**Unit – 1**

Q.1 Define data structure, also mention the application of data structure.

Q.2 What is stack, write down the algorithms for push and pop.

Q.3 Convert the following elements in postfix notations-

A+ B-(C+D)/E\*F-(G+H)\I

Q.4 What do you mean by tower of Hanoi, expalin with suitable example

Q.5 Write an algorithms for evalution of postfix notations.

**Unit – 2**

Q.1 What do you mean by circular link list.

Q.2 Write down the differecne between linear queue and circular queue. Also write advantage and disadvantage.

Q.3 Write a algorithms for performing the following operation on single link list-

Insetion, Delete and Display

Q.4 Write down the Advantages and disadvantages of single linked list over array.

Q.5 What do you mean by queue, exapline the operation and type of queue.

**Unit – 3**

Q.1 Write down the algorithms for bubble sort with suitable example.

Q.2 Sort the following elements by quick sort

2, 10, 9, 6, 1, 15, 5, 11

Q.3 Write an algorithms for binary search algorithms. Also search 25 in the following elements-

5, 8, 12, 21, 24, 25, 35, 37, 74, 87, 92

Q.4 Write down the time complexity of insertion sort, selection sort, heap and merge sort.

Q.5 Sort the following elements by insertion sort

12, 8, 45, 16, 18, 24, 3