Quiz 5 EECE4040 Spring 2022

Due Feb 14 at 11:59pm **Points** 10 **Questions** 10
Available Feb 14 at 10am - Feb 14 at 11:59pm about 14 hours
Time Limit 20 Minutes

This quiz was locked Feb 14 at 11:59pm.

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	13 minutes	9 out of 10

Score for this quiz: **9** out of 10
Submitted Feb 14 at 11:20pm
This attempt took 13 minutes.

Question 1

1 / 1 pts

The minimum depth of a binary tree with *n* nodes is approximately

- $\sqrt{n}$
- $\frac{\sqrt{n}}{2}$
- $\frac{1}{2}\log_2 n$
- Correct! $\log_2 n$
- $\frac{n}{2}$

Question 2

1 / 1 pts

The minimum depth of a binary tree with L leaf nodes is approximately

- $\frac{L}{2}$
- $\frac{1}{2} L \log_2 L$
- Correct! $\log_2 L$
- L
- $L \log_2 L$

Question 3

0 / 1 pts

Number of leaf nodes of a 2-tree with 101 nodes

- orrect Answer 51
- 25
- 21
- 49
- ou Answered 50

Question 4

1 / 1 pts

Which traversal can be used to assign keys to a binary tree, so that it becomes as binary search tree?

Correct!

- (selected) inorder traversal
- phat traversal
- postorder traversal
- breadth-first traversal
- preorder traversal

Question 5

1 / 1 pts

Which traversal allows the records of a binary search tree to be stored in a sequential file, so that it can be recovered by reading records sequentially from the file and inserting into a binary search tree, starting with the null tree?

Correct!

- (selected) preorder traversal
- postorder traversal
- breadth-first traversal
- inorder traversal
- bearcat traversal

Question 6

1 / 1 pts

Deleting from a node of a binary search tree that has two children involves swapping content with its

its preorder successor (or predecessor) and deleting the preorder successor (or predecessor)

its binary successor (or predecessor) and deleting the binary successor (or predecessor)

its tree successor (or predecessor) and deleting the tree successor (or predecessor)

Correct!

its inorder successor (or predecessor) and deleting the inorder successor (or predecessor)

its postorder successor (or predecessor) and deleting the postorder successor (or predecessor)

Question 7

1 / 1 pts

A binary tree having *n* nodes is balanced means

it is a full tree

it is a complete tree

Correct!

its depth is $O(\log n)$

its depth is $O(n)$

it is a 2-tree

Question 8

1 / 1 pts

A priority queue is effectively implemented using a

- forest
- binary search tree
- 2-tree
- graph
- heap

Correct!

Question 9

1 / 1 pts

Insertion and deletion into a max-heap takes respective times

- $O(\log n)$ and $O(1)$
- $O(\log n)$ and $O(\log n)$
- $O(1)$ and $O(\log n)$
- $O(1)$ and $O(n)$
- $O(n \log n)$ and $O(n \log n)$

Correct!

Question 10

1 / 1 pts

Heapsort has complexity

- $O(n\,(\log n)^2)$
- $O\left(n^2\ \log n\right)$
- $O(n)$
- **Correct!** $O(n\ \log n)$
- $O\left(n^2\right)$

Quiz Score: **9** out of 10