

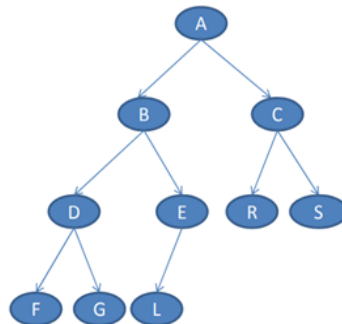
Unit-4

(short question)

1. Explain threaded binary tree.
2. What is the importance of threaded binary tree
- 3.. Define :
 - extended binary tree
 - full binary tree
 - strictly binary tree
 - complete binary tree.
4. Write a short note on min heap.
5. Difference between binary search tree and heap

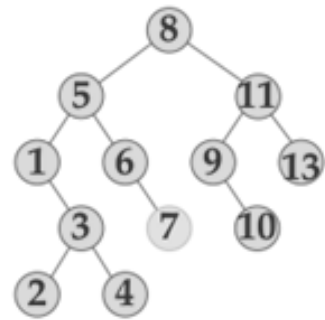
(long question)

1. a. Write recursive functions to find the in-order, pre-order and post-order traversals of a binary tree. Apply the functions and find the traversals for the given tree.



- b. Write functions to find the maximum and minimum element stored in a BST.
2. Construct a binary tree for the given traversals:
 - a. post-order = {4, 6, 5, 2, 3, 1} and in-order = {4, 2, 5, 6, 1, 3}.
 - b. in-order = {4, 2, 5, 1, 6, 3, 7} and pre-order = {1, 2, 4, 5, 3, 6, 7}.
3. a. Insert into an initially empty binary search tree with the following keys (in this order): 30, 40, 23, 58, 48, 26, 11, 13. Draw the tree after each insertion.
b. Given the following BST, show the deletion of key

- i. Key 7
- ii. Key 1
- iii. Key 8



- 4. Insert 2, 1, 4, 5, 9, 3, 6, 7, 16, 0 into an empty AVL tree.
- 5. Delete the key S from the following AVL tree.

