CSCI 340-3   **Quiz 9**   **Fall 2017**
                           Closed Book & Notes
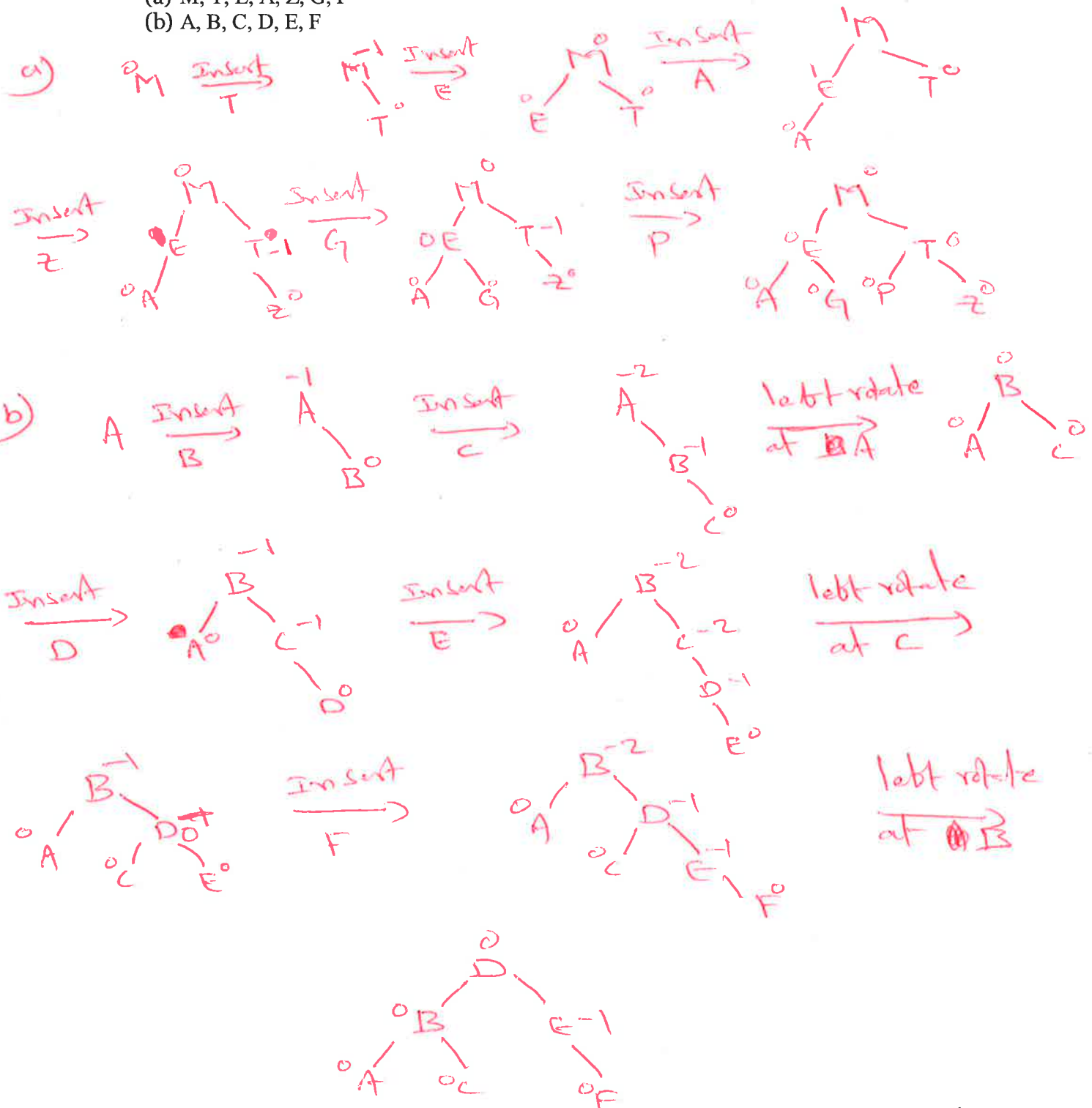
1. For each of the following cases, insert the keys (in the given order) to build them into an
    initially empty AVL tree. Show the tree after each insertion.

    (a) M, T, E, A, Z, G, P
    (b) A, B, C, D, E, F

2. (a) What are the total number of nodes in Fibonacci trees with heights h = 0, 1, 2, 3, 4 and 5?
   (b) Draw the Fibonacci trees with heights h = 2, 3, 4, and 5.

a)

Height	Number of Nodes
0	0
1	1
2	$F(1) + F(0) + 1 = 2$
3	$F(2) + F(1) + 1 = 4$
4	$F(3) + F(2) + 1 = 7$
5	$F(4) + F(3) + 1 = 12$

b)

h = 2

h = 3

h = 4

h = 5