

Started on Wednesday, 19 March 2025, 11:55 AM**State** Finished**Completed on** Wednesday, 19 March 2025, 12:05 PM**Time taken** 10 mins 11 secs**Marks** 15.00/20.00**Grade** **75.00** out of 100.00**Question 1**

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(2)
- ☐ c. myArray(3)
- ☐ d. myArray[3]

Question 2

Complete

Mark 1.00 out of 1.00

How do you break out of a loop in Java?

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

Question 3

Complete

Mark 1.00 out of 1.00

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

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

Question 4

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 5

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

Question 6

Complete

Mark 1.00 out of 1.00

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

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

Question 7

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

Question 8

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 3 4
- ☐ c. 0 1 3
- ☐ d. 0 1 2 4

Question 9

Complete

Mark 1.00 out of 1.00

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

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

Question 10

Complete

Mark 1.00 out of 1.00

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

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

Question 11

Complete

Mark 1.00 out of 1.00

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

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

Question 12

Complete

Mark 1.00 out of 1.00

What is the result of `5 / 2` in Java?

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

Question 13

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. 2
- ☒ d. 4

Question 14

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. , World!
- ☐ b. Hello, World!
- ☒ c. Hello
- ☐ d. Runtime Error

Question 15

Complete

Mark 0.00 out of 1.00

What is the result of the following code?

```
int x = 5;  
System.out.println(x++ + ++x);
```

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

Question 16

Complete

Mark 0.00 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. 4
- ☐ c. 2
- ☐ d. 3

Question 17

Complete

Mark 0.00 out of 1.00

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

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

Question 18

Complete

Mark 0.00 out of 1.00

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

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

Question 19

Complete

Mark 1.00 out of 1.00

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

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

Question 20

Complete

Mark 0.00 out of 1.00

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

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