

Java MCQs - 14

```
Topics: JAVA
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161. Consider the following code:

public class Main {
   public static void main(String[] args) {
      int[] arr = {1, 2, 3, 4, 5};
      System.out.println(arr[5]);
   }
}
What is the output of the above code?

A) 1
B) 2
C) 3
```

Answer: D) ArrayIndexOutOfBoundsException

D) ArrayIndexOutOfBoundsException

Explanation: The array arr has indices from 0 to 4, and accessing index 5 will result in an ArrayIndexOutOfBoundsException.

162. Which of the following statements about Java generics is true?

- A) Generics are a way to achieve multiple inheritance in Java.
- B) Generics are used to enforce type safety at compile-time.
- C) Generics can only be used with primitive data types.
- D) Generics can only be used with classes and not interfaces.

Answer: B) Generics are used to enforce type safety at compile-time.

163. Consider the following code:

```
public class Main {
    public static void main(String[] args) {
        int x = 5;
        System.out.println(x++ + ++x);
    }
}
```

What is the output of the above code?

- A) 11
- B) 12
- C) 13
- D) Compilation Error

Answer: C) 13

Explanation: x++ increments x after the current value is used in the expression, while ++x increments x before the current value is used in the expression.

164. Which of the following statements about Java threads is true?

- A) A thread in Java is always a lightweight process.
- B) Java threads always have the same priority.
- C) Threads cannot be created in Java.
- D) Threads share the same memory space.

Answer: A) A thread in Java is always a lightweight process.

165. Consider the following code:

```
public class Main {
    public static void main(String[] args) {
        String str1 = "Hello";
        String str2 = new String("Hello");
        System.out.println(str1 == str2);
    }
}
```

What is the output of the above code?

- A) true
- B) false
- C) Compilation Error
- D) Runtime Error

Answer: B) false

Explanation: str1 and str2 are two different objects in memory. The == operator checks for reference equality, and since they are different objects, the result is false.

166. Which of the following statements about Java exceptions is true?

- A) All exceptions in Java are checked exceptions.
- B) Checked exceptions are subclasses of RuntimeException.
- C) Unchecked exceptions must be caught using a try-catch block.
- D) The throws keyword is used to handle exceptions.

Answer: B) Checked exceptions are subclasses of RuntimeException.

167. Consider the following code:

```
public class Main {
   public static void main(String[] args) {
      int x = 5;
      int y = 0;
      try {
        int z = x / y;
        System.out.println(z);
      } catch (ArithmeticException e) {
        System.out.println("Error: " + e.getMessage());
      }
   }
}
```

What is the output of the above code?

- A) 0
- B) Error: / by zero
- C) Runtime Error
- D) Compilation Error

Answer: B) Error: / by zero

Explanation: An attempt to divide by zero results in an ArithmeticException, which is caught by the catch block.

168. What is the purpose of the break statement in Java?

- A) To terminate the execution of a loop or switch statement.
- B) To skip the current iteration of a loop and continue with the next iteration.
- C) To define a default case in a switch statement.
- D) To exit the entire program.

Answer: A) To terminate the execution of a loop or switch statement.

169. Consider the following code:

```
public class Main {
   public static void main(String[] args) {
      int[] arr = new int[5];
      System.out.println(arr.length);
   }
}
```

What is the output of the above code?

- A) 0
- B) 1
- C) 5
- D) Compilation Error

Answer: C) 5

Explanation: arr.length returns the length of the array, which is 5.

- 170. Which of the following statements about Java I/O streams is true?
- A) Java I/O streams are only used for network communication.
- B) Java I/O streams can be classified into three types: byte streams, character streams, and object streams.
- C) Java I/O streams support only character-based input/output.
- D) Java I/O streams are used only for reading data and not for writing.

Answer: B) Java I/O streams can be classified into three types: byte streams, character streams, and object streams.

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