

COMP 182 Quiz 5 — Wednesday 9, 2007

For each question select the best answer. All questions are worth 1 point. The last three questions will have any answer counted as correct.

For the first 12 questions assume that you start with an empty binary search tree and insert the items 10, 8, 4, 12, 7, 15, 18, 3 (in this order).

Problem 1. What is the height of the tree?

- a) 2 b) 3 c) 5 d) 8 e) 9

Problem 2. Where is the successor of 10?

- a) a leaf b) left child c) right child d) root e) no successor

Problem 3. How many leaves does the tree have?

- a) 3 b) 4 c) 5 d) 6 e) 7

Problem 4. How many children does 8 have?

- a) 0 b) 1 c) 2 d) 3 e) 4

Problem 5. How many descendants does 8 have?

- a) 0 b) 1 c) 2 d) 3 e) 4

Problem 6. The uncle of 4 is?

- a) 3 b) 7 c) 8 d) 10 e) 12

Problem 7. The preorder traversal would begin with?

- a) 3 4 7 8 b) 3 7 4 8 c) 10 8 12 4 d) 10 8 4 3 e) 3 7 18 4

Problem 8. The postorder traversal would begin with?

- a) 3 4 7 8 b) 3 7 4 8 c) 10 8 12 4 d) 10 8 4 3 e) 3 7 18 4

Problem 9. If you implemented the tree with a vector (numbering top to bottom left to right) then the location of 15 is?

- a) 2 b) 3 c) 4 d) 5 e) 6

Problem 10. If you implemented the tree with a vector (numbering top to bottom left to right) then the location of 10 is?

- a) 0 b) 1 c) 2 d) 5 e) 10

Problem 11. If you implemented the tree with a vector (numbering top to bottom left to right) then the location of 18 is?

- a) 2 b) 3 c) 8 d) 14 e) 18

Problem 12. Deleting 12 would cause:

- a) the removal of a leaf b) the tree to become disconnected c) setting 18 as the right child of 10
d) setting 18 as the right child of 15 e) setting 15 as the right child of 10

Problem 13. How many years will it take you to get your bachelors degree (total)?

- a) 4 b) 5 c) 6 d) over 6 e) over 10

Problem 14. How many programs have you written beyond those required for a course?

- a) < 5 b) 5-10 c) 10-20 d) 20-50 e) 50+

Problem 15. How is project 6 going?

- a) Haven't started b) Started, but confused c) Started, doing fine d) Nearly finished e) Running tests