Started on	Wednesday, 19 March 2025, 2:33 PM
State	Finished
Completed on	Wednesday, 19 March 2025, 2:41 PM
Time taken	8 mins 45 secs
Marks	18.00/20.00
Grade	**90.00** out of 100.00

Question 1

Complete

Mark 1.00 out of 1.00

What is the result of the following code?

```
String str = "Hello";
str.concat(", World!");
System.out.println(str);
```

- a. Hello
- b. Runtime Error
- c. , World!
- d. Hello, World!

Question 2

Complete

Mark 1.00 out of 1.00

What is the output of the following code?

```
for (int i = 0; i < 5; i++) {
    if (i == 2) {
        continue;
    }
    System.out.print(i + " ");
}
```

- a. 0 1 3 4
- b. 0 1 2 4
- c. 0 1 2 3 4
- d. 0 1 3

Question 3

Complete

Mark 1.00 out of 1.00

What is the main advantage of using a Doubly Linked List over a Singly Linked List?

- a. Faster deletion
- b. Doubly Linked List requires less memory
- c. It is easier to implement
- d. Traversal in both directions is possible

Question 4

Complete

Mark 1.00 out of 1.00

How do you access the third element in an array in Java?

- a. myArray[2]
- b. myArray(3)
- c. myArray(2)
- d. myArray[3]

Question 5

Complete

Mark 0.00 out of 1.00

Which is the correct way to declare a constant in Java?

- a. final int x = 10;
- b. constant final int x = 10;
- c. static final int x = 10;
- d. constant int x = 10;

Question 6

Complete

Mark 1.00 out of 1.00

Which of the following tree traversal methods gives nodes in non-decreasing order in a Binary Search Tree (BST)?

- a. Pre-order
- b. In-order
- c. Post-order
- d. Level-order

Question 7

Complete

Mark 1.00 out of 1.00

Which of the following data structures is used to implement recursion in Java?

- a. Array
- b. Linked List
- c. Stack
- d. Queue

Question 8

Complete

Mark 1.00 out of 1.00

What is the result of the following code?

```
int[] arr1 = {1, 2, 3};
int[] arr2 = arr1;
arr2[0] = 4;
System.out.println(arr1[0]);
```

- a. 1
- b. 2
- c. 4
- d. 3

Question 9

Complete

Mark 1.00 out of 1.00

How do you break out of a loop in Java?

- a. stop
- b. exit
- c. break
- d. end

Question 10

Complete

Mark 0.00 out of 1.00

What is the primary difference between a LinkedList and an ArrayList in Java?

- a. LinkedList uses a dynamic array, while ArrayList uses a doubly linked list
- b. LinkedList uses a singly linked list, while ArrayList uses a static array
- c. ArrayList stores objects, while LinkedList only stores primitive data types
- d. LinkedList uses nodes and pointers, while ArrayList uses an array

Question 11

Complete

Mark 1.00 out of 1.00

What is the purpose of the `continue` statement in Java?

- a. Skips the rest of the code in the loop and starts the next iteration
- b. Ends the loop
- c. None of the above
- d. Restarts the loop from the beginning

Question 12

Complete

Mark 1.00 out of 1.00

Which of the following operations is not possible on a stack?

- a. Push
- b. Peek
- c. Pop
- d. Enqueue

Question 13

Complete

Mark 1.00 out of 1.00

What is the default value of an instance variable in Java?

- a. 0
- b. Depends on the data type
- c. false
- d. null

Question 14

Complete

Mark 1.00 out of 1.00

What is the result of 5 / 2 in Java?

- a. 2.5
- b. 2
- c. Error
- d. 2.0

Question 15

Complete

Mark 1.00 out of 1.00

What is the result of the following code?
int x = 5;

System.out.println(x++ + ++x);

- a. 11
- b. 13
- c. 12
- d. 10

Question 16

Complete

Mark 1.00 out of 1.00

In a directed graph, what is a cycle called where all vertices are distinct?

- a. Eulerian cycle
- b. Hamiltonian cycle
- c. Bipartite cycle
- d. Simple cycle

Question 17

Complete

Mark 1.00 out of 1.00

How do you find the length of an array in Java?

- a. myArray.length()
- b. myArray.size()
- c. length(myArray)
- d. myArray.length

Question 18

Complete

Mark 1.00 out of 1.00

What is the purpose of the `new` keyword in Java?

- a. To allocate memory for an object
- b. To create a new instance of a class
- c. To initialize an array
- d. All of the above

Question 19

Complete

Mark 1.00 out of 1.00

What is the result of the following code?

```
int[] myArray = {1, 2, 3};

myArray[1] = 4;

System.out.println(myArray[1]);
```

- a. 1
- b. 3
- c. 4
- d. 2

Question 20

Complete

Mark 1.00 out of 1.00

In Java, which of the following is the most efficient data structure for retrieving data in constant time (on average)?

- a. TreeMap
- b. HashMap
- c. PriorityQueue
- d. LinkedList