A10.1-R4: INTRODUCTION TO OBJECT-ORIENTED PROGRAMMING THROUGH JAVA

NOTE:

IMPORTANT INSTRUCTIONS:

1.	There are **TWO PARTS** in this Module/Paper. **PART ONE** contains **FOUR** questions and **PART TWO** contains **FIVE** questions.

2.	**PART ONE** is to be answered in the **OMR ANSWER SHEET** only, supplied with the question paper, as per the instructions contained therein. **PART ONE** is **NOT** to be answered in the answer book.

3.	Maximum time allotted for **PART ONE** is **ONE HOUR**. Answer book for **PART TWO** will be supplied at the table when the answer sheet for **PART ONE** is returned. However, candidates, who complete **PART ONE** earlier than one hour, can collect the answer book for **PART TWO** immediately after handing over the answer sheet for **PART ONE**.

TOTAL TIME: 3 HOURS   **TOTAL MARKS: 100**
(PART ONE – 40; PART TWO – 60)

PART ONE
(Answer all the questions)

1.	**Each question below gives a multiple choice of answers. Choose the most appropriate one and enter in the "OMR" answer sheet supplied with the question paper, following instructions therein.** 	**(1x10)**

1.1	What does the expression 1.0 / 0.0 return?
A)	Double.NaN
B)	0.0
C)	Run time exception is generated
D)	Double.INFINITY

1.2	Which method of a Class class is used to determine the name of a class represented by this Class object as a String?
A)	getName()
B)	getClass()
C)	getResource()
D)	toString()

1.3	Which Java command disassembles a class file and prints out the package, protected, and public fields and methods of the classes passed to it to stdout?
A)	javadoc
B)	javap
C)	javaw
D)	javah

1.4	If a class inheriting an abstract class does not define all of its method then it will be known as?
A)	final
B)	simple
C)	abstract
D)	static

1.5	Which of these keywords must be used to monitor for exceptions?
A)	finally
B)	throw
C)	catch
D)	try

1.6   Which of the following creates a List with 3 visible items and multiple selection disabled?
A)   new List(3, false)
B)   new List(true ,3)
C)   new List(3, true)
D)   new List(false,3)

1.7   What is called the process of extracting common characteristics from two or more classes and combining them into a generalized superclass?
A)   Inheritance
B)   Generalization
C)   Specialization
D)   Realization

1.8   What is the process by which we can control what parts of a program can access the members of a class?
A)   Polymorphism
B)   Abstraction
C)   Encapsulation
D)   Recursion

1.9   What is the output of the following program?

```
public class TestingDemo        {
    public static void main(String args[])     {
        try {
            System.out.print("Hello" + " " + 1 / 0);
        }
        catch(Exception e)     {
            System.out.println("India");
        }
    }
}
```

A)   Hello
B)   India
C)   Compilation Error
D)   Hello India

1.10   Which one of the following methods of DataInputStream is used to read integer representation of next available byte input?
A)   read()
B)   readLine()
C)   readUTF()
D)   mark()

2. **Each statement below is either TRUE or FALSE. Choose the most appropriate one and ENTER in the "OMR" answer sheet supplied with the question paper, following instructions therein.** **(1x10)**

2.1 A HTML file can have multiple applet tag elements.

2.2 ResultSet.TYPE_SCROLL_INSENSITIVE constant indicates that the ResultSet object type is scrollable and generally sensitive to changes to the data that underlies the ResultSet.

2.3 Private members of class can be inherited by a sub class, and become protected members in sub class.

2.4 In Java, it is necessary to use new operator to initialize an array.

2.5 An anonymous class has a single super type either a class or an interface.

2.6 setDefaultCloseOperation() method is used to set the close operation for JFrame based frame.

2.7 In an Event Handling mechanism, a listener is a method that is notified when an event occurs.

2.8 An (non-local) inner class that is a member of an outer class may be declared as private.

2.9 LDAP is a lightweight client-server protocol for accessing directory services.

2.10 In Composition relationship child objects does not have their lifecycle without Parent object.

3. **Match words and phrases in column X with the closest related meaning/ word(s)/phrase(s) in column Y. Enter your selection in the "OMR" answer sheet supplied with the question paper, following instructions therein.** **(1x10)**

	X		Y
3.1	nextElement() method	**A.**	java.util.Enumeration
3.2	Object class	**B.**	BorderLayout
3.3	Collaboration	**C.**	FlowLayout
3.4	Interface deals with an Applet	**D.**	java.util.Iterator
3.5	Aggregation	**E.**	Interaction
3.6	Window class	**F.**	AppletContext
3.7	Panel class	**G.**	java.lang package
3.8	separator field	**H.**	AppletConfig
3.9	next() method	**I.**	java.io.File
3.10	Date class	**J.**	Association
		K.	java.util package
		L.	Recursim
		M.	CLASS PATH

4. **Each statement below has a blank space to fit one of the word(s) or phrase(s) in the list below. Enter your choice in the "OMR" answer sheet supplied with the question paper, following instructions therein.** **(1x10)**

A.	String	**B.**	List	**C.**	FontMetrics
D.	EventObject	**E.**	AdjustmentEvent	**F.**	setBounds()
G.	StringBuffer	**H.**	ComponentEvent	**I.**	Graphics
J.	Set	**K.**	null	**L.**	Font
M.	Read File				

4.1 _____ data types is used to store command line arguments.

4.2 The _____ interface provides support for ordered collections of objects.

4.3 _____ class is super class of all the events.

4.4 _____ objects are input to the paint() method.

4.5 The readLine() method returns _____ when it has reached the end of a file.

4.6 The implementation-specific properties like ascent, descent of a font object is implemented by

_____.

4.7 _____ objects are mutable.

4.8 The _____ interface provides support for collections of unique objects.

4.9 _____ event is notified if scroll bar is manipulated.

4.10 _____ method of the Component class is used to set the position and size of a component.

PART TWO
(Answer any **FOUR** questions**)**

5.
a)   Explain in detail about method overloading and method overriding with example.
b)   Explain the purpose of following diagrams in UML.
      i)   Class Diagram
      ii)   Use Case Diagram

                                                                                                (7+8)

6.
a)   What is a CLASSPATH? How can we set the CLASSPATH in Window and Linux Operating Systems? Explain with example.
b)   Discuss the Swing MVC architecture.
c)   What are the adapter classes? Describe the following adapter classes.
      i)   ContainerAdapter
      ii)   FocusAdapter

                                                                                                (5+5+5)

7.
a)   Explain the Java keywords static and final.
b)   Write a short note on Character Stream classes.
c)   What are Wrapper classes? Explain Autoboxing and Unboxing in brief.

                                                                                                (5+5+5)

8.
a)   What do you mean by the static and the dynamic typed languages? Explain in brief.
b)   What is an interface and how will you go about implementing an interface? Explain with example.
c)   Explain the Component and Container classes of java.awt package.

                                                                                                (5+5+5)

9.
a)   Explain packages in object oriented paradigms? Give any one example of package diagram.
b)   Explain the steps required to connect and process the data from a database using JDBC.

                                                                                                (7+8)