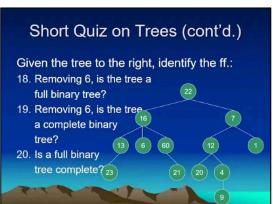
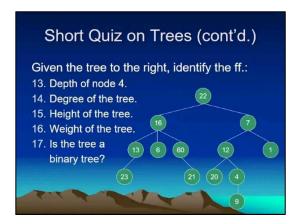
ROXAS, ALLIYAH FRANCINE J.

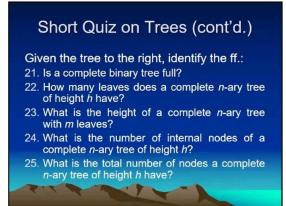
BSCPE 2-2

CPEN 65









6. Children of node 16?

ANS:

Nodes=13, 6, 60

7. Parent of node 1?

ANS:

Nodes=7

8. Siblings of node 23?

ANS:

Nodes=

9. Ancestors of node 9?

ANS:

Nodes=4, 12, 7, 22

10. Descendants of node 16?

ANS:

Nodes=13, 23, 6, 60, 21

11. Leaves.

ANS:

Nodes=23, 6, 21, 20, 9, 1

12. Non Leaves.

ANS:

Nodes=13, 16, 60, 12, 7, 22

13. Depth of node 4?

ANS: 3

14. Degree of the tree?

ANS: 3

15. Height of the tree?

ANS: 4

16. Weight of the tree?

ANS: 6

17. Is the tree a binary tree?

ANS: If the node 16 has a degree/no. of children of 3, then the answer is NO.

18. Removing 6, is the tree a full binary tree?

ANS: No, for the reason that nodes 13 and 60 only has 1 child or a degree of 1

19. Removing 6, is the tree a complete binary tree?

ANS: No, because leaf node 1 has a depth of two, leaf nodes 23, 21, and 20 each have a depth of 3, and leaf node 9 has a depth of 4.

20. Is a full binary tree complete?

ANS: No, because while all nodes in a full binary tree have exactly 2 degrees, this does not meet the other conditi on for a tree to be deemed a complete k-ary tree, namely the fact that all leaf nodes have a similar depth.

21. Is a complete binary tree full?

ANS: Yes, as all of the non-leaf nodes in a complete 2-ary tree must have a degree of two, and a complete 2-ary tree must contain leaf nodes of the same depth.

22. How many leaves does a complete n-ary tree of height h have?.

ANS: The formula n^h may be used to determine how many leaves are in a certain tree.

23. What is the height of a complete n-ary tree with m leaves?.

ANS: We can find the height of the tree by the used the formula log base of n (m)

24. What is the number of internal nodes of a complete n-ary tree of height h?.

ANS: The formula $(n^{h-1})/(n-1)$ can be used to find the number of internal nodes of the tree.

25. What is the total number of nodes a complete n-ary tree of h have?

ANS: The formula $(n^{(h+1)-1})/(n-1)$ can determine the number of nodes in the tree.