Code: 9F00105

MCA - I Semester Supplementary Examinations, August/September 2012
DATA STRUCTURES
(For students admitted in 2009, 2010 & 2011 only)

Time: 3 hours   Max Marks: 60

Answer any FIVE questions
All questions carry equal marks
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1 (a) What is a function? Explain the different ways that the arguments can be passed to the functions.
  (b) Explain any five string handling functions with its syntax and example.

2 (a) Explain the circular linked lists in detail.
  (b) What are draw backs of single linked lists? Explain how to insert an element into the double linked list.

3 (a) Explain the solution to the towers of Hanoi problem. Assume the number of disks as three.
  (b) How to store the stacks using linked list? Explain with example.

4 (a) Give brief description about the priority queues.
  (b) Explain the queue operations with suitable example.

5 Explain, how to sort the elements by using quick sort and derive the average case time complexity for the same.

6 (a) Write a program to find whether the given element is in the list or not by using linear search technique.
  (b) Write short notes on inverted tables.

7 (a) Explain, how to delete an element from the binary search tree.
  (b) Write non recursive algorithm for pre order tree traversal.

8 (a) Give brief description about the threaded binary trees.
  (b) Write a short notes on height balanced trees.

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