

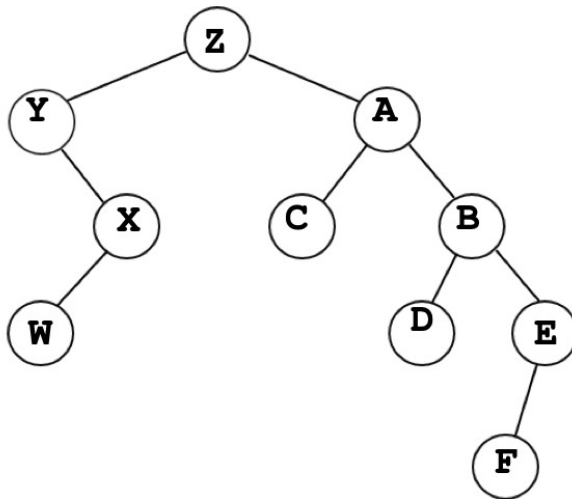
Q1. The maximum number of binary trees that can be formed by 3 nodes is:

- A.3
- B.9
- C.1
- D.5

Q2. Insert 5,4,10,3,9,2,12 in an empty binary search tree (BST) in the sequence, Which is the element that will be in the lowest level ?

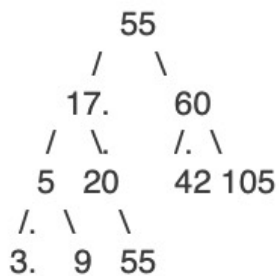
- A.2
- B.5
- C.12
- D.3

Q3. Consider the following tree:



- a. What is the in-order traversal of this tree?
- b. What is the pre-order traversal of this tree?
- c. What is the post-order traversal of this tree?

Q4 Is this a binary search tree?

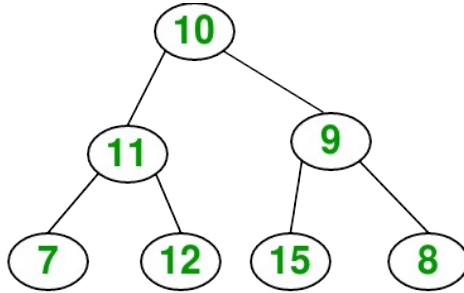


Q5 Construct a binary search tree for the following keys in the given order :

35 70 54 48 18 108 97 45.

Show the preorder, inorder and postorder traversals for the constructed tree.

Q6. Consider the following tree. Reorganise the keys so that the resultant tree is a binary search tree.

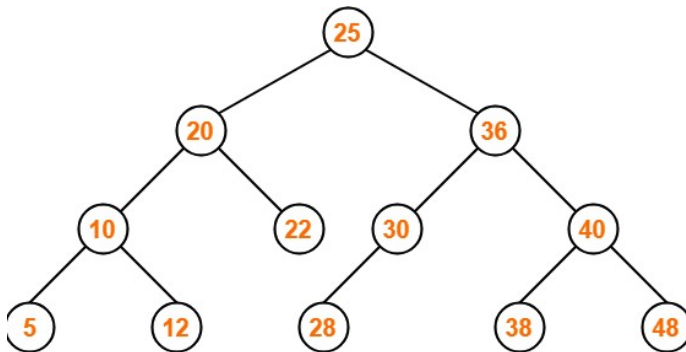


Q7. Consider the following Binary Search tree.

a) How many nodes will be visited to search for the value 38 in the tree.

b) Show the tree after inserting value 42 in the tree.

c) From the tree resulting from part b), delete node with value 36.



Q 8. A binary search tree is generated by inserting in order of the following integers- 50, 15, 62, 5, 20, 58, 91, 3, 8, 37, 60, 24

The number of nodes in the left subtree and right subtree of the root respectively is _____.

- A. (4, 7)
- B. (7, 4)
- C. (8, 3)
- D. (3, 8)