

--	--	--	--	--	--	--	--	--	--

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 :
i) Assembler ii) Debugger
iii) Linker iv) Emulator. (08 Marks)
- 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 :
i) Move a string from one memory location to another.
ii) Compare two strings located in different memory locations. (12 Marks)
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 :
i) MUL ; ii) JP ; iii) IRET ; iv) IDIV ; v) RCL ; vi) LOOPZ. (12 Marks)
b. Explain with example following assembler directives :
i) ASSUME ii) INCLUDE
iii) PROC-ENDP iv) SEGMENT – ENDS. (08 Marks)
- 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)