

Code: 9F00105

MCA I Semester Regular & Supplementary Examinations, March 2013

DATA STRUCTURES

Time: 3 hours

Max Marks: 60

Answer any FIVE questions

All questions carry equal marks

- 1 Discuss in detail about the various storage classes present in C language.
- 2 (a) Explain with a suitable example, the insertion operation on double linked lists.
(b) What is a sparse matrix? Explain it in detail.
- 3 (a) Write a C program to implement the stack operations by using arrays.
(b) Present a detailed note on towers of Hanoi problem.
- 4 (a) Describe in detail about the priority queues.
(b) Explain the array representation of queues with an example.
- 5 Explain the following sorting techniques with suitable examples:
(a) Quick sort.
(b) Radix sort.
- 6 (a) Explain the Fibonacci search with an example.
(b) Give brief description about any three hashing techniques.
- 7 Explain in detail about the various operations that can be performed on binary search trees.
- 8 (a) Write and explain the non recursive tree traversal algorithm for inorder.
(b) Explain the insertion operation on B - trees with an example.
