KARPAGAM ACADEMY OF HIGHER EDUCATION

(Deemed to be University)
(Established Under Section 3 of UGC Act 1956)
Coimbatore - 641021.
(For the candidates admitted from 2017 onwards)
DEPARTMENT OF COMPUTER SCIENCE, CA & IT

SUBJECT	: **DATA STRUCTURES - PRACTICAL**				
SEMESTER	: **III**				**L T P C**
SUBJECT CODE: **17CSU311**	**CLASS**	: **II B.Sc.CS**			**4 0 0 4**

SYLLABUS

1. WAP to calculate factorial and to compute the factors of a given no.

    (i)using recursion, (ii) using iteration

2. WAP to display Fibonacci series (i)using recursion, (ii) using iteration

3. WAP to implement Symmetric Matrix using one-dimensional array.

4. WAP to implement Diagonal Matrix using one-dimensional array.

5. Perform Stack operations using Array implementation. Use Templates.

6. WAP to reverse the order of the elements in the stack using additional stack.

7. Implement Linked List using templates. Include functions for insertion, deletion and search of a number, reverse the list and concatenate two linked lists (include a function and also overload operator +).

8. WAP to scan a polynomial using linked list and add two polynomial.

9. Perform Queues operations using Circular Array implementation. Use Templates.

10. Write a program to search an element from a list. Give user the option to perform Linear or Binary search. Use Template functions.

11. WAP to create a Binary Search Tree and include following operations in tree: (a) Insertion (Recursive and Iterative Implementation)

    a) Display its preorder, postorder and inorder traversals Recursively

12. WAP using templates to sort a list of elements. Give user the option to perform sorting using Insertion sort, Bubble sort or Selection sort.