

MODEL QUESTION PAPER

Fifth Semester B.Tech degree Examination, November 2010

BRANCH: Computer Science (2008 Scheme)

08.504 System Programming.

PART A

(Answer all questions. Each question Carries 4 mark)

1. Give characteristics of system software that differentiate it from application software.
2. Compare the characteristics of RISC machine and CISC machine.
3. What is a forward reference? How it is handled in a one pass assembler?
4. What are assembler directives? Explain the purpose of the following directives
(i) BASE (ii) LTOrg
5. Assume that the symbols ALPHA and BETA are two labels in source program. What is the difference between the following two sequences of statements
(a) LDA ALPHA - BETA
(b) LDA ALPHA
SUB BETA
6. What are Bootstrap loaders?
7. Explain the need of control section and program blocks?
8. What is dynamic linking? Explain the advantages of dynamic linking.
9. Differentiate subroutines and macros.
10. List out the task that can be accomplished by document - editing process. $[10 \times 4 = 40]$

PART B

Answer any one full question from each module. $[3 \times 20 = 60]$

Module I

11. a) Write SIC/XE program to find the maximum of a set of numbers. (8 marks)
- b) Explain the architecture of VAX machine. (12 marks)

OR

12. a) Write an SIC/XE program to find the number of add numbers in a set of integers. (8 marks)
- b) Explain the architecture of SPARC machine. (12 marks)

Module II

13. With suitable example explain the data structures used, pass1 and pass2 algorithms of a two pass assembler. (20 marks)

OR

14. a) Explain about machine dependent loader features. (12 marks)
b) List the features of MSDOS linker (8 marks)
- Module II
15. What is a macroprocessor? Explain about the algorithm and data structures for a one pass macro processor with suitable example. (20 marks)

OR

16. a) Explain about phases of a compiler. (10 marks)
b) With a diagram explain editor structure. (10 marks)

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