Code No: 53023

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B.Tech II Year I Semester Examinations, February/March - 2016
DATA STRUCTURES THROUGH C++
(Common to CSE, IT)

Time: 3 hours

Max. Marks: 75

Answer any five questions
All questions carry equal marks
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1.a) Explain the concept of exception handling.
  b) Explain about this pointer. [8+7]

2.a) Explain different types of inheritance.
  b) Explain about run time polymorphism. [8+7]

3. Write a C++ program to implement the Queue ADT using linked list. [15]

4.a) Show the contents of hash table after each insertion, given input {345, 54, 137, 36, 29, 12, 19, 34, 76, and 89} and hash Function h(x)=x mod 13 by using linear probing?
  b) Explain about quadratic probing and double hashing. [8+7]

5.a) Write an algorithm to insert an element in max heap. Trace the max heap algorithm for the following elements 11, 21, 13, 54, 665, 26, 37, 81.
  b) Explain about poly phase merge. [8+7]

6. Construct an AVL Tree using the following data entered in sequence 34, 2, 31, 56 ,12 ,45 ,89 ,44, 33, 1, 5, 9, 100 [15]

7.a) Explain the Red-Black search tree.
  b) Explain the deletion operation of B-Tree. [7+8]

8.a) Draw the flow chart for KMP algorithm.
  b) Explain about standard Tries. [8+7]

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