

Register Number

B.E/B.Tech (Full Time) DEGREE END SEMESTER EXAMINATIONS, APRIL / MAY 2012

ELECTRONICS AND COMMUNICATION ENGINEERING

FIFTH SEMESTER

EC9303 – MICROPROCESSORS AND MICROCONTROLLER.

(REGULATION: 2008)

Time : 3 Hrs

Max. Mark :100

Answer ALL Questions

PART-A

(10 x 2 = 20 Marks)

1. What is an instruction cycle?
2. What is the function of the IC 8087?
3. How many address and data lines are available in 8086?
4. Write a program in 8086 for addition of two 16-bit numbers with sum is more than 16 bits.
5. Draw the block diagram of programmable interrupt controller.
6. What is the control word to set all the ports of 8255 as output port?
7. Write a program in 8051 for finding the average of two numbers.
8. Draw the flag pattern of 8051 microcontroller.
9. Draw the schematic of interfacing microcontroller with DC motor.
10. Draw the pin details of 16X2 LCD display.

Part - B

(5 X 16 = 80 Marks)

- 11(a)(i). With a neat diagram explain the architecture of 8086 microprocessor. (8)
- (ii). Briefly explain the interrupt and its application available in 8086 microprocessor. (8)

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12(a). Draw the timing diagram for the instruction CALL, Assume all other relevant details. (16)

(OR)

12(b). Briefly explain the addressing mode available in 8086 microprocessor. (16)

13(a)(i). With a neat block diagram explain the elements of the IC 8251. (8)

(ii). With a neat block diagram explain the elements of the IC 8254. (8)

(OR)

13(b). Briefly explain key board and display controller IC 8279 and draw its interfacing schematic with keyboard and displays. (16)

14(a). With a neat diagram explain the architecture of 8051 microcontroller. (16)

(OR)

14(b)(i). With a neat diagram explain the timer / counter programming of 8051 microcontroller. (8)

(ii). Briefly explain the branching instructions available in 8051 microcontroller. (8)

15(a)(i). Briefly explain external memory interfacing with microcontroller. (8)

(ii). Briefly explain RTC interfacing using I2C standard. (8)

(OR)

15(b). With a neat diagram and schematic explain the construction and working of PWM based DC motor speed control. (16)
