

**FACULTY OF ENGINEERING****B.E. 3/4 (EE/Inst.) II-Semester (New) (Main) Examination, May 2013****Subject : Microprocessors and 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 importance of Direction Flag bit in 8086 Flag Register? (2)
2. What are the functions of CS and SS segment registers in 8086 microprocessor? (3)
3. Mention important features of Bus Interface unit in 8086 microprocessor Architecture. (3)
4. What is the role of a debugger program in any assembly language programming? (2)
5. Compare procedures and macros. (3)
6. List software Interrupts of 8086. (2)
7. Mention the important features of 8279. (3)
8. Give alternative functions of port 3 in 8051. (3)
9. Mention the important features of 8051 microcontroller. (2)
10. Mention different timer modes of operation in 8051 microcontroller. (2)

**PART – B (50 Marks)**

11. Write an example to each explain all the addressing modes of 8086 microprocessor. (10)
12. With an example explain the following 8086 instructions (10)  
(a) PUSH (b) LEA (c) XLAT (d) NOT (e) ROR
- 13.(a) Write 8086 Assembly Language Program to find maximum number in the array of 10 numbers of 8 bit. (6)  
(b) Explain the following 8086 Directives (4)  
(i) PAGE (ii) MODEL
- 14.(a) Explain BSR mode of 8255 PPI. (5)  
(b) Write the control word format of 8253 programmable Interval Timer. (5)
15. Draw the pin diagram of 8051 micro controller and explain each pin function in detail. (10)
16. With examples explain All logical and data movement instructions of 8051 microcontroller. (10)
17. With a diagram explain D/A converter Interfacing with 8051 and write an Assembly Language Program of 8051 to generate a square waveform. (10)