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2002 SCHEME

CS51

Fifth Semester B.E. Degree Examination, June-July 2009
System Software

Time: 3 hrs.

Max. Marks:100

Note : Answer any FIVE full questions.

- 1 a. Bring out the differences between application software and systems software. (10 Marks)
b. Explain the architecture of SIC/XE machine. (10 Marks)
- 2 a. Discuss the basic assembler features / functions. (10 Marks)
b. Explain the various data structures used in the assemblers. (10 Marks)
- 3 a. With examples discuss the details of displacement calculations for program counter relative and base relative addressing modes. (10 Marks)
b. Explain how the forward referencing problem is addressed in one pass assembler. (10 Marks)
- 4 a. What are the differences between linkage editor and a linking loader? (05 Marks)
b. Explain the functions of bootstrap loader. (05 Marks)
c. What is program relocation? How the problem of relocation is addressed in assembler? (10 Marks)
- 5 a. Explain the various data structures used in the macro processor algorithm. (10 Marks)
b. Discuss the general purpose macro processors and their advantages. (10 Marks)
- 6 a. Explain the basic compiler functions. (10 Marks)
b. Explain the operator precedence parsing giving examples. (10 Marks)
- 7 a. What are the differences between static storage allocation and dynamic storage allocation? Give examples. (10 Marks)
b. Write short notes on: MASM assembler, MASM macro processors, Editors. (10 Marks)
- 8 a. Write YACC specification of a simple desk calculator. (10 Marks)
b. Write a Lex program that copies a file replacing each non – null sequence of white space by a single blank. (10 Marks)