

35246 – DATA STRUCTURES USING C PRACTICAL

DETAILED SYLLABUS

OBJECTIVES

On completion of the following units of syllabus contents, the students must be able to

- Understand the use of arrays
- Use of arrays and pointers.
- Implement linear data structure algorithms using C language.
- Implement non - linear data structure algorithms using C language.
- Write programs for traversing a binary tree.
- Write programs for searching and sorting.

LAB EXERCISES

1. Write a program in 'C' to insert, delete an element from an array of elements. Also print the position of a particular element
2. Implement array using row major order and column major order.
3. Write a program in 'C' to create a two dimensional array with at least ten elements. Search for a particular element and print its position and address of the element.
4. Write a program in 'C' to perform PUSH and POP operations in stack by using array.
5. Write a program in 'C' to display the reverse of a string using a stack.
6. Write a program in 'C' to evaluate a postfix expression.
7. Write a program in 'C' to create a queue containing ten elements and perform delete and insert operations using array.
8. Write a program in 'C' to implement recursive function.
9. Write a program in 'C' to create a singly linked list containing at least five elements. Make necessary assumptions.
10. Write a program in 'C' to delete the first node that contains an integer data item of a single linked list.
11. Write a program in 'C' to create a binary tree.
12. Write a program in 'C' for pre-order traversal of a binary tree.
13. Write a program in 'C' for binary searching
14. Write a program in 'C' to sort 'N' Numbers using Insertion sort.
15. Write a program in 'C' to sort 'N' Numbers using bubble sort.
16. Write a program in 'C' to sort 'N' Numbers using selection sort.