

B2.51-R4: INTRODUCTION TO OBJECT ORIENTED PROGRAMMING THROUGH JAVA

NOTE:

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 **TEAR-OFF ANSWER SHEET** only, attached to 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 “tear-off” answer sheet attached to the question paper, following instructions therein.** **(1x10)**
 - 1.1 _____ class of java.util package supports Internationalization
 - A) TimeZone
 - B) Currency
 - C) Locale
 - D) Calendar
 - 1.2 Which one of the following is not an AWT listener interface?
 - A) ActionEvent
 - B) KeyListener
 - C) FocusListener
 - D) WindowListener
 - 1.3 Which one of the following is the correct syntax for suggesting that the JVM performs garbage collection?
 - A) System.free();
 - B) System.setGarbageCollection();
 - C) System.out.gc();
 - D) System.gc();
 - 1.4 What is the purpose of method parseDouble defined in Double class?
 - A) The method is used to convert String to Double class, assuming that the String represents a double.
 - B) The method converts the Double object to a String.
 - C) The method is used to convert String to a double assuming that the String represents a double.
 - D) The method converts a double to a String.

- 1.5 In the following jar command `jar cvf jarFileName *.class*.gif`, the option `v` is used to _____
- A) update an existing jar file.
 - B) verifies the jar file for the specified *class* and *gif* files.
 - C) generates verbose output.
 - D) displays the table of contents.
- 1.6 In Java, the collection of methods with no implementation is called _____
- A) an interface
 - B) a static class
 - C) a package
 - D) none of the above
- 1.7 _____ is used internally to initialize objects when no constructor is explicitly mentioned
- A) A default constructor
 - B) An assignment operator
 - C) A parameterized constructor
 - a) A copy constructor
- 1.8 The purpose of **USE Case** diagram of UML is _____
- A) Structure and connections of components.
 - B) Deployment of artifacts to nodes.
 - C) Procedural and parallel behavior.
 - D) How users interact with a system.
- 1.9

```
int values[ ] = {1,2,3,4,5,6,7,8};
for(int i=0;i< X; ++i)
System.out.println(values[i]);
```

Referring to the above, what value for X will print from all members of array "values"?
- A) 1
 - B) 7
 - C) 8
 - D) None of the above
- 1.10 Which code segment would execute the stored procedure "calculateSal()" located in a database server?
- A)

```
Statement stmt = connection.createStatement();
stmt.execute("CALCULATESAL()");
```
 - B)

```
CallableStatement cs = con.prepareCall("{call calculateSal }");
cs.executeQuery();
```
 - C)

```
StoreProcedureStatement spstmt = connection.createStoreProcedure("calculateSal()");
spstmt.executeQuery();
```
 - D)

```
PreparedStatement pstmt = connection.prepareStatement("calculateSal()");
pstmt.execute();
```
 - E)

```
Statement stmt = connection.createStatement();
stmt.executeStoredprocedure("calculateSal()");
```

2. Each statement below is either TRUE or FALSE. Choose the most appropriate one and ENTER in the “tear-off” sheet attached to the question paper, following instructions therein. (1x10)

- 2.1 JFrame is a parent class of a JPanel.
- 2.2 The entry point of every application in java is its main() method.
- 2.3 The ArrayList class provides the capability to implement a growable array of object.
- 2.4 In java, Object class is the root of class hierarchy.
- 2.5 The destroy() method of a JApplet is called more than once in its life cycle.
- 2.6 Assertions are a commonly used idiom for defensive programming.
- 2.7 The JButton object can be created with text and icon.
- 2.8 When using the GridBagLayout manager, each new component requires a new instance of the GridBagConstraints class.
- 2.9 The combination of name, return type and order of arguments is termed as signature of method.
- 2.10 UML Sequence diagram is one form of interaction diagram.

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 “tear-off” answer sheet attached to the question paper, following instructions therein. (1x10)

X		Y	
3.1	javax.swing package	A.	Graphics2D
3.2	In Object Oriented Programming, each package represents a	B.	paintComponent()
3.3	Array in Java	C.	drawPaint()
3.4	A method used to paint graphics in a JApplet	D.	Shape
3.5	A class for rendering 2-dimensional shapes, text and images	E.	is a set of lightweight component
3.6	An object which generates an event is known as	F.	MVC
3.7	The architecture of swing component	G.	Source Object
3.8	An object which registers itself for receiving an event.	H.	Listener Object
3.9	Generalization	I.	association
3.10	Aggregation	J.	is an object
		K.	namespace.
		L.	is a relationship
		M.	interaction

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 “tear-off” answer sheet attached to the question paper, following instructions therein. (1x10)

A.	IOException static	B.	InvalidMarkException	C.	final
D.	javap	E.	default	F.	ResultSet
G.	private	H.	FlowLayout	I.	PreparedStatement
J.	reference	K.	SQLException	L.	ReadOnlyBufferException
M.	objects				

- 4.1 A class declared as _____ cannot be inherited.
- 4.2 An object is implicitly passed to a method by _____.
- 4.3 The class variable is also called as a(n) _____ variable.
- 4.4 getNextException method belongs to _____ class.
- 4.5 The object of _____ class is thrown when an attempt is made to reset a buffer when its mark is not defined.
- 4.6 The jdk development tool which is used as a class file disassembler is known as _____.
- 4.7 A SQL statement is precompiled and stored in a _____ object.
- 4.8 _____ is the default access modifier for instance variables in Java.
- 4.9 UML depicts information systems as a collection of _____.
- 4.10 The default layout manager of a JPanel container is _____.

PART TWO

(Answer any **FOUR** questions)

- 5.**
- a) What are Wrapper classes? Explain in detail.
 - b) What is a package? Explain the steps for creating user defined package.
 - c) Briefly discuss Abstraction and Encapsulation in Object Oriented Programming.
- (5+5+5)**
- 6.**
- a) Write a short note on following UML diagrams
 - i) Component diagram
 - ii) Deployment diagram
 - b) Write a short note on java.nio.ByteBuffer class.
 - c) What do you mean by static and dynamic typed languages? Explain in brief.
- (5+5+5)**
- 7.**
- a) What is an exception? Describe exception handling mechanism with example.
 - b) What is JDBC? Write the basic steps required to connect and process the data from a database using JDBC.
 - c) What is inheritance? Write the important benefits of Inheritance.
- (5+5+5)**
- 8.**
- a) Explain static and dynamic method binding?
 - b) What is the UML Sequence diagram? Explain it with suitable example?
 - c) List the features provided by Swing for developing GUI Application and discuss the Swing JTextField and JLabel components.
- (5+5+5)**
- 9.**
- a) What is an Applet? Discuss the applet HTML tag with its required attributes with an example.
 - b) What is the UML? What is its use?
 - c) What is a Layout Manager? Explain the following layout managers:
 - i) BorderLayout
 - ii) GridLayout
 - iii) FlowLayout
- (5+5+5)**