Code : **RA9F00105**

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MCA II Semester Regular Examinations, August 2010
DATA STRUCTURES

Time: **3 hours**
Max Marks: **60**

Answer any FIVE questions
All questions carry equal marks
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1. (a) What are derived data types? Explain about enumerated data type in C.
   (b) How do you pass arrays as arguments to functions in C? Explain with an example.

2. (a) Write routines for inserting and deleting elements in a double linked list. Explain with examples.
   (b) Write about the representation of sparse matrix using linked lists.

3. (a) How do you evaluate the given arithmetic expression using stacks. Explain in detail.
   (b) Write a recursive procedure for solving towers of Honoi problem. Draw the sequence of calls free for a value of n=3.

4. What are various representations for queues? Explain the operations of addition and deletion in each representation.

5. (a) Explain the process of sorting elements using bubble sort methods.
   (b) Explain about Radix sort.

6. (a) Write about Fibonacci search method.
   (b) Explain about rectangular tables and inverted tables.

7. (a) Write recursive and non-recursive post order traversal routines for a binary tree.
   (b) What is a binary search tree? Explain the methods of deleting an element from a binary search tree.

8. Explain in detail about height balanced trees.

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