



**Term Evaluation (Odd) Semester Examination September 2025**

Roll no.....

Name of the Course: Diploma (CS)  
Semester: 5<sup>th</sup> Sem  
Name of the Paper: Java Programming  
Paper Code: DTCS-505  
Time: 1.5 hour

**Maximum Marks: 50**

**Note:**

- (i) Answer all the questions by choosing any one of the sub-questions
- (ii) Each question carries 10 marks.

**Q1. (10 Marks)**

- a. Explain the difference between objects and classes in Java? Describe with the help of a Java program that defines a class, creates multiple objects, and shows the interaction between them?

(CO1)

OR

- b. Describe why java is termed as platform-independent language? Justify this statement by explaining the features of Java in detail? Compare it with other programming languages?

(CO1)

**Q2. (10 Marks)**

- a. Describe the role of different operators in Java: arithmetic, relational, logical and conditional? Support your explanation with programs?

(CO1)

OR

- b. Explain while, do-while, and for loops in Java with examples? Also explain the working of break, continue, and labeled loops in Java?

(CO1)

**Q3. (10 Marks)**

- a. Explain the use of operators, decision-making, and looping in solving real-life problems? Illustrate with a Java program that simulates a basic ATM menu system (deposit, withdraw, balance check, exit) using operators and conditional statements?

(CO1)

OR

- b. Describe constructors in Java? Explain default, parameterized constructors and copy constructors? Explain the concept of constructor overloading?

(CO2)

**Q4. (10 Marks)**

- a. Explain the concept of inheritance in Java? Differentiate between multilevel inheritance and hierarchical inheritance in Java?

(CO2)

OR

- b. Explain what is method overloading in Java? Discuss the role of the final variable, final method, and final class with suitable examples?

(CO2)

**Q5. (10 Marks)**

- a. Explain one-dimensional and two-dimensional arrays in Java? Discuss their declaration, creation, and initialization with examples? Explain the role of wrapper classes in java?

(CO2)

OR