Code No.: **6330**

FACULTY OF ENGINEERING

B.E. (III/IV Year) (EE/Inst.) II Semester (Main) Examination, June 2010

MICROPROCESSORS AND MICRO CONTROLLERS

Time : 3 Hours]   [Max. Marks : 75

Answer all questions from Part A.

Answer any five question from Part B.

Part A – (Marks : 25)

1. What is an assembler directive? Explain the EXTRN Assembler Directive.   (3)

2. Illustrate with an example how the 20 bit physical address of a code byte is computed.   (3)

3. Compare the procedures and manos in brief.   (3)

4. What is the difference between machine code and assembler code.   (2)

5. Bring out the advantages of using mode O over model 1 in 8255.   (3)

6. Explain the FIFO status word of 8279.   (3)

7. Explain the Boolean processor in 8051 microcontroller in brief.   (2)

8. Explain the 'Reset' in interrupts of 8051 microcontroller.   (2)

9. Compare microprocessor and microcontroller in brief.   (2)

10. List any three applications of microcontrollers.   (2)

Part B – (Marks : 50)

11. (a) Draw the pin diagram of 8086 and explain the function of Important pins.   (5)

    (b) Distinguish between minimum and maximum modes of operation of 8086.   (5)

12. (a) Write an assembly language program to find average value from a given array of data.   (5)

    (b) Explain any five assembler directives with examples.   (5)

[P.T.O.

13. (a) Describe the function of the 8086 segment registers.   (5)

    (b) What is hand shaking? How does it compare with simple parallel I/O?   (5)

14. Draw the Internal architecture of 8255 and explain its modes of operation in detail.
                                                                                    (10)

15. (a) List the different modes of operation of keyboard and display interface and also
         explain the keycode data format in brief.   (5)

    (b) Explain the 8051 oscillator and clock with diagram.   (5)

16. (a) How does 8051 differentiate between the external and Internal program memory.
                                                                                    (5)

    (b) Explain the different modes of operation of timer / counter in 8051 microcontroller.
                                                                                    (5)

17. (a) Explain seven segment LCD display system using microcontroller.   (6)

    (b) What are interrupts provided in 8051.   (4)

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