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06CS45

Fourth Semester B.E. Degree Examination, June 2012
Microprocessors

Time: 3 hrs.

Max. Marks:100

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

PART – A

- 1 a. With the help of a neat diagram, explain the internal architecture of 8086. (12 Marks)
- b. Explain different addressing modes of 8086, with examples. (08 Marks)
- 2 a. Explain MOV instruction coding format with the help of an example. (12 Marks)
- b. Explain the following assembly language program development tools : (08 Marks)
 - i) Assembler ii) Debugger
 - iii) Linker iv) Emulator.
- 3 a. Explain different types of unconditional jump statements in 8086. List and explain different conditional jump statements in 8086. (12 Marks)
- b. Write a delay loop which produces a delay of 500 μ s on 8086 with 5-MHZ clock. (08 Marks)
- 4 a. Write 8086 assembly language program to do the following using string instructions : (12 Marks)
 - i) Move a string from one memory location to another.
 - ii) Compare two strings located in different memory locations.
- b. Explain CALL and RET instructions in 8086. (04 Marks)
- c. Explain with example how the macros are defined and called. (04 Marks)

PART – B

- 5 a. Explain the working of the following instructions with an example to each : (12 Marks)
 - i) MUL ; ii) JP ; iii) IRET ; iv) IDIV ; v) RCL ; vi) LOOPZ.
- b. Explain with example following assembler directives : (08 Marks)
 - i) ASSUME ii) INCLUDE
 - iii) PROC-ENDP iv) SEGMENT – ENDS.
- 6 a. Explain with the help of neat block diagram, a simple 8086 based micro computer, with 8086 in min mode. (12 Marks)
- b. Explain the block diagram of 8086 memory bank. Discuss the accessing of byte or word from memory. (08 Marks)
- 7 a. Explain 8086 interrupt response. E interrupts of TYPE 0, TYPE 1, TYPE 2 and TYPE 4. (12 Marks)
- b. Explain with neat diagram internal organization of 8259 A priority interrupt controller. (08 Marks)
- 8 a. Explain with neat diagram internal organization of 8255 A programmable parallel port device. Discuss different modes of 8255 A. (12 Marks)
- b. Explain the control word format of 8255 A. (08 Marks)

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