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10EC62

Sixth Semester B.E. Degree Examination, June/July 2018
Microprocessors

Time: 3 hrs. Max. Marks:100

Note: ***Answer any FIVE full questions, selecting at least TWO questions from each part.***

PART – A

1 a. Draw the internal architecture of the 8086 and explain. **(10 Marks)**

b. What is addressing mode? Explain the different addressing mode of 8086? Explain each with examples. **(10 Marks)**

2 a. Explain the following instructions :
i) LEA ii) IDIV iii) DAA iv) JNGE v) SHR. **(10 Marks)**

b. Explain various instruction formats used in 8086 with suitable example. **(10 Marks)**

3 a. Explain the following instructions with examples :
i) MOVS B ii) CMPS B iii) SCAS B iv) repeat prefix (REP) v) LODS. **(10 Marks)**

b. Write a 8086 procedure to convert packed BCD Number in AL to ASCII equivalent in AX. **(06 Marks)**

c. Compare procedure and macro. **(04 Marks)**

4 a. Explain atleast FIVE dedicated interrupts in 8086. **(10 Marks)**

b. What are hardware interrupts of 8086? Write the interrupt priority of 8086. **(05 Marks)**

c. Explain the software interrupt operation of 8086. **(05 Marks)**

PART – B

5 a. Write a keyboard procedure that scans the keyboard (4×4 matrix) and returns with numeric code of the key in AL. **(10 Marks)**

b. Explain the interfacing of a steppermotor to 8086 with necessary circuit diagram. Write an ALP to rotate the stepper motor clockwise by one complete rotation and anticlockwise by one complete rotation. **(10 Marks)**

6 a. Explain the data types of Numeric data processor 8087. **(10 Marks)**

b. Explain the function of the following instructions :
i) FCOMP ii) FENI iii) FDECSTP iv) FSTENV v) FYL2XP1 **(10 Marks)**

7 a. With a block diagram, explain the maximum mode of operation of 8086. **(10 Marks)**

b. Write a note on USB. **(10 Marks)**

8 a. List the different registers in 80386. **(08 Marks)**

b. Explain basic features of Pentium processor. **(06 Marks)**

c. List the features of 80386 processor. **(06 Marks)**

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.

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