

Code: 9F00105

MCA I Semester Supplementary Examinations August 2014

DATA STRUCTURES

(For students admitted in 2009, 2010, 2011, 2012 & 2013 only)

Time: 3 hours

Max. Marks: 60

Answer any FIVE questions
All questions carry equal marks

1. (a) Explain any five string handling functions with their syntax and example.
(b) Write a program in C to find the sum of the individual digits of a given number.
2. (a) Explain with suitable example, the insertion operation on single linked list.
(b) Give brief description about the circular double linked lists.
3. (a) Write the procedure to convert the infix expression to postfix form and explain it with suitable example.
(b) Write a non recursive program to find the factorial of a given number.
4. (a) What is a priority queue? Explain the max priority queue with example.
(b) Write a program in C implement the queue operations.
5. (a) Derive the average case time complexity for quick sort.
(b) Explain the sorting of elements by using the radix sort technique.
6. (a) Discuss in detail about the inverted tables.
(b) Compare the time complexities of different searching algorithms.
7. Write and explain the various non recursive tree traversal algorithms with suitable example.
8. Write short notes on the following:
 - (a) Min heap.
 - (b) Insertion operation on binary search trees.
 - (c) Heap sort.
