

MCA (Revised) / BCA (Revised)**Term-End Examination****December, 2015****MCS-024 : OBJECT ORIENTED TECHNOLOGIES AND
JAVA PROGRAMMING***Time : 3 hours**Maximum Marks : 100**(Weightage 75%)*

Note : Question no. 1 is compulsory. Attempt any three questions from the rest.

1. (a) Explain the basic features of Object Oriented Programming Language. 5
- (b) Why is Java called Machine Independent Language ? Explain the functionality of JVM. 5
- (c) What is the difference between constructor and method ? Explain with an example. 5
- (d) Explain the uses of keywords *final*, *finally* and *finalize* in Java. 6
- (e) What is an abstract class ? Explain the use of abstract class with an example. 6
- (f) What are the different boolean and bitwise operators in Java ? Explain in brief. 6
- (g) Write a Java Applet to display "Java is an Object Oriented Programming Language"; in red color. 7

2. (a) Distinguish between the following terms with suitable example(s) : 4×3=12
- (i) Method Overloading and Overriding
 - (ii) Application and Applet
 - (iii) Get Method and Post Method in Servlet.
 - (iv) Readers / Writers and I/O Streams.
- (b) What is listener ? Write a program to implement mouse motion listener. 8
3. (a) What is encapsulation ? Explain its advantage with suitable example. 3
- (b) What will be the output of the following program : 5

```

Class t extends Thread
{
    public void run ( )
    {
        System.out.println ("start");
        yield ( );
        resume ( );
        System.out.println ("restart");
        stop ( );
        resume ( );
        System.out.println ("Nothing");
    }
    public static void main (String a [ ])
    {
        t1 = new t ( );
        t1.start ( );
    }
}

```

- (c) Explain the output stream class hierarchy in Java. 6
- (d) What is layout manager ? Explain the Flow Layout and Border Layout. Also explain how a layout is set. 6
4. (a) What is a JavaBean ? Discuss its features in brief. 5
- (b) What is checked exception ? How is it different from unchecked exception ? Explain with an example. 7
- (c) What is inheritance ? Create a class Train and inherit class SuperfastTrain from it, define proper constructor for both of the classes. 8
5. (a) Write a program in Java to implement socket programming using Datagram Class. 8
- (b) How do we design a package in Java ? What are the steps to add classes and interfaces in a package ? 6
- (c) What is synchronization ? Explain how methods are synchronized in Java, with the help of an example. 6
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