MPCS-P1:LAB1: DATA STRUCTURES USING C++

1. Write C++ programs to implement the following using an array.
   a) Stack ADT b) Queue ADT
2. Write C++ programs to implement the following using a singly linked list.
   a) Stack ADT b) Queue ADT
3. Write C++ program to implement the deque (double ended queue) ADT using a doubly linked list.
4. Write a C++ program to perform the following operations:
   Insert an element into a binary search tree.
   Delete an element from a binary search tree.
   Search for a key element in a binary search tree.
5. Write a C++ program to implement circular queue ADT using an array.
6. Write C++ programs that use non-recursive functions to traverse the given binary tree in
   a) Preorder b) inorder c) postorder.
7. Write a C++ programs for the implementation of bfs and dfs for a given graph.
8. Write C++ programs for implementing the following sorting methods:
   a) Quick sort b) Merge sort c) Heap sort
9. Write a C++ program to perform the following operations
   a) Insertion into a B-tree b) Deletion from a B-tree
10. Write a C++ program to perform the following operations
    a) Insertion into an AVL-tree b) Deletion from an AVL-tree

MPCS-P2: LAB2: DBMS

1. Display all the employees in alphabetical order from employee table.
2. Change the basic salary Rs,3000 where basic salary less than 2500 from employee table.
3. Change the basic_sal = 3000 where job in clerk from employee table.
4. Delete all records from Dept table.
5. Add a column " Telephone_No" of data type 'number' and size = '10' to the employee table.
6. Create an index for client _no on client_mast table.
7. Display the length of each employee name from employee table.
8. Find average salary per job in each department _no.
9. Display only those jobs where max sal >=3000.
10. Find out the difference between highest and lowest salaries.
11. Display the sequence root of 81.
12. Display the total number of working days of each employee from employee table.
13. Count the number of products having price greater than equal to 1200.
14. Calculate the average price of all the products from product –mast table.
15. Find out the employees who earn the highest salary in each dept_no
16. Display all clerks from emp table using cursor.
17. Update all Sal < 1000 to Sal = 2000 using cursor.
18. Create a function for Simple Interest.
19. Create a recursive function for Fibonnaci series.
20. Create a package for checking the Even or Odd numbers.
21. Create a package for bank transactions for account debit and credit.

MPCS-P3: LAB - 3: ADVANCED WEB PROGRAMMING LAB

1. HTML to Servlet Applications
2. Applet to Servlet Communication
3. Designing online applications with JSP
4. Creating JSP program using JavaBeans
5. Working with Enterprise JavaBeans
6. Working with Java Database Connectivity.
7. Creating Web services with RMI.

8. To Implement RMI program to perform arithmetic functions.
9. Develop a simple application to insert and retrieve data from database.
10. Design a color bean.

MPCS-P4: PROJECT WORK

Each student will develop and implement individually a Project work which is an application (software or hardware or both) based on any emerging latest technologies. The Project work is to be carried out either in an R & D section of any Industry or Research Institute or University or in the Institute itself (i.e., in which the candidate is studying) within the duration of second year. The Project work report shall be submitted through the Guides / Supervisors to the Head of the Department