Started on	Wednesday, 19 March 2025, 2:33 PM
State	Finished
Completed on	Wednesday, 19 March 2025, 2:40 PM
Time taken	7 mins 29 secs
Marks	16.00/20.00
Grade	**80.00** out of 100.00

Question 1

Complete

Mark 1.00 out of 1.00

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

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

Question 2

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

Question 3

Complete

Mark 1.00 out of 1.00

How do you break out of a loop in Java?

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

Question 4

Complete

Mark 0.00 out of 1.00

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

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

Question 5

Complete

Mark 1.00 out of 1.00

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

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

Question 6

Complete

Mark 0.00 out of 1.00

What is the result of the following code?

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

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

Question 7

Complete

Mark 0.00 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. 2
- d. 4

Question 8

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

Question 9

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

Question 10

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

Question 11

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

Question 12

Complete

Mark 1.00 out of 1.00

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

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

Question 13

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. Bipartite cycle
- c. Hamiltonian cycle
- d. Simple cycle

Question 14

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

Question 15

Complete

Mark 1.00 out of 1.00

What is the result of 5 / 2 in Java?

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

Question 16

Complete

Mark 1.00 out of 1.00

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

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

Question 17

Complete

Mark 1.00 out of 1.00

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

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

Question 18

Complete

Mark 1.00 out of 1.00

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

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

Question 19

Complete

Mark 1.00 out of 1.00

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

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

Question 20

Complete

Mark 0.00 out of 1.00

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

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