# Review Test 10- Algorithm and Data Structures

Max:Marks-10
Time: 10 min



* Required

Email *

pranitt1398@gmail.com

Name *

Pranit Tondvalkar

PRN *

220960920085

Consider the following array A, and the searching element is X. How many comparisons are required to search an element X in array A using Sequential Search. * 1 point

A[ ]= {25, 45, 87, 21, 18, 49, 13, 115, 83, 65}

X = 83

- ○ 7
- ◉ 8
- ○ 9
- ○ 10

Choose true statement : * 1 point

I - Binary search is faster than linear search.

II - Binary search may not be applied on all the input lists on which linear search can be applied

- ◉ Only I
- ○ Only II
- ○ Both I and II
- ○ Neither I nor II

In binary search, the key to be searched is compared with the element in the _____ of a sorted list. 1 point

- ○ End
- ○ Front
- ◉ Middle
- ○ None of these

Clear selection

Choose correct option * 1 point

- ○ Balance factor = height of right sub tree - height of left sub tree
- ◉ Balance factor = height of left sub tree - height of right sub tree
- ○ Balance factor = height of left sub tree - height of root tree
- ○ Balance factor = height of root tree - height of right sub tree

1 point

What is an AVL tree?

- ◉ a tree which is balanced and is a height balanced tree
- ○ a tree which is unbalanced and is a height balanced tree
- ○ a tree with three children
- ○ a tree with at most 3 children

Clear selection

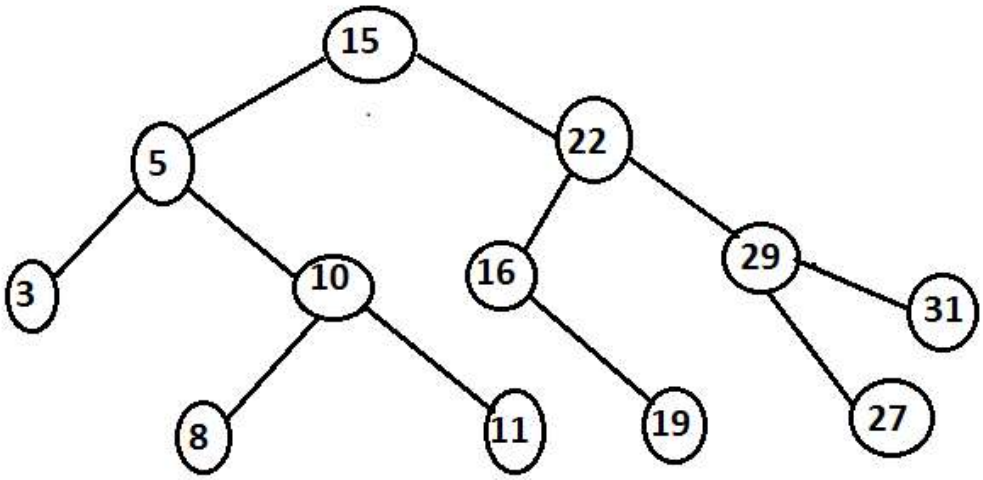
The number of rotations required to insert a sequence of elements 9,6,5,8,7,10 into an empty AVL tree is? 2 points

- ○ 0
- ○ 1
- ○ 2
- ◉ 3

Clear selection

Consider the following AVL tree. 2 points

How many number of rotations required for deleting 3?




- ◉ 0
- ○ 1
- ○ 2
- ○ 3

Clear selection

Construction of AVL tree with height 4 1 point

What is the Minimum number of nodes

- ○ 4
- ○ 8
- ◉ 12
- ○ 16

Clear selection



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