**2. Extended Binary Tree (2 - Tree) :-**

* *Extended binary tree is a binary tree in which each and every node can have 2 children and 0 children. That is any node cannot have a single child node.*
* *The node which are having child nodes are internal node and a node which don’t have any child node are external node.*
* *External node represented by square and Internal node are represents by circle.*

*Ex-*

***Length of Internal and External node***

*0* ***NE ( node of external ) = NI (node of internal) +1*** ***LI (length of Internal ) of ‘ T ’ =******0+1 = 1*** *1 1* ***LE (length of external ) of ‘ T ’ = 1+2+2 = 5***

*2 2* ***Qns . Find the LI,LE of the tree and NE of the following trees*** *:- ans.* ***NE = NI+1 =1+1 = 2*** ***LI of ‘ T ’ = 0 LE of ‘ T ’ = 1+1 = 2*** *0* ***NE = NI+1 = 5+1 = 6*** *1 1* ***LI of ‘ T ’ = 0+1+1+2+2 = 6******LE of ‘ T ’ = 2+2+3+3+3+3 = 16*** *2 2 2 2 3 3 3 3*

***Note : - LE = LI + 2.n***

***Where , n = no. of internal node***

***LE = 6+2 (5)***

***= 16***