

Total No. of printed pages = 4

BCA 171303

Roll No. of candidate

--	--	--	--	--	--	--	--	--	--

7/2/2021

BINA CHOWDHURY CENTRAL LIBRARY
(M.T. & T.P.S.)
BINA CHOWDHURY CENTRAL LIBRARY
BINA CHOWDHURY CENTRAL LIBRARY

B.C.A. 3rd Semester End-Term Examination

OBJECT ORIENTED PROGRAMMING IN JAVA

(New Regulation)

Full Marks – 70

Time – Three hours

The figures in the margin indicate full marks for the questions.

Answer question No. 1 and any *four* from the rest.

1. Answer the following questions : (10 × 1 = 10)

(i) Which of the following option leads to the portability and security of Java?

- (a) Byte code is executed by JVM
- (b) The applet makes the Java code secure and portable
- (c) Use of exception handling
- (d) Dynamic binding between objects

(ii) Which of the following is not a Java features?

- (a) Dynamic
- (b) Architecture Neutral
- (c) Use of pointers
- (d) Object-oriented

(iii) Evaluate the following Java expression, if $x = 3$, $y = 5$ and

$z = 10 : ++z + y - y + z + x ++$

- (a) 24
- (b) 23
- (c) 20
- (d) 25

[Turn over

(iv) What is the output of the below code:

```
class increment {  
    Public static void main (string args[ ])  
    {  
        int g=3;  
        system.out.print (++g *8);  
    }  
}
```

- (a) 32 (b) 33
(c) 24 (d) 25

(v) Which statement is true about Java?

- (a) Java is a sequence-dependent programming language
(b) Java is a code dependent programming language
(c) Java is a platform-dependent programming language
(d) Java is a platform independent programming language

(vi) Which of the following is not an OOPS concept in Java?

- (a) Polymorphism (b) Inheritance
(c) Compilation (d) Encapsulation

(vii) What is not the use of "this" keyword in Java?

- (a) Referring to the instance variable when a local variable has the same name
(b) Passing itself to the method of the same class
(c) Passing itself to another method
(d) Calling another constructor in constructor chaining

(viii) Which of the following is a type of polymorphism in java programming?

- (a) Multiple polymorphism
(b) Compile time polymorphism
(c) Multilevel polymorphism
(d) Execution time polymorphism

(ix) What will be the output of the following Java code?

```
class Output
{
    public static void main(String args[ ])
    {
        int x = y = z = 20;
    }
}
```

BINA CHOWDHURY CENTRAL LIBRARY
(M.T & B.P.S.)
Azerk Halkiwapara,
Kolkata - 700 17

- (a) compile time error (b) run time error
(c) 20 (d) compile and runs fine
- (x) Abstract class cannot have a constructor
(a) True (b) False

2. Answer the following questions

- (a) What are the different features of Java Programming? Explain. (5)
(b) What is a variable? What are the different types of variables used in Java? Explain with a suitable program. (5)
(c) What are the rules for access control and inheritance in Java Programming? (5)

3. Answer the following questions.

- (a) What is constructor? How it is different from a method or function? What is the use of a constructor? (5)
(b) What is a copy constructor? Explain copy constructor with a suitable Java Program. (5)
(c) What is Polymorphism? Explain static polymorphism using suitable Java Program (5)

4. Answer the following questions.

- (a) What default constructor in Java? How it is different from parameterized constructor (5)
(b) Explain the use of BufferedReader class with suitable Java Program (5)
(c) What is the use of "this" keyword and how it different from "super" keyword. Explain its use using suitable Java Program. (5)

5. Answer the following questions.

- (a) What is method overriding? How it is different from method overloading? Explain method overriding using suitable Java Program. (8)
- (b) What is an array? How can we declare an array and allocate memory in Java? Explain with a Java program to take a array of integer type and print the sum of the inserted values in the declared array. (7)

6. Answer the following questions.

- (a) What is a package? What is the default package name used in Java? What is the difference between the two import statement given below: (5)

```
import java.util*;
```

```
import java.util.Scanner;
```

- (b) What is the difference between the super class and the sub class? What is the use of super class and sub class? (3)
- (c) Explain the concept of Multilevel Inheritance using suitable Java Program (5)
- (d) Explain the use static keyword in the below line.

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

7. Answer the following questions.

- (a) What is a byte code? What is the use of Byte code in a Java Program? (2)
- (b) What is an interface? Explain interface with a suitable Java Program (6)
- (c) What are the rules of an abstract class? (4)
- (d) Define the tern encapsulation? Give an example of encapsulation. (3)