

# SATHYABAMA UNIVERSITY

(Established under section 3 of UGC Act, 1956)

Course & Branch: B.E/B.Tech – CSE/IT (Dual CSE)

Title of the paper: System Programming

Semester: V

Max. Marks: 80

Sub.Code: 312507/411507/412507/511507/512507/6C0101

Time: 3 Hours

Date: 20-11-2008

Session: FN

---

PART – A

(10 x 2 = 20)

Answer All the Questions

1. Write the elements of ALP?
2. Draw the block diagram for one pass assembler.
3. Differentiate Linker and Loader?
4. What is nested macro call?
5. Write any two compiler writing tools?
6. Define context free grammar.
7. What is predictive parsing?
8. Differentiate parse trees & syntax trees.
9. What are the sources for optimization?
10. Define global data flow analysis.

PART – B  
Answer All the Questions

(5 x 12 = 60)

11. Design a two pass assembler.  
(or)
12. Discuss in detail about the pass structure of an assembler.
13. Explain the design of Linker.  
(or)
14. (a) Write about Macro definition and Macro call. (4)  
(b) How Macros can be expanded? (8)
15. Explore the Regular Expression  $a^*b^*c^*$  abb to finite Automata.  
(or)
16. Discuss the structure of Compiler with examples and diagrams.
17. Construct a parse tree with suitable example, using operator precedence parsing.  
(or)
18. Write short notes on Three address codes, Quadruples, and Triples.
19. Construct Directed Acyclic Graph representation of basic blocks for Fibonacci series.  
(or)
20. (a) Construct reducible flow graph with example. (8)  
(b) Explain the various loop optimization measures. (4)