Data Structures Quiz

S. Venkata Ramana
19BCS0946
Sec :- B.

(1) In order :- AKBJCLDEHGFI

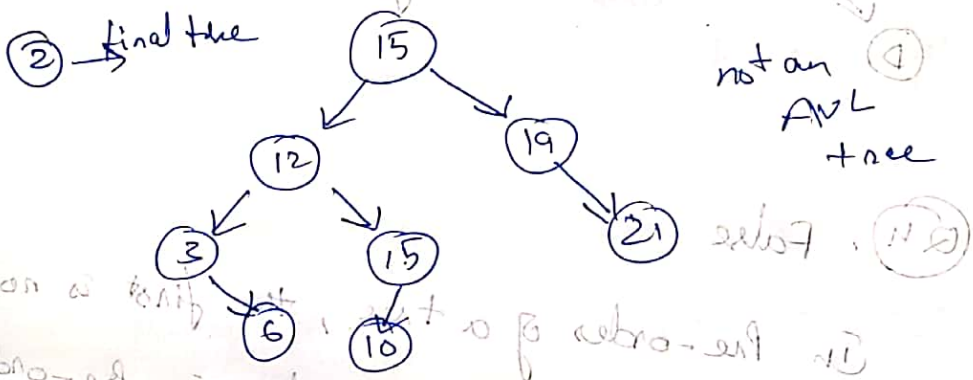
Preorder :- LKAJBCIHEDFG

POSTORDER :- ABCJKIDEFGHL

Breadth first order Traversal

LKIHAJEFGBCD.

(2) find the



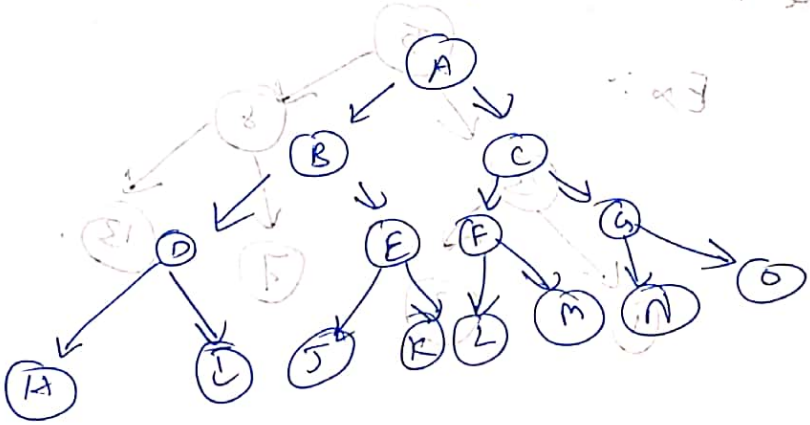
not an AVL tree

(03) Height of the tree is 3, following

The largest no. of nodes $2^{n+1} - 1 = 2^4 - 1 = 15$

The smallest no. of nodes $2^{n-1} = 2^{3-1} = 4$

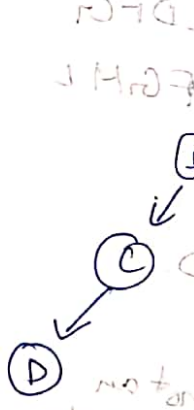
Tree with largest number of nodes is



Internal Nodes : A B C D E F G

Leaf Nodes : H I J K L M N O

Tree with smallest no. of nodes :



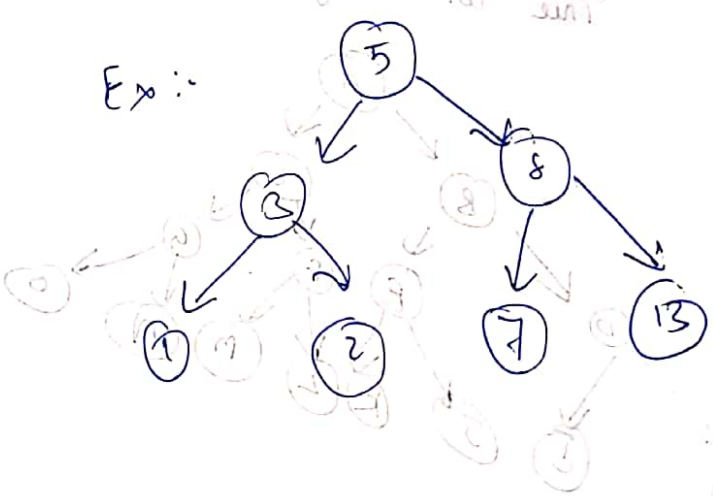
Here, Inte node - A B C

Leaf nodes - D.

(Q4). False.

In Pre-order of a tree, the first is not smallest, According to rule, in pre-order we first put root-node the left child and then right child In b/co their left child is smallest and it is not at first place.

Ex :-



Here, preorder becomes 5, 3, 1, 2, 8, 7, 13

Here 2 is smallest in first cycle but not at first place.

(5). The breath first traversal of given is

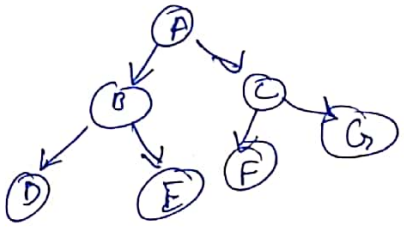
2, 3, 5, 10, 8, 7, 22, 11, 13, 20, 24, 16

2	3	5	10	8	7	22	11	13	20	24	16	Null

Deletion and addition operation is not possible in this tree because this is not binary search tree. this operation only exist for bst.

(6) The Post order traversal sequence of Binary Search tree is given as 10, 30, 20, 150, 300, 200, 200

let us consider the BST as.



The post-traversal for this tree will be DEB FGCA.

Compare the nodes to given value.