

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

Fourth Semester B.E. Degree Examination, December 2011
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. Define microprocessor. With a neat block diagram, explain the overview of microcomputer. (06 Marks)
- b. What is flag register? Explain the flag register format, in detail (06 Marks)
- c. List and explain the addressing modes supported by 8086. (08 Marks)
- 2 a. Is coding the instruction for 16-bit processor is difficult? Give reasons. (04 Marks)
- b. Generate the machine equipment code for the following 8086 instruction:
MOV CS:[BX], DL (06 Marks)
- c. Explain the assembly language programming development tools. Write the algorithm for each. (10 Marks)
- 3 a. Write an assembly level program to convert two ASCII codes to packed BCD numbers. (06 Marks)
- b. What is the need for unconditional jump instructions? Explain the different unconditional jump instructions, supported by 8086. (08 Marks)
- c. Write a delay loop, which produces a delay of 500 μ s on 8086 microprocessor, with 5 MHz clock. (06 Marks)
- 4 a. Explain the string instructions supported by 8086. (08 Marks)
- b. Write an assembly level program to check a given string is pallendrome or not, using the string instruction. (08 Marks)
- c. Define and differentiate between reentrant and recursive procedures. (04 Marks)

PART – B

- 5 a. What is effect of using the following instructions or directives in 8086 programming:
i) GLOBAL ii) CALL iii) LAHF iv) TYPE v) NEG
vi) DQ vii) LEA viii) TEST ix) GROUP x) XLAT (10 Marks)
- b. Write an assembly level program to find the binomial-coefficient, using recursion. (10 Marks)
- 6 a. Write and explain all the signal activities on 8086 buses, during a simple read operation. (10 Marks)
- b. What is the need for memory banking? With a neat block diagram, explain the memory banking, in 8086. (10 Marks)
- 7 a. List and explain the hardware interrupt applications. (08 Marks)
- b. With a neat block diagram, explain the 8259A system connections. (09 Marks)
- c. List the differences between 8086 and 8088. (03 Marks)
- 8 a. With a neat block diagram, explain the internal block diagram of 8255A. (08 Marks)
- b. Design a control word for interfacing keyboard. (02 Marks)
- c. Write on assembly level program to interface logic controller for multiplication of two 8-bit numbers. (10 Marks)
