

Tests & Quizzes

Quiz3

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Part 1 of 3 - True or False

Question 1 of 19 1 Points

Exception `e = new Exception("Woops");` is a legal statement.

- ☒ A. True
☐ B. False

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Question 2 of 19 1 Points

Is this catch block legal?

```
catch(NoSuchMethodException nsme){  
    System.out.println(nsme.getMessage());  
    System.exit(0);  
}
```

Time Remaining: 00:57:31

▲ Hide Time Remaining ▲

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Question 3 of 19 1 Points

When a method might throw an exception but not catch it, the exception class usually must be listed in a 'throw' (keyword) clause for the method.

- ☐ A. True
☒ B. False

throw ws

[Reset Selection](#)

Question 4 of 19 1 Points

A try block is followed by one or more catch blocks. In this case, always list the catch block for a more specific exception class before the catch block for a more general exception class.

- ☒ A. True
☐ B. False

[Reset Selection](#)

Question 5 of 19 1 Points

Unchecked exceptions must be caught eventually. Otherwise, program execution will terminate.

- ☒ A. True
☐ B. False

[Reset Selection](#)

Question 6 of 19 1 Points

Files that are considered to be strings of characters and that look like characters to your program and to a text editor are called text files. All other files are called binary files.

- ☐ A. True
☒ B. False

[Reset Selection](#)

Question 7 of 19 1 Points

A stack or a queue often serves as the underlying mechanism on which an ADT array is based.

- ☐ A. True
☒ B. False

[Reset Selection](#)

Question 8 of 19 1 Points

Pushing and popping items on a stack and inserting and removing items in a queue all take $O(N)$ time.

- ☒ A. True
☐ B. False

[Reset Selection](#)

Question 9 of 19 1 Points

Deleting a node with one child from a binary search tree involves finding that node's successor

- ☒ A. True
☐ B. False

[Reset Selection](#)

Part 2 of 3 - Multiple Choice

Question 10 of 19 1 Points

Which of the following is true?

- ☐ A. The top of a stack corresponds to the front of a queue.
- ☒ B. The contents of a queue can wrap around, while those of a stack cannot.
- ☐ C. The pop operation on a stack is considerably simpler than the remove operation on a queue.
- ☐ D. In both the stack and the queue, items removed in sequence are taken from increasingly high index cells in the array.

[Reset Selection](#)

Question 11 of 19 1 Points

A queue might be used to hold

- ☒ A. the items to be sorted in a insertion sort
- ☐ B. reports of variety of imminent attacks on the star ship Enterprise.
- ☐ C. keystrokes made by a computer user writing a letter.
- ☐ D. symbols in a algebraic expression being evaluated.

[Reset Selection](#)

Question 12 of 19 1 Points

When you create a reference to a node in a linked list, it

- ☐ A. must refer to the first node
- ☐ B. can refer to any node you want
- ☐ C. must refer to the node pointed to by 'current'
- ☒ D. must refer to the node pointed to by 'next'

[Reset Selection](#)

Question 13 of 19 1 Points

A binary tree is a search tree if

- ☐ A. in the path from the root to every leaf node, the key of each node is greater than the key of its parent
- ☐ B. every non-leaf node has children whose key values are less than the parent
- ☒ C. every left child has a key less than the parent and every right child has a key greater than the parent
- ☐ D. a node can have a maximum of two children

[Reset Selection](#)

Question 14 of 19 1 Points

A subtree of a binary tree always has

- ☐ A. a root unconnected to the main tree's root
- ☐ B. a sibling with the same number of nodes
- ☒ C. a root that is a child of the main tree's root
- ☐ D. fewer nodes than the main tree

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Part 3 of 3 - Filling the blanks

Question 15 of 19 1 Points

Access to the nodes in a linked list is usually through the node.

Question 16 of 19 1 Points

A special case often occurs for insertion and deletion routines when a list is

Question 17 of 19 1 Points

A transforms a range of key values into a range of index values.

Question 18 of 19 1 Points

Separate chaining involves the use of a at each location.

Question 19 of 19 2 Points

Create a method `ListNode reverseList(ListNode head)` to reverse a Linked List in Java

```
public class ListNode {  
  
    private int data;  
    private ListNode next;  
  
    ListNode(int data) {  
        this.data = data;  
        this.next = null;  
    }  
  
    // standard getters and setters  
}
```

A linked list may contain multiple `ListNode` objects. For example, we can construct the above sample linked list with a loop:

```
ListNode constructLinkedList() {  
    ListNode head = null;  
    ListNode tail = null;  
    for (int i = 1; i <= 5; i++) {  
        ListNode node = new ListNode(i);  
        if (head == null) {  
            head = node;  
        } else {  
            tail.setNext(node);  
        }  
        tail = node;  
    }  
    return head;  
}
```

Maximum number of characters (including HTML tags added by text editor): 32,000

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