FACULTY OF ENGINEERING
B.E. 3/4 (EEE / Inst.) II – Semester (Main) Examination, June 2014

Subject: Microprocessors and Microcontrollers

Time: 3 Hours   **Max.Marks: 75**

Note: Answer all questions from Part A. Answer any five questions from Part B.
PART – A

1	List the advantages of segmented memory.	(2)
2	Explain about instruction queue.	(2)
3	Explain the functioning of following directives: DQ, EXTRN.	(4)
4	Explain the following pins of 8086: $\overline{BHE}$, ALE.	(2)
5	Give the control word format of 8253 programmable interval timer.	(3)
6	Give the contents of program statue word of 8051.	(2)
7	Define baudrate.	(2)
8	Explain about HOLD pin of 8086.	(2)
9	Explain any two software interrupts of 8086.	(4)
10	Mention difference between microprocessor and microcontroller.	(2)

PART – B

11 (a) Explain the architecture of 8086 microprocessor with help of a neat sketch. (6)
   (b) Explain any two string instructions and branching instructions with examples. (4)

12 (a) Write an assembly language program for 8086 to multiply two numbers using shift and add method. (6)
   (b) Explain any three program control directives. (4)

13 (a) Give the block diagram of 8255 PPI. (4)
   (b) Explain the procedure to interface a matrix keyboard to 8086. (6)

14 (a) Explain the architecture of 8051 microcontroller with a neat sketch. (5)
   (b) Write an assembly language program for 8051 to add ten 8-bit BCD numbers and store the result in external memory. (5)

15 (a) Explain any two addressing modes of 8051 with examples. (4)
   (b) Explain the procedure of interfacing 8051 to LEDs in order to light 8 LEDs alternately. (6)

16 Explain the modes of operation of timers and counters of 8051. (10)

17.(a) Explain about BSR mode of 8255 PPI. (4)
   (b) Explain the procedure to interface D/A converter to 8086 to generate a sawtooth waveform. (6)

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