

Code No: 53023

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B.Tech II Year I Semester Examinations, November - 2015

DATA STRUCTURES THROUGH C++

(Common to CSE, IT)

Time: 3 hours

Max. Marks: 75

Answer any five questions
All questions carry equal marks

- 1.a) Write a C++ program to check whether given number is prime or not.
b) Explain about friend functions. [8+7]
- 2.a) What is function template? Write a program to find addition of two numbers using function templates.
b) Explain about file streams. [8+7]
- 3.a) Explain about threaded binary tree with an example.
b) Explain about list ADT with example program. [8+7]
- 4.a) Explain about Quadratic probing and extendible hashing.
b) What is skiplist? [10+5]
5. Explain heap sort with C++ implementation. [15]
6. Explain deletions in AVL Trees. How many types of imbalances are there during AVL deletions? Explain each of them with an example. [15]
- 7.a) Explain the procedure for insertion operation in a B-Tree.
b) Explain about splay tree. [8+7]
8. Explain the Knuth-Morris-Pratt algorithm. [15]

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