**III Semester B.Tech. in (Computer/Electronics and Tele Communication)
Engineering Examination, August 2011
DATA STRUCTURES**

Time : 3 Hours   Max. Marks : 75

Instruction : Answer any five questions from Part – A and Part – B.

PART – A

Answer **any five** questions.   (5×5=25)

1. Mention some of the problem solving strategies.
2. What are the features of an efficient algorithm ?
3. Explain briefly the various applications of linked list.
4. Write a short note on abstract data type.
5. What are the various operations done under list ADT ?
6. Write the application of binary tree.
7. Write the differences external sorting and internal sorting.
8. Explain topological sort.

PART – B

Answer **any five** questions.   (5×10=50)

9. Design an algorithm for fro sine function computation. Explain it with an example.
10. What are the steps taken to improve the efficiency of an algorithm ?
11. Explain the array implementation of queue ADT in detail.
12. Explain the different tree traversals with an application.
13. Define AVL trees ? Explain the LL, RR, RL, LR case with an example.
14. Explain quick sort with examples.
15. Explain Prim's algorithm with an example.
16. Explain in detail the various representation of graph with example.

————————————