

## A10.2 R3: 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. (1 x 10)**
  - 1.1 Visualizing program components as objects is characteristics of which of the following language types?
    - A) Object oriented programming language
    - B) Machine language
    - C) Command line operating system
    - D) Procedural language
  - 1.2 What will be the result of compilation for the following code?

```
public class MyClass
{
    final int i ;
    public static void main(String[ ] arguments)
    {
        System.out.println(new MyClass().i);
    }
}
```

    - A) Will print 0
    - B) Will give compile error
    - C) Will give runtime error
    - D) Will give syntax error
  - 1.3 Which are the valid declarations for an integer literal?
    - i) 0
    - ii) -5
    - iii) 0416
    - iv) 0xabcdef
    - A) i) and ii)
    - B) i), ii) and iii)
    - C) iv)

D) All of the above

- 1.4 A subclass is also called as  
A) inner class  
B) nested class  
C) derived class  
D) hidden class
- 1.5 What will be the outcome of executing following code?  
class MyClass  
{  
public static void main (String args[ ])  
{  
String s1[ ] = new String[5];  
String str = s1[0].toUpperCase();  
System.out.println(str);  
}  
}
- A) Will print null  
B) Will give NullPointerException  
C) Will not compile  
D) Will print NULL
- 1.6 Which of the following values you can assign to variable of type char?  
i) 'A'  
ii) 9  
iii) "Hello"  
iv) 12.3
- A) i) and ii)  
B) i), ii) and iii)  
C) i)  
D) None of the above
- 1.7 Command to execute a compiled java program is  
A) run  
B) execute  
C) javac  
D) java
- 1.8 Attribute of an Object is also known as its  
A) State  
B) Method  
C) Behavior  
D) Procedures
- 1.9 Which of the following method is not defined by the Applet class?  
A) init( )  
B) paint( )  
C) start( )  
D) none of the above
- 1.10 Java language has support for which of the following types of comments  
A) block, line and javadoc  
B) javadoc, literal and string  
C) javadoc, char and string

D) single, multiple and quote

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. (1 x 10)

- 2.1 A Java program can be interpreted.
- 2.2 As long as a computer has a Java Virtual Machine, the program written in the Java programming language can run on any computer.
- 2.3 StringBuffer class is alternative to String class.
- 2.4 A class which you create only to extend from, but not to instantiate from is called derived class.
- 2.5 Each method in a parent class can be overridden at most once in any one subclass.
- 2.6 A series of statements written to perform a particular task is called "procedure" in Java.
- 2.7 The return type for a method can be any Java type, including void.
- 2.8 An important principle of object oriented programming is implementation hiding.
- 2.9 When you perform mathematical calculations on the unlike data type, java will perform an implicit conversion to unify the types.
- 2.10 A method name min() that needs two integer arguments is declared as public void min (int a, b);.

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. (1 x 10)

X		Y	
3.1	In JAVA Method called when mouse button is pressed	A.	exception
3.2	Inheritance relationships form	B.	To detect, indicate
3.3	Animation Applet uses call	C.	Create multithreaded clients
3.4	Use try, throw	D.	Tree like hierarchical structures
3.5	Connectionless services	E.	Grater Performance, Less reliability
3.6	Java Multithreading	F.	Create multithreading Servers
3.7	Catch	G.	mouseDown
3.8	Control counting loops	H.	Repaint
3.9	A Java language	I.	Platform Independent
3.10	A Method is invoked by	J.	method call
		K.	invoke call
		L.	MousePress
		M.	With integer
		N.	Paint
		O.	Bus structure
		P.	To handle, detect

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. (1 x 10)

<b>A.</b>	methods	<b>B.</b>	variable	<b>C.</b>	tree
<b>D.</b>	grow or shrink	<b>E.</b>	String	<b>F.</b>	star
<b>G.</b>	java.util	<b>H.</b>	double buffering	<b>I.</b>	synchronous errors
<b>J.</b>	text	<b>K.</b>	hierarchy	<b>L.</b>	networking
<b>M.</b>	structure	<b>N.</b>	buffering		

- 4.1 \_\_\_\_\_ can reduce or eliminate flicker in an animation.
- 4.2 Exception handling is designed for dealing with \_\_\_\_\_.
- 4.3 Modules in Java are called \_\_\_\_\_ and classes.
- 4.4 Initialize instance \_\_\_\_\_ of a class in that class’s constructor.
- 4.5 Object Oriented Programming provides several ways of “seeing the forest through the \_\_\_\_\_”.
- 4.6 We can use StringTokenizer from \_\_\_\_\_.
- 4.7 \_\_\_\_\_ fields are single line areas that receive user inputs from the keyboard.
- 4.8 Data items processed by Computer form a data \_\_\_\_\_.
- 4.9 Java’s \_\_\_\_\_ capabilities are centralized in the java.net package.
- 4.10 Conventional arrays cannot \_\_\_\_\_.

**PART TWO**

(Answer any **FOUR** questions)

**5.**

- a) Write a program to load an applet that knows the dimensions of the applet.
- b) Using “swing”, write a program to display “Hello World” with a decorated window.

**(8+7)**

**6.** Answer any **five** of the following:

- i) What is a ‘SocketOptions’ interface?
- ii) What is a ‘SocketImplFactory’ interface?
- iii) What is a ‘FileNameMap’ interface?
- iv) What is a ‘ContentHandlerFactory’ interface?
- v) What is an ‘URLStreamHandlerFactory’ interface?
- vi) What is a ‘DatagramSocketImplFactory’ interface?

**(3x5)**

**7.**

- a) Explain cloning with a program example.
- b) Why do we need wrapper class, explain with the help of an example?

**(8+7)**

**8.**

- a) Write a program to explain parsing a URL using networking package in Java.
- b) Compare String and StringBuffer classes.

**(8+7)**

**9.**

- a) Explain the concept of Polymorphism.
- b) Describe the relevance of ‘inheritance’ in Java Programming.
- c) Write a program to display a pop-up menu.

**(5+5+5)**