

B2.52-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)

|    |                |    |                  |    |                    |
|----|----------------|----|------------------|----|--------------------|
| A. | methods        | B. | variable         | C. | tree               |
| D. | grow or shrink | E. | String           | F. | star               |
| G. | java.util      | H. | double buffering | I. | synchronous errors |
| J. | text           | K. | hierarchy        | L. | networking         |
| M. | structure      | N. | 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.
- 4.10Conventional 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 ‘inheritence’ in Java Programming.
  - c) Write a program to display a pop-up menu.
- (5+5+5)**