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Name.....
Reg. No.....

**FIFTH SEMESTER B.TECH. (ENGINEERING) DEGREE
EXAMINATION, DECEMBER 2007**

CS 04 505—PROGRAMMING PARADIGMS

(2004 Admissions)

Time : Three Hours

Maximum : 100 Marks

Answer all questions.

Part A

- I. (a) What are the improvements a programming language can provide on a bare machine ?
(b) Define a context free grammar and the variant BNF.
(c) What are virtual functions ?
(d) What is the role of modules in program design ?
(e) What are the characteristics of functional programming languages ?
(f) What are the different approaches in garbage collection in a functional programming ?
(g) What is a Difference list ?
(h) What is deadlock ? How it can be prevented ?

(8 × 5 = 40 marks)

Part B

- II. (a) Develop a program to find the k^{th} occurrence of x , from left to right $k \geq 0$ in a subarray $A[i ..n]$.
Or
(b) Explain in detail the different parameter parsing mechanisms with example.
- III. (a) Explain how the base and derived classes provide information hiding feature of object oriented programming.
Or
(b) Define a class Quene, implementing the methods to perform various operations on quene.
- IV. (a) What is a cut ? How it makes the computation more efficient ? What are the programming applications of cut ?
Or
(b) Discuss in detail about different approaches to expression evaluation in a list.
- V. (a) How control is specified in prolog ? Discuss in detail.
Or
(b) Discuss on safe access to shared data in a concurrent programming environment.

(4 × 15 = 60 marks)