

Govt. of Karnataka, Department of Technical Education

Diploma in Information Science & Engineering

Third Semester

Subject: Data Structures lab

Contact Hrs / week: 6

Total hrs: 96

List of Programs

PART - A	
1.	To illustrate the use of pointers in arithmetic operations
2.	To illustrate the different parameter passing mechanisms: Call by value and Call by reference
3.	To find the smallest element in an array of 10 elements using pointers
4.	To count the number of characters in a given file.
5.	To create a file that contains atleast 5 records which consists of Book No., Book Name, Author, Publisher, and price
6.	Display the contents of the file created in program No. 5 in the following format Book No. Book Name Author Publisher Price
PART – B	
7.	To illustrate Stack operations using pointers to array
8.	To implement queue using pointers to array
9.	To implement circular queue: insert, delete and display
10.	To implement singly list : create, delete and display
11.	To implement doubly linked list : create, delete and display
12.	To implement binary tree traversal operations.
13.	To sort using bubble sort.
14.	To sort an array using selection sort.
15.	To sort an array using insertion sort.
16.	To search a given number using binary search

Note: Execute programs in LINUX / Windows platform

References:

1. **Programming in ANSI C**, 4th/e, E.Balagurusamy, Tata Mcgraw Hill, ISBN: 9780070648227
2. **Introduction to Data Structures in C**, Ashok N Kamthane Third impression 2009, Pearson Education, ISBN : 9788131713921

Scheme of valuation

1	Record	05
2	Writing two programs one each from part A & part B	20 X 2 = 40
3	Entering one program from part B	05
4	Execution with result	30
5	Viva-voce	20
	Total Marks	100