

Roll No.

DD-2874 (SE)

B. C. A. (Part III) EXAMINATION, 2020

Paper Fourth

PROGRAMMING IN JAVA

Time : Three Hours

Maximum Marks : 100

Minimum Pass Marks : 40

Note : Attempt any *two* parts from each Unit. All questions carry equal marks.

Unit—I

1. (a) Compare the String and StringBuffer classes in Java on the basis of their use and methods provided. Write a small program to show the use of StringBuffer.
- (b) What is the major difference between two-dimensional arrays in C++ and Java ?
- (c) Write a java program to read the elements of an integer array as input from the user and print the sum of all elements of the array.

Unit—II

2. (a) What is the use of Interfaces in Java ?

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- (b) How are packages helpful in software development using Java ? A programmer wants to use a class `SomeClassName` present in the package `java.XXX.YYY`. Which of the following two import statements is more efficient way of doing this ?

`Import java.XXX.YYY.SomeClassName;`

`Import java.XXX.YYY.*;`

- (c) Demonstrate the use of “super” and “this” keyword in java using a java program. The program should be well documented with proper comments.

Unit—III

3. (a) Write a Java code to create two threads—one for printing multiples of 3 (3, 6, 9, up to 60) and the other for printing multiples of 5 (5, 10 15 ... up to 100).
- (b) What is finally block used for in Exception Handling ? Which code should be written in the finally block ?
- (c) Write a java program to create a scenario that will raise an “Arithmetic Exception” exception. The program should be well documented with proper comments.

Unit—IV

4. (a) Write a java program to read a text file from the local file system and display its contents.
- (b) With the help of a diagram, explain the architecture and working of JDBC as a bridge between java applications and external databases.
- (c) What is the use of the `URL` class in Java ? Explain the constructors of this class.

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Unit—V

5. (a) Write a java program to create an Applet that will display the text “Welcome to Java” on the screen in Red colour.
- (b) Draw and explain the applet life cycle.
- (c) List and explain the methods of KeyListener Interface in Java.