|  |  |  |
| --- | --- | --- |
| **S.NO** | **NAME OF THE PROGRAM** | **PG.NO** |
| 1 | Write a C++ program to implement all the functions of a dictionary ADT. |  |
| 2 | Write a C++ program for skip lists |  |
| 3 | Write a C++ program for hashing with quadratic programming. |  |
| 4 | C++ programs using class templates to implement the following using an array. |  |
| a) Stack ADT b) Queue ADT |
| 5 | Write C++ programs using class templates to implement the following using a singly linked list. |  |
| a) Stack ADT b) Queue ADT |
| 6 | Write C++ programs using class templates to implement the deque (double ended |  |
| queue) ADT using a doubly linked list and an array. |
| 7 | Write C++ programs, using class templates, that use non-recursive functions to |  |
| traverse the given binary tree in |
| a) preorder b) inorder and c) postorder. |
| 8 | Write C++ programs, using class templates, that use recursive functions to traverse the given binary tree in |  |
| a) preorder b) inorder and c) postorder. |
| 9 | Write a C++ program using class templates to perform the following operations: |  |
| a) Insert an element into a binary search tree. |
| b) Delete an element from a binary search tree. |
| c) Search for a key element in a binary search tree. |
| 10 | Write C++ programs using class templates for the implementation of bfs and dfs for a given graph. |  |
| 11 | Write C++ programs using class templates for implementing the following sorting methods: |  |
| a) Merge sort b) Heap sort |
| 12 | Write a C++ program using class templates to perform the following operations |  |
| a) Insertion into a B-tree b) Deletion from a B-tree |
| 13 | Write a C++ program using class templates to perform the following operations |  |
| a) Insertion into an AVL-tree b) Deletion from an AVL-tree |
| 14 | Write a C++ program using class templates to implement Kruskal\_s algorithm to generate a minimum cost spanning tree. |  |
| 15 | Write a C++ program using class templates to implement Prim\_s algorithm to |  |
| generate a minimum cost spanning tree |
| 16 | Write a C++ to implement Knuth-Morris-Pratt pattern matching algorithm. |  |

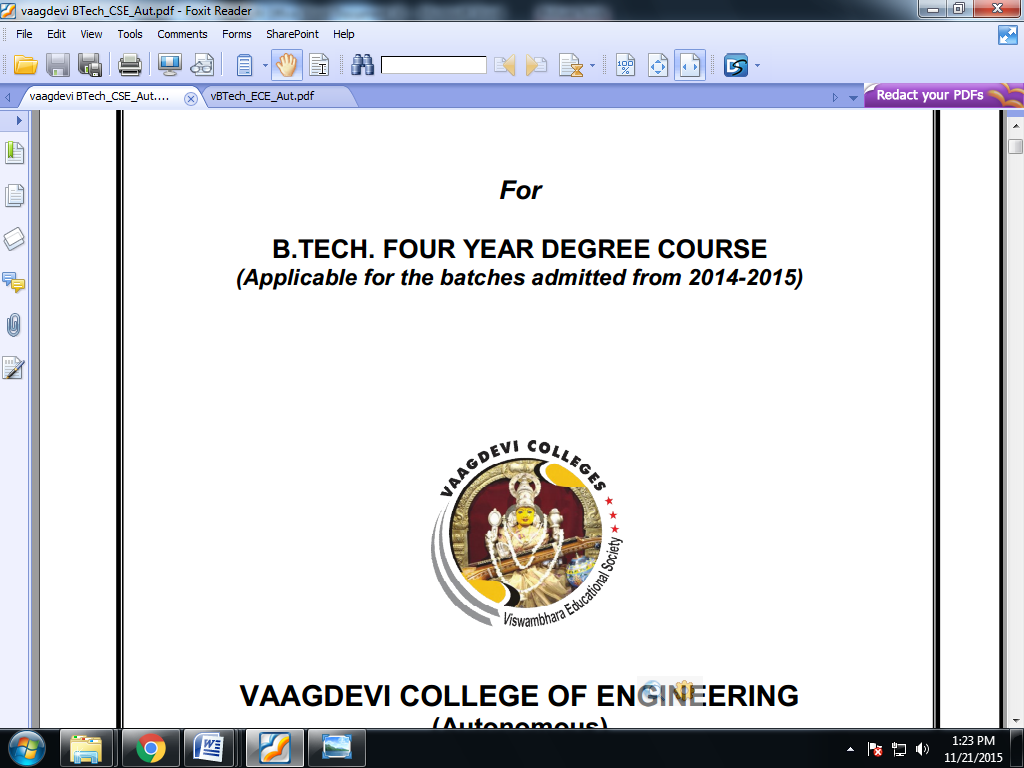
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**DEPARTMENT OF COMPUTER SCIENCE ENGINEERING**

**DATA STRUCTURES THROUGH C++ Lab Manual**

**[Subject Code: A93508]**

**II B Tech Semester –I**

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**VAAGDEVI COLLEGE OF ENGINEERING**

**(UGC AUTONOMOUS)**

**In-charge HOD Principal**