Question - 1

BST Traversal

SCORE: **5 points**

Given a binary search tree, which traversal type would print the values in the nodes in sorted order?

- ( ) Preorder
- ( ) Postorder
- (•) Inorder
- ( ) All of the above

Question - 2

Elementary Symbol Table

SCORE: **5 points**

Which of the following is true for symbol table?

- (•) Only one value is associated with each key (no duplicate keys in a table).
- ( ) If keys are numeric and starting with 0. Then they should be in range of 0 to N-1 where N is the size of symbol table.
- (•) Finding floor is to find the largest key that is less than or equal to the given key.
- (•) Finding ceiling is to find the smallest key that is greater than or equal to the given key.
- ( ) As a symbol table is always sorted with respect to keys. It can also act as priority queues.
- ( ) ArrayList, LinkedList, Stack and Queues are good examples of in built symbol tables in Java.

Question - 3

Binary Tree

SCORE: **5 points**

Which of the following statements about binary trees is **NOT** true?

- (•) Every binary tree has at least one node.
- ( ) Every non-empty tree has exactly one root node.
- ( ) Every node has at most two children.

Every non-root node has exactly one parent.

Question - 4

Height of tree

SCORE: **5 points**

The following numbers are inserted into an empty binary search tree in the given order: 10, 1, 3, 5, 15, 12, 16. What is the height of the binary search tree?

- 2
- 3
- 4
- 5

Question - 5

Sequential search in an unordered linked list

SCORE: **30 points**

Please implement the **put()** and **delete()** function of symbol table with a linked list of nodes that contain keys and values.