

FACULTY OF ENGINEERING
B.E. 3/4 (ECE) I-Semester (Suppl.) Examination, July 2014

Subject : Microprocessors & Microcontrollers

Time : 3 Hours

Max. Marks: 75

Note: Answer all questions of Part - A and answer any five questions from Part-B.

PART – A (25 Marks)

- 1 What is the function of READY pin in 8086? (2)
- 2 Explain the following alignment directions of 8086 (a) EVEN (b) ORG (2)
- 3 What are functions of 8086 pins (a) DT/R (b) DEN (2)
- 4 Discuss memory banks of 8051. (3)
- 5 What is the purpose of Instruction Queue in 8086? (2)
- 6 What is the size of physical memory in 8086? Why? (2)
- 7 Explain the following instructions (3)
 - (a) djnz (b) SWAPA (c) CJNE
- 8 What is Microcontroller? How does it differ from microprocessor? (3)
- 9 Discuss addressing modes of 8051 with examples. (3)
- 10 What is stack? Write its role in CALL Instruction. (3)

PART – B (50 Marks)

- 11 Write and explain Architecture of 8086. (10)
- 12 (a) Write an ALP in 8086 to sort a given list in ascending order. (5)
 (b) Explain addressing modes of 8086. (5)
- 13 Interface keyboard and display unit with 8086. (10)
- 14 (a) Interface the following memory ICs with 8086
 (i) Two 4KB EPROMs ending at FFFFFH (5)
 (ii) Two 4KB SRAMs, starting at 00000H (5)
 (b) What is 8255? Discuss its modes.
- 15 (a) What is Assembler? Discuss the assembler directives of 8086. (5)
 (b) Explain physical memory organization of 8086. (5)
- 16 (a) How do you program 8051 timer in mode 1 to generate a delay of 5 msec. (5)
 (b) Write a program to transfer 'A' serially at 4800 baudrate continuously. Show configurations of all systems required. (5)
- 17 Write short notes on any two of the following: (10)
 - (a) 8086 Interrupts
 - (b) Stepper motor Interface
 - (c) Analog to Digital converter
