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10EC/TE62

Sixth Semester B.E. Degree Examination, June/July 2016
Microprocessors

Time: 3 hrs.

Max. Marks: 100

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

PART – A

- 1 a. With a neat diagram explain the internal architecture of 8086. (08 Marks)
b. Explain about segment registers and its advantages. (06 Marks)
c. Explain about instruction execution time dependency parameters. (06 Marks)
- 2 a. Explain the following instruction function with an example:
(i) LOOP (ii) IMUL (iii) XLAT (iv) AAM (06 Marks)
b. What is assembler directive? Explain the following assembler directives:
(i) ASSUME (ii) PUBLIC (iii) ALIGN (08 Marks)
c. Write an ALP to perform GCD of two 16-bit integers and comments. (06 Marks)
- 3 a. Write an ALP to perform reversing string along with flow chart. (08 Marks)
b. List out two differences between MACRO and PROCEDURE. (06 Marks)
c. List and briefly explain String instruction. (06 Marks)
- 4 a. What is interrupt? Explain about dedicated interrupts with respect to 8086. (08 Marks)
b. Briefly explain about hardware and software interrupt applications. (06 Marks)
c. What are the steps involve during the interrupt response. (06 Marks)

PART – B

- 5 a. What is interfacing? Explain about $m \times n$ matrix keyboard interface diagram along with program and flow chart. (14 Marks)
b. Briefly explain about 8255 control word format. (06 Marks)
- 6 a. Explain about control register of 8087. (06 Marks)
b. Explain about various data types with respect to 8087. (06 Marks)
c. What is co-processor? Why it is called so? Give the significance of 8087 NDP. (08 Marks)
- 7 a. Explain maximum mode operation of 8086 with relevant block diagram. (10 Marks)
b. Write a short note on PCI and USB. (10 Marks)
- 8 a. Write the salient features of 80486. (06 Marks)
b. Briefly explain about 80386 special registers. (10 Marks)
c. Write a note on Pentium processor. (04 Marks)

Important Note : 1. On completing your answers, carefully draw diagonal cross lines on the remaining blank spaces.
2. Any revealing of identification, appeal to evaluator and/or equations written eg. 42+8 = 50, will be treated as malpractice.