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Question Paper Code: J7660

M.E. DEGREE EXAMINATION, JUNE 2010

Second Semester

Computer Science and Engineering

CS9223 — ADVANCED SYSTEM SOFTWARE

(Regulation 2009)

Time : Three hours

Maximum : 100 Marks

Answer ALL Questions

PART A — (10 × 2 = 20 Marks)

1. What is the use of lexical analyzer?
2. What is device driver?
3. Draw the symbol table structure.
4. Differentiate high level languages from medium level languages.
5. What do you mean by in-line expansion?
6. What is the advantage of code sharing?
7. Write down the features of object-oriented virtual machine.
8. List the steps involved in garbage collection.
9. What do you mean by emulation?
10. What are the issues in instruction set?

PART B — (5 × 16 = 80 Marks)

11. (a) (i) Explain the parameter passing methods. (8)
(ii) Explain the steps involved in implementing subprograms. (8)

Or

- (b) (i) Explain the dynamic binding of method calls. (8)
(ii) Describe the memory management unit. (8)
12. (a) Discuss the local and global symbol table formats and their management. (16)

Or

- (b) What is the need for optimization? Discuss the early and loop optimization techniques. (16)
13. (a) Discuss the following:
(i) Shrink wrapping (8)
(ii) Register allocations and assignment. (8)

Or

- (b) Explain the logic behind speculative scheduling and instruction scheduling with their relative merits and demerits. (16)
14. (a) Discuss the java virtual machine architecture. (16)

Or

- (b) Explain the following:
(i) Various issues in dynamic class loading (8)
(ii) Security issues in virtual machines. (8)
15. (a) Discuss the various issues in profiling and migration. (16)

Or

- (b) Give two examples for the real world implementation of system software and discuss any one of it. (16)