ANNA UNIVERSITY COIMBATORE

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

REGULATIONS – 2007

THIRD SEMESTER

070230011 - COMPUTER ARCHITECTURE

(COMMON TO CSE / IT)

TIME : 3 Hours **Max.Marks : 100**

PART – A

(20 x 2 = 40 MARKS)

ANSWER ALL QUESTIONS

1. What are the five functionally independent main parts of the computer ?
2. Write the formula for calculating program execution time T.
3. What is Big-Endian and Little-Endian byte assignments ?
4. Define Addressing modes. Give some example.
5. What is called full Adder ?
6. Write the expression for Generate(Gi) and Propagate(Pi) of a carry-lookahead addition.
7. What is Booth algorithm?
8. Write the 3 steps of a Restoring Division?
9. Define Processor clock and Multiphase clocking.
10. What is Microroutine and Microinstructions ?
11. Define Fetch, Decode, Execute and Write instructions.
12. What is called Data Hazard ?
13. What is called Static memory ?
14. Define ROM, PROM, EPROM, EEPROM.
15. What are Tracks and Sectors in a disk ?
16. Write the eight Control commands used in magnetic tape drives.
17. Define Memory-mapped I/O.
18. Write any three Operating system routines.

19. What is called Distributed Arbitration ?
20. What is called Plug-and-Play feature ?

PART – B

(5 x 12 = 60 MARKS)

ANSWER ANY FIVE QUESTIONS

21. a) With diagram write in detail about the functional units of a computer. 6

    b) Write in detail about the stack operation. 6

22. Explain in detail about multiplication of positive numbers with diagram.
23. Briefly write about the Booth algorithm in a signed-operand multiplication.
24. With diagram explain in detail about fetching a word from memory.
25. Explain in detail about the conditional branches and branch predictions.
26. Explain about the Mapping functions of Cache memory.
27. Draw diagram and explain about the working of magnetic Hard disk.
28. Explain in detail about the Direct Memory Access.

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