S 9099

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2006.

Third Semester

Computer Science and Engineering

CS 233 — SYSTEM SOFTWARE

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Define system software.

2. Differentiate CISC with RISC machines.

3. Differentiate normal literal representation with ltorg literal representation.

4. List out the machine independent assembler features.

5. Differentiate linking loader with linkage editor.

6. Write short notes on bootstrap loader.

7. Write short notes on recursive macro expansion.

8. Define macro processor functions.

9. List out the various system software tools.

10. Write short notes on debugger.

PART B — (5 × 16 = 80 marks)

11. (a) Compare SIC with SIC/XE machine architecture in the following ways :

(i) Memory

(ii) Register

(iii) Data format

(iv) Instruction format

(v) Addressing mode.

Or

(b) Explain in detail about VAX and pentium pro architectures.

12. (a) (i) Write down an algorithm to implement 2 pass assembler. (8)

(ii) Explain multipass assembler operations with an example. (8)

Or

(b) (i) Explain different types of instruction formats and addressing modes of two pass assembler with example.

(ii) Explain briefly the one pass assembler.

13. (a) Explain program linking and relocation properties of loader with example.

Or

(b) (i) Explain algorithm and data structure for the representation of linking loader.

(ii) Explain the steps involved in dynamic linking.

14. (a) Explain the algorithm and data structure used to represent a macro processor.

Or

(b) Explain all machine independent macro processor features with example.

15. (a) Explain the various phases of a compiler.

Or

(b) Explain the different types of code optimization techniques.

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