



## Term Evaluation (Odd) Semester Examination September 2025

Roll no.....

Name of the Course: Diploma (CS)

Semester: 3

Name of the Paper: Object Oriented Programming

Paper Code: DTCS-301

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. Differentiate between Procedure Oriented Programming (POP) and Object Oriented Programming (OOP) using suitable examples. (CO1)

OR

- b. Explain the fundamental concepts of OOP (e.g., abstraction, encapsulation, inheritance, polymorphism) with appropriate examples. (CO1)

**Q2.**

(10 Marks)

- a. Explain the general structure of a C++ program with an example, labeling each section clearly. (CO1)

OR

- b. Construct a simple C++ program that prints student details using iostream, main(), and return. Annotate each part of the program. (CO1)

**Q3.**

(10 Marks)

- a. Define a class in C++ and illustrate how to specify member functions inside and outside the class using an example. (CO2)

OR

- b. Demonstrate the concept of objects by writing a program that creates multiple objects of a class and shows their usage. (CO2)

**Q4.**

(10 Marks)

- a. Explain with examples the different types of constructors in C++. (CO2)

OR

- b. Develop a C++ program that uses a copy constructor to initialize an object. (CO2)

**Q5.**

(10 Marks)

- a. Explain the use of static data members and static member functions in C++ with appropriate examples. (CO2)

OR

- b. Explain the need for a destructor in C++ and its working with a suitable example. (CO2)