DSA_Quiz_5_6/4/2021

* This form will record your name, please fill your name.

1. How many BSTs can be possible from 3 unique keys?
(1 Point)

2. Consider the following preorder traversal sequence of a BST.:

40, 36, 12, 15, 17, 85, 45, 50, 87, 95, 90

Find the postorder traversal.
(2 Points)

- ○ 17,15,12,36,50,45,95,90,87,85,40

- ○ 17,15,12,36,50,45,90,95,87,85,40

- ○ 17,15,12,36,45,50,90,95,87,85,40

- ○ 17,15,12,36,50,45,90,95,85,87,40

3. Consider the insertion sequence for an AVL tree : 13,45,57,20,17,58,65. How many rotations are performed while inserting keys in the given sequence? (Count double rotation as single one)
(2 Points)

○ 3

○ 2

○ 1

○ 5

4. In the previous example, what will be left child of 45 after first rotation?
(1 Point)

○ NULL

○ 13

○ 57

○ 20

5. An AVL tree is created from the given keys: 13,34,12,40,37,15. If tree is represented using sequential representation, what will be the sequence?
(2 Points)

○ 34,13,37,12,15,-,40

○ 34,13,12,15,40,37,-

○ 13,12,-,15,37,34,40

○ 13,12,-,15,34,37,40

6. What is the maximum height of any AVL-tree with 12 nodes?
(2 Points)

○ 3

○ 4

○ 2

○ 5