1. a. Draw the tree corresponding to the following arithmetic expression:

$$((14-8)*2)*15+16/((14-7)*2)$$

[4]

b. Write down the preorder, inorder, postorder and levelorder traversal sequence for the tree generated in question 1(a).

[6]

c. Draw the Binary tree using the following Pre-order and In-order traversing sequence (consider sequence from left to right):

[6]

Pre-order: 68, 35, 11, 7, 15, 65, 21, 5, 19, 23, 14, 29, 16, 51, 32

In-order: 7, 11, 35, 65, 15, 21, 5, 68, 23, 14, 19, 51, 16, 32, 29

d. From the tree generated in question 1(c) answer the following:

[4]

i.   What is the depth of node 68?
ii. What is the height of node 19?
iii. What is the height of the tree?
iv. Write down the ancestors of node 32.