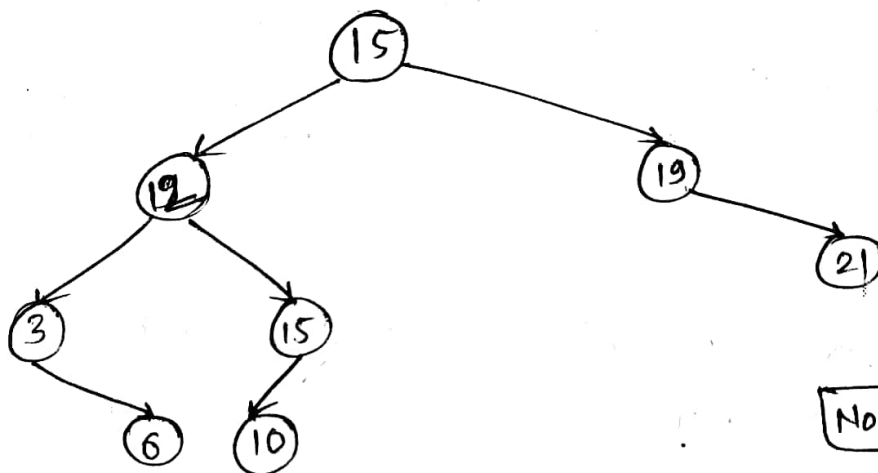


Sarang Vivek Dev. (19BEC039)

Q.1.

- i) Inorder : A K B J C L O E H G F I
- ii) Preorder : L K A J B C I H E O F G
- iii) Postorder : A B C J K I O E F G H L

Q.2.

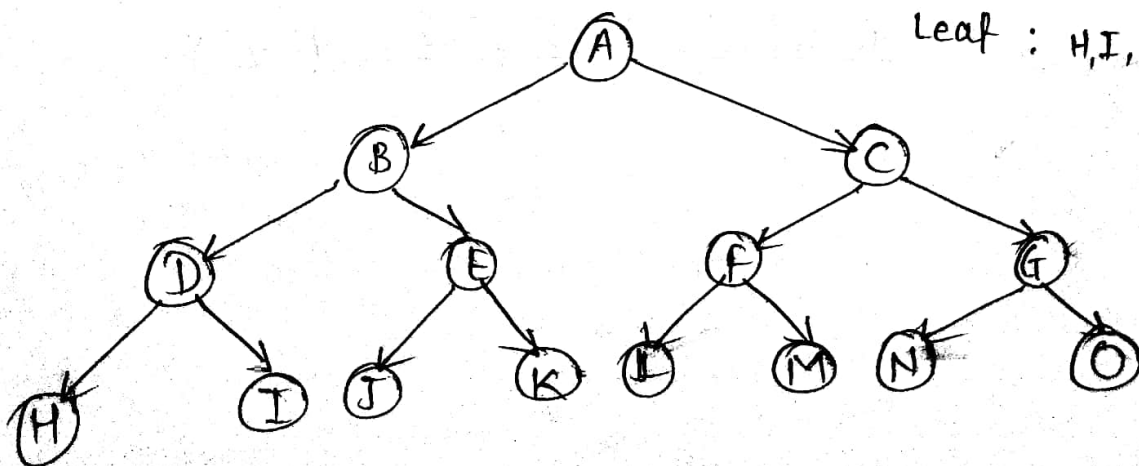


Not an AVL tree

Q.3. $n = 3$

\therefore Largest no. of nodes = $2^{n+1} - 1 = 15$
Least no. of nodes = $2^n - 1 = 4$.

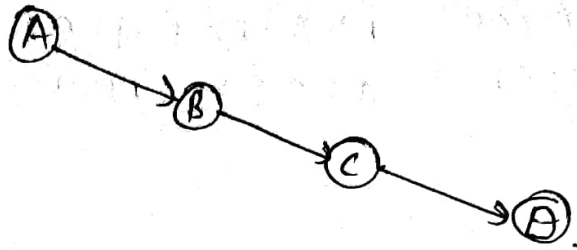
(i) tree with 15 nodes.



Internal nodes: A, B, C, D, E, F, G
Leaf : H, I, J, K, L, M, N, O

(ii) Tree with least no. of trees.

internal: A, B, C
leaf: D.



Q. 4.

False.

As we go from parent \rightarrow left \rightarrow right; the first value printed is 'parent's node' so, the statement is false.

Q. 5.

(i) Before traversal :

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

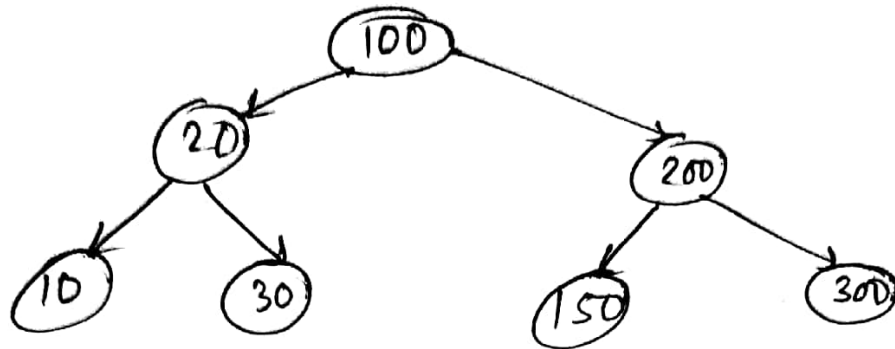
(ii) After traversal :

2	3	5	10	16	7	22	11	13	20	24	4
---	---	---	----	----	---	----	----	----	----	----	---

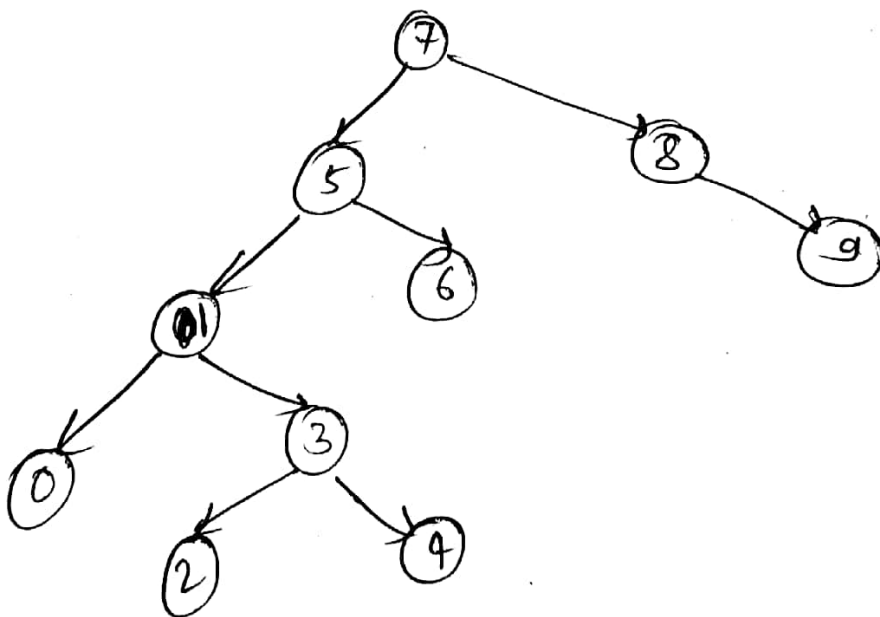
Q. 6.

7 numbers are given. So, we need a no. which is betⁿ this sequence in middle.

So,



Q. 7. Numbers are : 0, 1, 2, 3, 4, 5, 6, 7, 8, 9



inorder : 0, 1, 2, 3, 4, 5, 6, 7, 8, 9.

Option (III) :