

ANNA UNIVERSITY COIMBATORE

B.E. / B.TECH. DEGREE EXAMINATIONS : MAY / JUNE 2010

REGULATIONS : 2007

FIFTH SEMESTER : ELECTRICAL & ELECTRONICS ENGINEERING

070280045 - MICROPROCESSORS AND MICROCONTROLLERS

PART - B

(5 x 12 = 60 Marks)

ANSWER ANY FIVE QUESTIONS

- 21 a. Explain the CALL and LDA instructions with timing diagrams. (8)
- b. Briefly explain the addressing modes in 8085 (4)
- 22.a. Explain the functions of 8251 with suitable diagram. (8)
- b. How do you communicate with peripherals through 8255? (4)
- 23.a. Discuss about the addressing modes and interrupts of 8086. (8)
- b. Write a 16 bit addition program using 8086 instructions. (4)
- 24.a. Explain the timer and counter in 8051  $\mu$ C. (8)
- b. Briefly explain the six interrupts in 8051  $\mu$ C. (4)
- 25.a. How do you interface a stepper motor with 8051? Explain. (8)
- b. Write short notes on sensors. (4)
- 26.a. Draw the block diagram of 8085 architecture. Explain the functions of each block. (8)
- b. Write short note on Keyboard and display controller. (4)
- 27.a. Explain about interfacing an LCD with 8051. (8)
- b. Write an 8085 program for 8bit multiplication. (4)
- 28.a. Discuss about serial communication in 8051. (6)
- b. Briefly explain about the instruction sets in 8086. (6)

\*\*\*\*\*THE END\*\*\*\*\*

Max. Marks : 100

PART -A

(20 x 2 = 40 Marks)

ANSWER ALL QUESTIONS

1. Mention the flags in 8085.
2. List the various interrupts in 8085.
3. Mention any five machine cycles in 8085.
4. What are the functions of program counter and stack pointer?
5. Write the various operating modes of 8255.
6. List the major components of 8259.
7. What is the importance of hand shake signals?
8. Mention the applications of 8253.
9. List some of control signals in 8086.
10. Compare 8085 and 8086.
11. What is a numeric processor? Why does it require?
12. Briefly explain the flags in 8086.
13. Define PSW register.
14. What are the differences between micro processors and micro controller?
15. List the single bit instructions of 8051.
16. Explain the SWAP instruction.
17. What are the functions of EA and ALE?
18. How do you determine the clock frequency in ADC?
19. Define temperature sensor and give example.
20. Explain about DAC in 8051.