Code No.: 3070

FACULTY OF ENGINEERING

B.E. III/IV Year (E & EE/Inst.) II Semester (Main) Examination, May/June 2011

MICROPROCESSORS AND MICROCONTROLLERS

Time : 3 Hours] [Max. Marks : 75

Answer **all** *questions from Part A.*
Answer any **five** *questions from Part B.*

Part A – (Marks: 25)

1. What are the advantages of segmentation in 8086? 3
2. What is the purpose of Queue in the BIU of 8086? 2
3. What are the conditional flags of 8086 microprocessor? 2
4. Explain the difference between Jump and CALL instructions. 2
5. What is EQU assembler directive and give suitable example. 3
6. Write a control word to make all the Ports are input Ports (intel 8255). 3
7. What is the difference between procedure and Macros? 2
8. Give alternate functions of Port 3 of 8051. 3
9. Compare microprocessor and microcontroller. 3
10. What are the interrupt resources ? 2

Part B – (Marks : 50)

11. (a) Draw the internal architecture of 8086 microprocessor and explain the functions of BIU and EU. 5

    (b) Explain general purpose registers of 8086. 5

12. (a) Write an ALP in 8086 to determine numbers of even elements and number of odd elements in a given array. 5

    (b) Explain all possible assembler directives creates storage for a byte or group of bytes. 5

13. (a) Explain command words/mode words of 8255. 5

(b) Explain different modes of 8255 in detail 5

14. (a) Draw the pin diagram of 8051 microcontroller and explain pin functions in detail. 10

15. (a) Explain how array of LED'S are interfaced to 8086 microprocessor through 8255. 5

(b) Develop an ALP in 8086 to display the LED'S ON and OFF alternatively. 5

16. (a) What are the different modes of 8051 timers/counters and explain one of the timer mode operation with example. 5

(b) Explain interrupts of 8051 microcontroller. 5

17. (a) Discuss memory and I/O interfacing. 4

(b) Explain different modes of operations of intel 8253. 6