Reg. No. : ☐☐☐☐☐☐☐☐☐☐☐☐

Question Paper Code : 71193

M.E. DEGREE EXAMINATION, JUNE/JULY 2013.

Second Semester

Computer Science and Engineering

CS 9223/CS 923 — ADVANCED SYSTEM SOFTWARE

(Regulation 2009)

Time : Three hours   Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. State the difference between compiler and interpreter.

2. List the events that occur when a procedure is invoked.

3. What is the necessity for loop optimization?

4. Which data structure was suitable for symbol table? Why?

5. Define chromatic number.

6. Brief on constant propagation with example.

7. How will a java file be converted into byte code?

8. State the uses of VM.

9. How does simulation differ from emulation?

10. Define binary translation.

PART B — (5 × 16 = 80 marks)

11. (a) For the following source language statements, show the output of each and every phases of a compiler.   (16)

    P = IR * EF * 23 where P, IR, EF are real.

Or

    (b) Discuss various parameters passing technique with example.   (16)

12. (a) What is meant by optimization? Explain various loop optimization techniques with example. (16)

Or

(b) Discuss the issues in designing an intermediate language. (16)

13. (a) In detail discuss about register allocation and assignment. (16)

Or

(b) Discuss the following :
   (i) Code scheduling (8)
   (ii) Instruction scheduling. (8)

14. (a) Explain the features of Pascal P code VM.

Or

(b) Discuss the following :
   (i) Math and sweep collectors (8)
   (ii) Compacting collectors. (8)

15. (a) Explain the design issues of various instruction sets. (16)

Or

(b) Explain process virtual machine in detail. (16)

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