

UNIT-3

1. How would you apply what you learnt to develop a pseudocode for search an element in SLL.
2. Write a function or algorithm for insert, delete, display, search in circular linked list and list any 5 applications for CLL.
3. How would you apply what you learnt to develop a algorithm for insert, search, delete, display an element in SLL.
4. Illustrate function or algorithm for Double linked list to insert, delete, display and search a node and list any 5 applications for DLL.
5. Explain how to create circular linked list and insert nodes at end.
6. Produce algorithm for insert and delete a node from doubly linked list.
7. Write a function for delete and display in Circular Linked List and list any 3 applications for CLL.
8. Write a function for searching an element in DLL.

9. Write a program for stack using linked list.

10. Write a program for queue using linked list.

UNIT-4

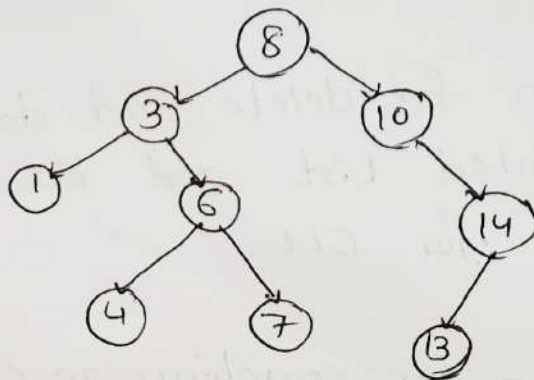
1. Explain about the representation of binary trees using arrays and linked list.

2. Evaluate the post order traversal for given In order traversal of binary tree is F, A, C, K, F, H, D, B, G and pre order traversal is F, A, E, K, C, D, H, G, B.

3. Sketch a Binary Search Tree whose preorder traversal is 38, 14, 8, 23, 18, 56, 45, 82, 70.

*. ~~[Sketch a Binary Binary Search Tree whose preorder traversal is]~~

Write inorder, preorder, postorder traversal of the following tree

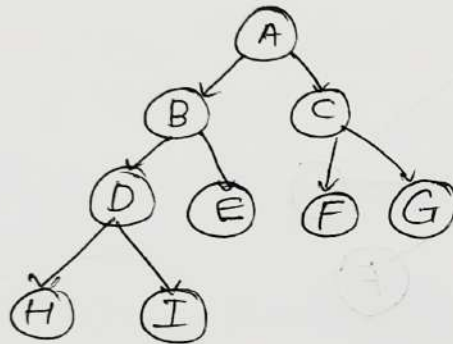


5. Predict a binary tree for given Inorder traversal of a binary tree is D, G, B, E, A, H, F, I, C and pre order traversal is A, B, D, E, C, F, H, I

6. Construct a binary tree whose Inorder traversal is E, A, C, K, F, H, D, B, G and preorder traversal is F, A, E, K, C, D, H, G, B.

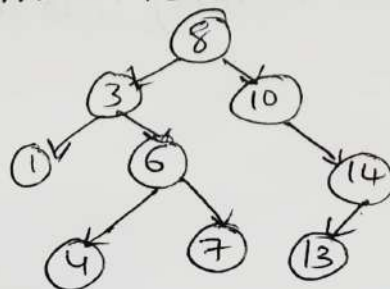
7. Analyse a binary search tree for the following 100, 50, 200, 25, 90, 80, 150.

8. Sketch the following binary search trees using array and linked list?



9. Illustrate a function for insert, delete, display search Operations on binary search tree.

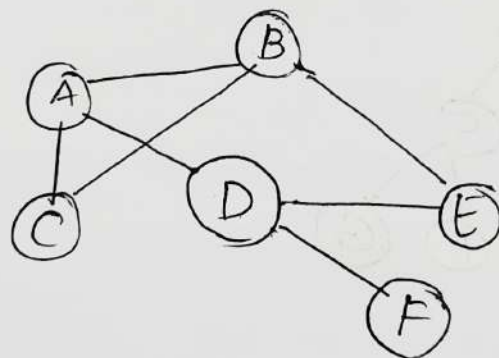
10. How would you construct a binary search tree from inorder and preorder traversals?



11. Estimate the height, count nodes and minimum and maximum element of a given tree and write algorithms for it.
12. Analyse the concept of a binary tree and list its type and properties.
13. Demonstrate tree traversals of a binary search tree? Outline algorithm.

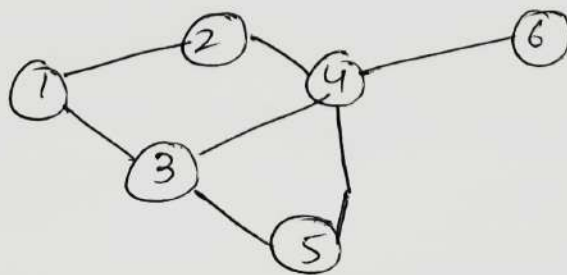
UNIT-5

1. Differentiate between trees and graphs?



2. Predict BFS and DFS
3. Illustrate the concept of collision? What are collision resolution techniques? Predict the advantages and disadvantages of various collision resolution strategies.
4. Explain about Hashing. What is Hash Table?

5. Explain about different types of graphs with a neat diagram.
6. Write a C program for Depth First Traversal in graphs.
7. Write a C program for Breadth First Traversal in graphs.
8. Analyze input (371, 323, 173, 199, 344, 679, 989) and hash function $h(x) = x \bmod 10$, Show the result separate chaining linear probing.
9. Prepare the Hash table of size 11 by using quadratic probing to fill. Data elements are 23, 0, 52, 61, 78, 33, 100, 8, 90, 10, 14.
10. Prepare the steps for hash table entries for the given data set using linear probing 12, 45, 67, 88, 27, 78, 20, 62, 36, 55 (size = 10)
11. Produce BFS on



12. Produce DFS on

