

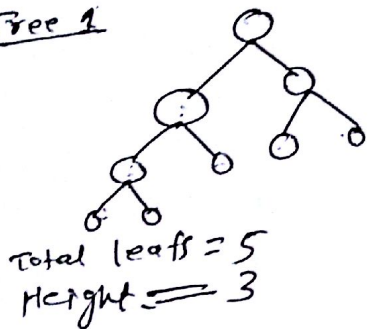
## Lab 4

## Group-2

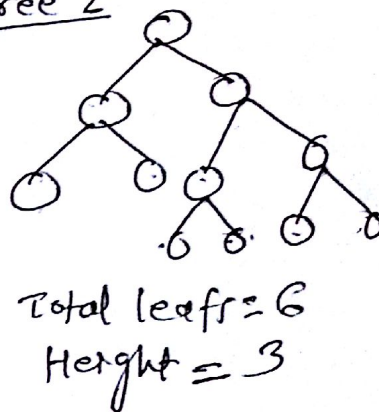
### Problem 4 Binary Trees

#### Tree 1

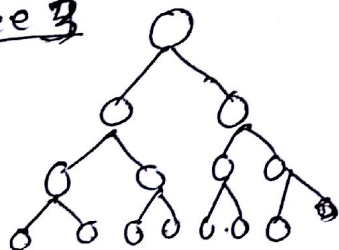
(a)



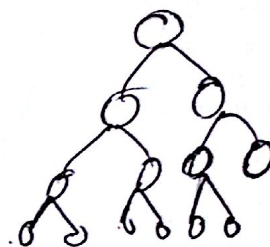
#### Tree 2



#### Tree 3



#### Tree 4



- (b) Ans: from our observation we see that at most 8 leaves can be made with height of 3.  
So It is True

- (c) Ans: Based on (b) we can say that, in general ~~the~~ if  $n = \text{height of tree}$  then  $\text{leaves} \leq 2^n$  is True  
if Tree is balanced Then,  $\text{leaves} = 2^n$