

**NOTE: SECTION A IS COMPULSORY. ATTEMPT ANY FOUR QUESTIONS FROM SECTION B AND TWO FROM SECTION C**

**SECTION A MARKS 2 EACH**

- Q1) a)What is Non -Linear Data structure?
- b)What is Sorting and Merging?
- c)Explain operations on Data Structures.
- d)Write a short note on Linear search.
- e)Explain about Binary tree.
- f)Explain Representing the graph.
- g)Explain Depth - First search.
- h)Define Stack.
- i)Write a short note on Bubble sort.

**SECTION B MARKS 5 EACH**

- Q2) What is recursion? What are the Advantages of recursion? Write a procedure to implement. Quick sort using recursion?
- Q3) Write a program for the Evolution of post fix expression.
- Q4) What is tree? Explain the type of Branches of a tree.
- Q5) What is hashing? Explain various Hashing Techniques.
- Q6) Explain the concept of stack along with it's Applications

**SECTION C MARKS 10 EACH**

- Q7) What is linked list? Write an Algorithm to insert, delete and modify operations on Double linked list.
- Q8) What is binary tree? Write a program to create a tree and display it in (a) in -order
  - (b) pre-order
  - ( c ) post-order.
- Q9) Define Stack? How stacks are implemented using linked list?