ANNA UNIVERSITY COIMBATORE

B.E. / B.TECH. DEGREE EXAMINATIONS : DECEMBER 2009

REGULATIONS : 2007

FIFTH SEMESTER

070290032 - MICROPROCESSORS AND MICROCONTROLLERS

(COMMON TO CSE / IT)

TIME: 3 Hours   Max.Marks : 100

PART –A

(20 x 2 = 40 Marks)

ANSWER ALL QUESTIONS

1. What are the Special purpose registers used in 8085?

2. How Program Counter is useful for execution?

3. What is the purpose of ALE signal?

4. What is meant by three byte instruction? Give an example.

5. Why addressing modes are needed in 8086?

6. What concept is used to enhance the performance of execution of instruction in 8086?

7. Why odd and even bank memories are used in 8086?

8. What are the segment registers used in 8086?

9. What is meant by minimum mode operation in 8086?

10. How physical memory address is derived from logical memory address?

11. Is this instruction valid? Justify. MOV AL, CX

12. What is meant by multi processor configuration?

13. What is the 8 bit format for BSR mode in 8255?

14. What is the interface device used for interrupt system?

15. What is meant by n-key rollover mode in 8279?

16. What is meant by DMA?

17. List out the functional bits of PCON special function register in 8051.

18. What are the advantages of microcontroller?

19. List out few applications of Micro controller.

20. What is the role of internal memory in microcontrollers?

PART - B

(5 x 12 = 60 Marks)

ANSWER ANY FIVE QUESTIONS

21. Write 8085 based assembly language program for ascending order of twenty 8 bit numbers stored in the memory starting from 4200 H.

22. a. Discuss about interrupt system of 8085.   6

b. Explain the data transfer instruction set with example.   6

23. Explain the instruction set of 8086 with suitable example for each.

24. Describe the following :   6 + 6
   a. Assembler directives   b. Interrupt service routine

25. Explain the pin out signals for maximum mode operation of 8086.

26. Describe the 8086 based system design with suitable example.

27. Describe the IO operating mode of 8255 with necessary handshake signals.

28. Describe the functions of circuit structure for single bit used in port 2 and port 3 with diagram.