DO NOT WRITE ANYTHING ON QUESTION PAPER EXCEPT ROLL NO.

CHITKARA UNIVERSITY

2022-2023

Sessional Test II – MAY, 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. Which keyword is used to mark a method as synchronized in Java?

- [x] synchronized
- [ ] volatile
- [ ] static
- [ ] final

Question 2. Which of the following is NOT a type of exception in Java?

- [ ] IOException
- [ ] RuntimeException
- [ ] SQLException
- [x] LogicException

Question 3. What is synchronization in Java multithreading?

- [x] It is a way to prevent multiple threads from executing the same code simultaneously.
- [ ] It is a way to pause a thread's execution for a specified time.
- [ ] It is a way to check if a thread is still running.
- [ ] It is a way to set the priority of a thread.

Question 4. Which of the following statements is true regarding multiple catch clauses in Java?

- [ ] Multiple catch clauses can be used to catch different types of exceptions.
- [ ] Multiple catch clauses can be used to catch the same type of exception.
- [ ] Multiple catch clauses can be used to catch different types of exceptions in the same block.
- [x] All of the above.

Question 5. "java".substring(1) will return :

- [ ] j
- [ ] a
- [x] ava
- [ ] jay

Question 6. Two ways to synchronize the threads which are sharing an object are

- [ ] synchronized methods and synchronized class
- [ ] synchronized methods and synchronized static methods
- [x] synchronized methods and synchronized block
- [ ] synchronized run() and synchronized start()

Question 7. What is the difference between a checked and an unchecked exception in Ja va?

- [ ] Checked exceptions are checked at compile-time, while unchecked exceptions are ch ecked at runtime.
- [ ] Checked exceptions are checked at runtime, while unchecked exceptions are checke d at compile-time.
- [x] Checked exceptions must be caught or declared in the method signature, while unche cked exceptions do not have to be caught or declared.
- [ ] There is no difference between a checked and an unchecked exception.

Question 8. Which method is used to create a new thread in Java?

- [x] start()
- [ ] run()
- [ ] yield()
- [ ] sleep()

Question 9. In Java, String is treated as

- [ ] primitive type
- [x] object
- [ ] wrapper class
- [ ] abstract class

Question 10. Which of the following statements are true regarding exceptions in Java?

- [ ] An exception is an error condition that occurs during program execution.
- [ ] An exception can be handled by using try-catch block
- [ ] An exception can be thrown using the throw keyword
- [x] All of the above

Section – A

(Q 11 to 15: Each question carries 2 mark)

Question 11. Which interface is used to create a thread in Java?

- [x] Runnable

- [ ] Threadable
- [ ] Executable
- [ ] Processable

Question 12. `Find the output of the following program.`

```
 try {
    String s = null;
    System.out.println(s.length());
} catch (NullPointerException e) {
    System.out.println("Null Pointer Exception");
} catch (Exception e) {
    System.out.println("Exception");
} finally {
    System.out.println("Finally block");
}
```

- [x] Null Pointer Exception Finally block
- [ ] Exception Finally block
- [ ] Arithmetic Exception Finally block
- [ ] None of these

Question 13. What will be the output of the following Java code?

```
abstract class X
{
    public X()
    {
        System.out.println("ONE");
    }
    abstract void abstractMethod();
}
class Y extends X
{
    public Y()
    {
        System.out.println("TWO");
    }
    void abstractMethod()
    {
        System.out.println("THREE");
    }
}
class MainClass
{
    public static void main(String[] args)
    {
        X x = new Y();
        x.abstractMethod();
    }
}
```

- [ ] TWO THREE ONE
- [ ] THREE ONE TWO
- [ ] ONE THREE TWO
- [x] ONE TWO THREE

Question 14. Choose the correct statement about StringBuffer and StringBuilder

- [ ] StringBuffer and StringBuilder both are same
- [x] StringBuffer is thread safe but StringBuilder is not thread safe
- [ ] StringBuffer is not thread safe but StringBuilder is thread safe

☐ None of the StringBuffer and StringBuilder is thread safe

Question 15. What will be the output of the following Java code?

```
class Example {
public static void main(String[] args)
{
Thread t1 = new Thread(new MyRunnable());
Thread t2 = new Thread(new MyRunnable());
t1.start();
t2.start();
}
}
class MyRunnable implements Runnable {
public void run() {
for (int i = 0; i < 5; i++)
{
System.out.print(i);
}
}
}
```

☐ 0 0 1 1 2 2 3 3 4 4
☑ 0 1 2 3 4 0 1 2 3 4
☐ The output cannot be determined