

Code :9A05302

R9**II B.Tech I Semester(R09) Supplementary Examinations, May 2011****ADVANCED DATA STRUCTURES****(Electronics & Computer Engineering, Computer Science & Systems Engineering, Information Technology, Computer Science & Engineering)****Time: 3 hours****Max Marks: 70****Answer any FIVE questions
All questions carry equal marks**

1. (a) What is a friend function? What are the merits and demerit of using friend function?
(b) Explain the different types of constructors in C++.
2. (a) What is Dynamism? Explain any three kinds of dynamism for object-oriented design with an example for each.
(b) What is Compile time polymorphism? Explain with an example.
3. (a) What characteristics should a good algorithm possess?
(b) Analyse the time and space complexity for recursive binary search algorithm.
4. (a) Describe Type declaration for separate chaining hash table.
(b) Discuss Linear Probing.
5. With suitable diagram, explain the principle of Priority Queue.
6. (a) Give the linked list representation of a binary search tree. What are the operations performed on a binary tree.
(b) It is required to build a binary search tree with a set of data. Write a function for inserting an item into a binary search tree. Use this function to build a tree from a given set of data as input.
7. (a) Explain about Splay trees.
(b) Write short notes on B-trees.
8. Explain Brute force algorithm with example. Also write a C++ program to implement it.
