an assembler directive? Give example
3. List the general purpose registers of 80386 CPU
4. What are the different modes of operation of 8086?
5. What is the maximum size of a memory segment of 8086 ? (3 x 2 = 6)

PART – B

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

1. Calculate the physical address if the contents of DS = 2000H and DI = 2345H.
2. What will be the value of AL and Status of Carry flag, Zero flag and Sign flag after executing the following instructions

   MOV AL, 72H

   ADD AL, 94H
3. Explain Register addressing mode and direct addressing mode of 8086 with suitable example.
4. Explain any three Rotate instructions of 8086
5. Explain the MMX data types
6. Explain interrupt vector table 8086.
7. Describe the control register format for BSR mode operation of 8255 (4 x 6= 24)

PART – C

Answer ***any of the three units*** from the following. Each full question carries 15 marks

UNIT –I

III With a neat diagram, explain the internal architecture of 8086 microprocessor (15)

OR

IV Explain the flag registers of 8086 with a neat diagram (15)

UNIT-II

V (a) List and explain the functions of any four data transfer instructions of 8086 microprocessor with suitable example (8)

(b) Write a program segment to add the content of two memory variable named ***Number 1*** and ***Number 2*** and store the result in to another memory variable named ***sum.*** (7)

OR

VI (a) List and explain the functions of any four Logical instructions of 8086 with suitable example (8)

(b) Write an assembly language segment to copy the content of 10 consecutive elements of Block 1 to Block 2. Assume that Block 1 and Block 2 are defined as byte accessible. Use string handling instructions to copy the data. (7)

UNIT-III

VII (a) Explain the internal Architecture of 8255 programmable Peripheral interface with a neat sketch (8)

(b) Explain different modes of operation of 8255 (7)

OR

VIII (a) Explain the interfacing of 8259 with 8086 microprocessor with a neat sketch. (8)

(b) Explain the priority of interrupts of 8086 (7)

UNIT-IV

IX (a) Draw and explain the super scalar architecture of Pentium CPU (8)

(b) Explain different modes of operation of 80386 (7)

OR

X (a) Explain the working of a five stage instruction pipeline with necessary figures (8)

(b) Explain different pipeline hazards (7)

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