Question **6**

Not yet answered

Marked out of 1.00

Starting from an initially empty binary search tree (built with the regular "≤" relation), insert into it, in the given order, the following elements: 41, 54, 60, 23, 73, 68, 98, 16, 13, 19, 36, 100, 76.

It is enough to draw the final tree.

Show the two possible trees after the removal of 41.

Justify your answers.

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Question **7**

Not yet answered

Marked out of 1.00

We have a hashtable with m = 8 positions in which separate chaining is used as a collision resolution method, but every position contains the root of a binary search tree.

Show how the following elements can be added into this hashtable (which is initially empty): 8, 99, 40, 19, 56, 16, 17, 28, 62. It is enough to draw the final hashtable, but show how you computed the position for every element.

Specify the load factor of the table.

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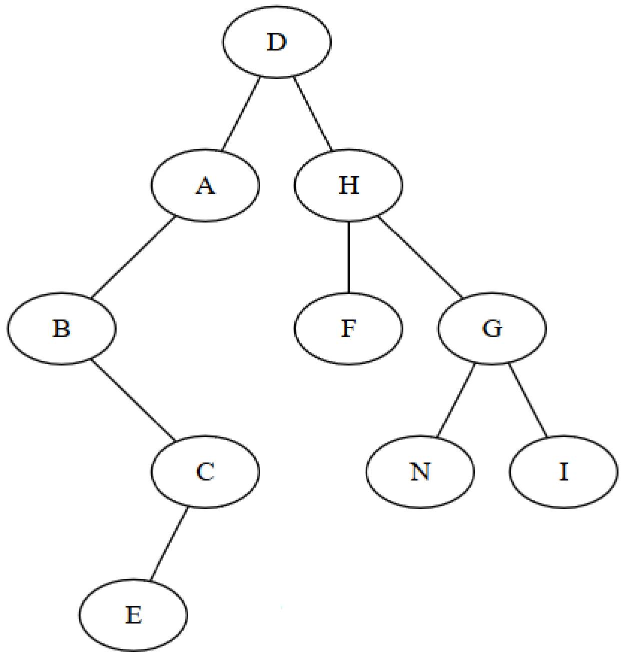
Question **8**

Not yet answered

Marked out of 1.00

For the following binary tree, specify its preorder, postorder, inorder and level order traversal.

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Question **9**

Not yet answered

Marked out of 1.00

Is the following array a binary heap? If not, transform it into a binary heap by swapping two elements:

[41, 54, 13, 73, 68, 98, 63, 100, 76].

In the (possibly modified) heap add the following elements (in this order): 19, 18, 59. After adding these 3 elements, remove an element from the heap. Draw the heap after every operation (4 drawings).

Justify your answers.

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