3) (10 pts) DSN (AVL Trees)

(a) (8 pts) Create an AVL tree by inserting the following values into an initially empty AVL Tree in the order given: 7, 8, 54, 13, 35, 66, 50, and 12. Show the state of the tree after each insertion.

(b) (2 pts) Draw the state of the tree after the deletion of the node containing the value 7.

Computer Science Foundation Exam

May 19, 2018

Section II A

ALGORITHMS AND ANALYSIS TOOLS

**NO books, notes, or calculators may be used,
and you must work entirely on your own.**

Name: _____

UCFID: _____

NID: _____

Question #	Max Pts	Category	Score
1	10	ANL	
2	5	ANL	
3	10	ANL	
TOTAL	25		

You must do all 3 problems in this section of the exam.

Problems will be graded based on the completeness of the solution steps and <u>not</u> graded based on the answer alone. Credit cannot be given unless all work is shown and is readable. Be complete, yet concise, and above all <u>be neat</u>. For each coding question, assume that all of the necessary includes (stdlib.h, stdio.h, math.h, string.h) for that particular question have been made.