R18

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B.Tech II Year I Semester Examinations, October - 2020
DATA STRUCTURES
(Common to CSE, IT)

Time: 2 hours   Max. Marks: 75

Answer any five questions
All questions carry equal marks
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1.a) Write an algorithm of Insert and Delete operation in Singly Linked List.
  b) Convert the following infix expression into postfix expression
     A + B – C * D * E $ F $ G   [7+8]

2. Explain about the various hash collision resolution techniques with an example.   [15]

3. Insert the following list of elements from the AVL tree. Delete the elements 18, 2 and 30 from the AVL tree 12, 30, 36, 18, 25, 9, 4, 2, 17, 14 , 20, 47   [15]

4.a) Differentiate between BFS and DFS.
  b) Explain about external sorting with an example.   [7+8]

5.a) Write an algorithm of compressed Trie.
  b) Explain about the Brute force algorithm with an example.   [7+8]

6.a) Write a program to implement stack using linked list.
  b) Explain the operations of Queue with an example.   [8+7]

7. Explain about:
   a) Rehashing
   b) Extendible hashing   [15]

8. Write an algorithm to delete an element from the binary search tree.   [15]

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