

Sessional Test II – April, 2023

Roll No:

[Total No. of Pages: 4]

Programme: B.E. (CSE)

Time: 90 minutes

Course Title: Core Java

Course Code: CS109

Max. Marks: 40

General Instructions:

- Follow the instructions given in each section.

Section – A

(Q 1 to 10: Each question carries 1 mark)

Question 1. What will be the output of the following program?

```
public class MCQ {  
    public static void main(String[] args) {  
        try {  
            int[] myArray = {1, 2, 3};  
            System.out.println(myArray[3]);  
        } catch (ArrayIndexOutOfBoundsException e) {  
            System.out.println("Index out of bounds");  
        }  
    }  
}
```

- ☐ 1
- ☐ 2
- ☐ 3
- ☒ Index out of bounds

Question 2. Which keyword is used to specify which exceptions a method can throw in Java?

- ☐ try
- ☐ catch
- ☐ throw
- ☒ throws

Question 3. What is an interface in Java?

- ☐ A class that cannot be instantiated
- ☒ A blueprint of a class that can be implemented by multiple classes
- ☐ A class that can only be inherited by other classes
- ☐ None of the above

Question 4. What is the difference between an abstract class and an interface in Java?

- ☐ An interface can have method definitions while an abstract class cannot
- ☒ An abstract class can have method definitions while an interface cannot
- ☐ An abstract class can be instantiated while an interface cannot
- ☐ An interface can be extended while an abstract class cannot

Question 5. Which of these method of Thread class is used to Suspend a thread for a period of time?

- ☒ sleep()
- ☐ terminate()
- ☐ suspend()
- ☐ stop()

Question 6. **Score : 1/1** **Time spent: 49 sec**

Which of these method of class String is used to obtain length of String object?

- ☐ get()
- ☐ Sizeof()
- ☐ lengthof()
- ☒ length()

Question 7. Which of the following is true about the String class in Java?

- ☐ It is mutable
- ☒ It is immutable
- ☐ It is a subclass of the StringBuffer class
- ☐ It is a subclass of the StringBuilder class

Question 8. “An abstract class can have constructor.” Which statement will be true from the above?

- ☐ No abstract class can not have constructor.
- ☐ Abstract class can have only static constructor.
- ☒ Yes, abstract class can have constructor.
- ☐ Abstract class can have constructor but must be default constructor.

Question 9. Choose the correct syntax of a Java Package below.

- ☒ package PACKAGE_NAME;
- ☐ package PACKAGE_NAME.*;
- ☐ pkg PACKAGE_NAME;
- ☐ pkg PACKAGE_NAME.*;

Question 10. Two methods in the Thread class that help the user to create and run threads are:

- ☒ public void run() and public void start()
- ☐ public void run(Thread t) and public void start(Thread t)
- ☐ thread(Runnable) and start()
- ☐ Thread() and Runnable()

Section-2-Multiple Choice

Question 1. Consider the following program and predict the output:

```
class MyThread extends Thread {
    public void run() {
        System.out.println("In run method; thread name is: " + Thread.currentThread().getName());
    }
}
class ThreadTest {
    public static void main(String args[]) {
        Thread myThread = new MyThread();
        myThread.run(); // #1
        System.out.println("In main method; thread name is: " + Thread.currentThread().getName());
    }
}
```

- ☐ The program results in a compiler error at statement #1.
- ☐ The program results in a runtime exception.
- ☒ The program prints the following: In run method; thread name is: main In main method; thread name is: main
- ☐ The program prints: In the run method; the thread name is: thread-0 In the main method; the thread name is: main

Question 2. Find the output of the following program.

```
try {
    int x = 10 / 0;
} catch (ArithmeticException e) {
    System.out.print("Arithmetic Exception ");
} catch (Exception e) {
    System.out.print("Exception ");
} finally {
    System.out.print("Finally block ");
}
```

- ☐ Exception Finally block
- ☒ Arithmetic Exception Finally block
- ☐ Arithmetic Exception
- ☐ Exception

Question 3. What will be the output of the following code?

```
public class MCQ {
    public static void main(String[] args) {
        try {
            int[] arr = new int[5];
            arr[10] = 10;
            try {
```

```
String str = null;
System.out.println(str.length());
} catch (NullPointerException e) {
    System.out.println("Caught NullPointerException");
}
} catch (ArrayIndexOutOfBoundsException e) {
    System.out.println("Caught ArrayIndexOutOfBoundsException");
}
}
}
```

- ☐ Caught NullPointerException
- ☒ Caught ArrayIndexOutOfBoundsException
- ☐ Both of the above
- ☐ None of these

Question 4. What will be the output of the following code?

```
public class StringExample {
    public static void main(String[] args) {
        String s1 = "Hello";
        String s2 = "World";
        String s3 = "HelloWorld";
        String s4 = s1 + s2;
        String s5 = "Hello" + "World";
        System.out.println(s3 == s4); // Line 1
        System.out.println(s3 == s5); // Line 2
        System.out.println(s3.equals(s4)); // Line 3
        System.out.print(s3.equals(s5)); // Line 4
    }
}
```

- ☐ true false true false
- ☐ true true true true
- ☐ false true false true
- ☒ false true true true

Question 5. Which keyword is used to ensure that a block of code is always executed, even if an exception is thrown?

- ☐ try
- ☐ catch
- ☐ throw
- ☒ finally