**Chapter 16 Concept Quiz**

Examine whether each of the following statements is true or false. If a statement is false, please explain why.

1. In Binary tree data structure, there may be more than one path from one node to the other.

2. In a BST tree, all items are unique.

3. Compare with ArrayList, looking up an item in a BST is slower.

4. A new item can be inserted as a non-leaf node in a BST tree.

5. An InOrder traversal on a BST tree can return all items in the tree in ascending order.

6. A node’s next-in-order successor node in a BST tree locates on the node’s left subtree and is the right-most node on the left subtree.

7. In BST traversal, recursive traversal is a depth-first traversal while level-by-level traversal is a breadth-first traversal.

8. The equivalent data structure to BST tree in Java Collection is called TreeList.

9. In Huffman tree, the path to the more frequent character is longer than the less frequent character.

10. In a BST tree, all leaf nodes can be at different levels of the tree.

**Answers to the Quiz**

1. False. There is one and only one path from one node to the other.

2. True.

3. False. BST is more efficient to look up an item than ArrayList.

4. False. A new item is always inserted in a BST tree as a leaf node.

5. Tree.

6. False. It is on the right subtree and is the left-most node on the right subtree.

7. True.

8. False. It is called TreeSet.

9. False. The path to the more frequent character is shorter.

10. True.