

ANNA UNIVERSITY COIMBATORE
B.E. / B.TECH. DEGREE EXAMINATIONS: MAY / JUNE 2010
REGULATIONS : 2007
SIXTH SEMESTER : ECE
070290072 - MICROCONTROLLER & RISC ARCHITECTURES

TIME : 3 Hours

PART - A

Max. Marks: 100

(20 x 2 = 40 MARKS)

ANSWER ALL QUESTIONS

1. List the I/O port pins of 8051?
2. Define Baud rate.
3. Write note on interrupt polling?
4. List the use of external memory in 8051?
5. What is assembler directive? Give examples.
6. Mention the basic registers of timer.
7. List the fields of assembly language program.
8. What is the function of MAX232?
9. Write the pin description of LCD.
10. Define conversion time of an ADC.
11. What is the function of PSEN?
12. Mention the five functional groups of 8051 instruction set.
13. Compare RISC and CISC.
14. What is meant by architectural inheritance?
15. Write the various stages involved in ARM7 processor execution.
16. List the different clock signals used in ARM processor.
17. What is called switching state?
18. List the mode identifier of ARM registers.
19. What are the classifications of ARM instruction?
20. List various condition fields.

PART - B

(5 x 12 = 60 MARKS)

ANSWER ANY FIVE QUESTIONS

- 21.a. Write an assembly language program for the mode – 2 operation in serial data communication of 8051 (8)
- b. Briefly explain on JUMP and CALL instructions of 8051 (4)
- 22.a. Write an ALP for sorting the data in ascending order. (8)
- b. Explain the DAA and SWAP instructions. (4)
- 23.a. Explain the normal four step sequence while interfacing stepper motor with 8051. (6)
- b. Write an assembly language program in 8051 to generate a delay of 20ms. (6)
- 24.a. Write an ARM code to find the minimum of 10 signed integers (8)
- b. Compare the TDMI-ARM8 and TDMI-ARM9 development tools. (4)
25. Describe the procedure and Write an ALP for stepper motor interfacing of 8051
- 26.a. Explain the structure of internal RAM of 8051 with neat sketch (8)
- b. Explain the IE register and IP register of 8051. (4)
- 27.a. Delineate the ARM processor mode. (4)
- b. Write ARM instructions to swap/interchange numbers between three variables (8)
- 28.a. Write an ARM code for unsigned byte data transfer, with an example (6)
- b. Describe the Architectural support for high level languages of ARM RISC processor with suitable illustration. (6)

*****THE END*****