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1. In ......; for any node n, every descendant node's value in the left subtree of n is less than the value of n and every descendant node's value in the right subtree is greater than the value n.

A) binary tree

**B**) binary search tree

C) AVL tree

D) binary heap tree

2. For finding a node in a ....., at each stage we ideally reduce the number of nodes we have to check by half.

A) binary treeB) binary search treeC) AVL treeD) binary heap tree

3. In the best case of BST, the time is on the order of ....., but in the worst case it requires linear time.

A) log<sub>2</sub>n B) n C) log<sub>2</sub>(n+1) D) n+1

4. ..... of binary search tree starts by visiting the current node, then its left child and then its right child.

A) Preorder traversal

B) In-order traversal

C) Linear traversal

D) Post-order traversal

5. The order with which the nodes are inserted affects the running time of the ...... search algorithm.

A) AVL Tree

B) Red-Black Tree

**C) Binary Search Tree** 

D) Binary Heap Tree

6. ..... of binary search tree starts by visiting the current node's left child, then its right child and finally the current node itself.

A) Preorder

B) In-order

C) Linear

**D)** Post-order

7. With an ideal balance, the running time for inserts, searches and deletes, even in the worst case is .....

A) log<sub>2</sub>n B) n C) log<sub>2</sub>(n+1) D) n+1

8. In binary search tree, a ..... exists if starting from some node n there exists a path that returns to n.

A) cycle

B) node

C) root

D) subtree

9. In binary search tree, a ..... rooted to node n is the tree formed by imaging node n was a root.

A) cycle

B) node

C) root

D) subtree

10. ..... is a binary search tree whose left subtree and right subtree differ in height by at most 1 unit and whose left and right subtrees are themselves AVL trees.A) Red-Black TreeB) AVL Tree

C) Binary Head Tree

D) A-A Tree