

## Quiz # 3

10  
5 14  
3 6 11 17

**Q. 3: True/False questions**

- a) Inserting into an AVL tree with  $n$  nodes requires  $\Theta(\log_2 n)$  rotations

False. Number of rotations is  $O(\log_2 n)$  but not  $\Theta(\log_2 n)$

- b) The height of any Binary Search Tree is  $O(\log_2 n)$

False. It can be up to  $n$ .

- c) The key for every node in a Binary Search Tree is greater than its parent's key

False. The key of nodes in the left subtree of a node are less than their parent's key.