

Total No. of printed pages = 3

CSE 181404

Roll No. of candidate

8782 ✓

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

BINA CHANDRAN CENTRAL LIBRARY
(CIVIL & GIS)
Agara, Hattichowapara,
Gurupatti - 781017

2022

B.Tech. 4th Semester End-Term Examination

Computer Science and Engineering

JAVA PROGRAMMING

(New Regulation & New Syllabus)

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 : (MCQ/Fill in the blanks) : (10 × 1 = 10)
- (i) Arrays in java are -
- (a) Object reference
 - (b) Object
 - (c) Primitive data type
 - (d) None
- (ii) Identify the corrected definition of a package
- (a) A package is collection of classes
 - (b) A package is collection of classes and interfaces
 - (c) A package is collection of interfaces
 - (d) A package is collection of editing tools
- (iii) Identify the keyword among the following that makes a variable belong to a class rather than being defined for each instance of the class.
- (a) Final
 - (b) Volatile
 - (c) Static
 - (d) Abstract

[Turn over

(iv) Which of the following exception is thrown when divided by zero statement is executed?

- (a) Arithmetic Exception
- (b) Null Pointer Exception
- (c) Number Format Exception
- (d) None of these

(v) Identify the output of the following code:

```
String str = "abcde";
```

```
System.out.println( str .substring( 1, 3));
```

- (a) Abc
- (b) bcd
- (c) bc
- (d) cdc

BINA CHOWDHURY CENTRAL LIBRARY
(GIMT & GIPS)
Azara, Hailhowspara
Guwahati - 781017

(vi) Which of the following is the valid syntax:

- (a) Char ch[] = new Char();
- (b) Char []ch = new Char[];
- (c) Char ch[] = new Char(5);
- (d) Char []ch = new Char[5];

(vii) Which of the following is true?

- (a) "X extends Y" if and only if X is a class and Y is an interface
- (b) "X extends Y" if and only if X is an interface and Y is a class
- (c) "X extends Y" if X and Y are either both classes or both interfaces
- (d) "X extends Y" is correct for all combinations of X and Y being classes and/or interfaces

(viii) What is byte code in Java?

- (a) Code generated by java compiler
- (b) Code generated by java virtual machine
- (c) Name of java source code file
- (d) Block of code written inside a class

(ix) Which of these operators is used to allocate memory to array variable in Java?

- (a) Melloc()
- (b) Alloc
- (c) New
- (d) New melloc

(x) Modulus operator (%) can be applied to which of these?

- (a) int
- (b) Floating-point numbers
- (c) Both (a) and (b)
- (d) None of these

BINA CHOWDHURY CENTRAL LIBRARY
(JGIMT & GIKI)
Azara, Halikowasira,
Guwahati-781017

2. (a) Why Java is called Machine Independent language. Explain briefly. (5)
(b) Discuss about the various important features exhibited by java as an Object-oriented programming language. (10)
3. (a) What is an applet? Describe the different stages in the life cycle of an Applet. (2 + 3 = 5)
(b) What is an exception? What are checked and unchecked exceptions? (2 + 3 = 5)
(c) Discuss briefly about how exceptions are handled in Java. (5)
4. Differentiate between: (3 × 5 = 15)
(a) Method overloading V s. Method Overriding
(b) Application V s. Applet
(c) Class V s Interface
5. (a) What is an interface? Write a java program to create an interface to calculate the area of a shape and implement it in a suitable example. (2 + 5 = 7)
(b) What is a thread? Explain . briefly about the different states of a thread with the state transition diagram. (3 + 5 = 8)
6. (a) List out the differences between AWT and Swings. Also, explain about any two Layout Managers with example programs. (3 + 4 = 7)
(b) Write a java program using JDBC to store the records of 3 students in the database showing the following operations: (8)
(i) Insert
(ii) Delete
(iii) Update and
(iv) Select
7. (a) Write a program to create a sample form using Awt and Swing components for registering students to a college database. (7)
(b) Write a simple program in Java where a Client Program requests the Server to add two Integers and Return the sum to the client. (8)