

- 2 (a) Write a program using pointer to read data in an array of integers and print its elements in reverse order. 7
(b) What do you mean by Searching technique ? Which searching technique is better as compare to other ? Explain Binary search with suitable example. 8

- 3 (a) Write a program to perform push() and pop () for stack implemented through singly linked list. 8
(b) Demonstrate quick Sort on the following set of numbers. 7
91, 16, 53, 31, 98, 12, 79, 82, 63, 77
Take the last number as pivot. Show the order the number changes during each step of Quick Sort.

OR

- 3 (a) Explain two way merge Sort with example. 8
(b) Write an algorithm to traverse a binary tree in in-order and post-order non recursively. 7

- 4 (a) What do you mean by Circular Linked List ? What are the advantages of it ? Write an algorithm to insert and delete a node from the Circular Linked List. 8
(b) Explain Dynamic Memory Allocation and Static Memory Allocation with example. 7

OR

- 4 (a) Explain weighted balanced tree and heighthed Balance tree. 8
(b) Represent following expression in a form of tree and draw a tree for following traversal sequence : Inorder, Pre-order and Postorder. 7
 $A + B * C + (D/E) * (C - D * (A+D))$

- 5 Attempt any three : 15
(i) Heap Sort
(ii) 2/3 tree
(iii) Binary Search
(iv) Primitive data structure