ANNA UNIVERSITY COIMBATORE

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

REGULATIONS : 2007

SIXTH SEMESTER : INFORMATION TECHNOLOGY

070250025 - PRINCIPLES OF COMPILER DESIGN

TIME : 3 Hours Max.Marks : 100

PART – A

(20 x 2 = 40 MARKS)

ANSWER ALL QUESTIONS

1. What is the function of lexical analyzer?
2. What is called tokens?
3. Define cross compiler.
4. What are the tools used to construct compiler?
5. Define an operator precedence grammar.
6. Construct a parse tree for s-> iCtS -> ibtS.
7. What is recursive descent parsing?
8. What are the two aspects used in bottom – up tree construction process?
9. What is parse tree and write its purpose?
10. What are different types of intermediate code used in compilers?
11. What are the two principal methods used to represent the value of Boolean expression?
12. What is back patching?
13. What are the three main sources of difficulty in code generation?
14. What are various types of addressing modes used during code generation?
15. What is the purpose of register descriptors and address descriptors?
16. Write a note on peephole optimization.
17. What is code optimization?
18. Define code motion.

19. What is called reduction in strength?
20. What is loop unrolling?

PART – B

(5 x 12 = 60 MARKS)

ANSWER ANY FIVE QUESTIONS

21. Explain the operation of operator precedence parsing with example

22. Explain various phases of compiler in detail.

23. Write short note on: a. Lexical Analysis (6)
    b. Syntax Analysis (6)

24. Write the steps involved in constructing SLR parsing table with example

25. Explain the code translation process for case statement and procedure call

26. Describe about the memory organization for C program in detail.

27. What is DAG representation and explain the construction of DAG for basic block.

28. Explain data flow analysis in the presence of procedural call.

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