Roll No. ……..

BCA–C404

Bachelor of Computer Applications

(Fourth Semester)

EXAMINATION, 2022-23

PROGRAMMING IN JAVA

Time : $2\frac{1}{2}$ Hours

Maximum Marks : 60

Note : All questions have to be attempted.

Section—A

1. Multiple choice questions : 1 each

   (a) Multiple inheritance represents : (CO2, BL1)

   (i) one class inheriting from more super classes

   (ii) more classes inheriting from one super class

   (iii) more classes inheriting from more super classes

   (iv) None of the above

(b) To prevent the method from overriding, method will be declared as : (CO1, BL2)

(i) static

(ii) final

(iii) abstract

(iv) None of the above

(c) Identify the string : (CO1, BL2)

(i) ”o”

(ii) “abc”+”def”

(iii) Both the above

(iv) None of the above

(d) Select the true statement regarding object : (CO2, BL1)

(i) An object is an instance of a class.

(ii) An object is what classes instantiated are from.

(iii) An object is a variable.

(iv) An object is not an instance of a class.

(e) During garbage collection, java run time system automatically calls ..... method. (CO3, BL3)

(i) finalizer()

(ii) finalize()

(iii) finally()

(iv) None of the above

(f) While extending threads, ... method that must be overridden : (CO3, BL1)

(i) run()

(ii) start()

(iii) paint()

(iv) Stop()

(g) Select the method which is a part of Abstract Window Toolkit (AWT) : (CO4, BL1)

(i) display()

(ii) paint()

(iii) transient()

(iv) drawString()

(h) Choose the package that can be used for invoking a method remotely : (CO5, BL6)

(i) java.awt

(ii) java.rmi

(iii) java.util

(iv) java.applet

(i) The major components of the JDBC are :

(i) DriverManager, Driver, Connection, and Statement

(ii) DriverManager, Driver, Connection, Statement, and Resuit Set

(iii) DriverManager, Statement, and Resuit Set

(iv) DriverManager, Connection, Statement, and Resuit Set (CO5, BL2)

(j) Choose the data source name in the statement DriverManager.getConnection("jdbc :odbc :orasuman", "scott", "tiger") (CO3, BL3)

(i) jdbc

(ii) odbc

(iii) orasuman

(iv) scott

(k) Choose the keywords that must be used to monitor for exceptions : (CO4, BL3)

(i) finally

(ii) try

(iii) throw

(iv) catch

(l) Identify the output of the program :

```
class Main {
public static void main(String args[]) {
```

```
try{
      throw 10;
}
   catch(int e) {
      System.out.println("Got the Exception" + e);
   }
 }
}
```

(CO5, BL3)

(i) Got the Exception 0

(ii) Got the Exception 10

(iii) Compiler Error

(iv) None of the above

2. Attempt any four of the following. (Short answer type questions) 3 each

(a) What are the various types of loops in Java ? Discuss briefly. (CO1, BL1)

(b) Write a program using try and catch block. (CO3, BL2)

(c) Discuss about various operators in java. (CO1, BL6)

(d) Explain the operation of garbage collection in java. (CO2, BL2)

(e) Compare call by value and call by reference in java. (CO2, BL2)

Section–B

3. Attempt any two of the following 6 each

(a) Differentiate between abstract class and interface in Java with example. (CO2, BL2)

(b) Discuss method overriding. Implement a program of method overloading. (CO2, BL6)

(c) Define polymorphism. Create a program of runtime polymorphism. (CO3, BL1)

4. Attempt any two of the following 6 each

(a) Why we use super keyword in java ? Create a program to show the use of super keyword. (CO2, BL1)

(b) Illustrate the operations of string class. Explain about java.lang.String class and methods. (CO3, BL2)

(c) Define Thread. Explain the thread life cycle with diagram. (CO3, BL1)

5. Attempt any two of the following : 6 each

(a) Create student (roll int(10), name varchar(l00), marks int(10)) table. Write a program to perform insert operation and display the content of this table.

(CO5, BL3)

(b) Explain the features of JApplet. Write a program to enables applets to use Swing components

(CO3, BL3)

(c) What is exception ? Explain the operation of catch block and finally block. (CO4, BL1)