

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/  
COMMERCIAL PRACTICE, NOVEMBER - 2023**

**OBJECT ORIENTED PROGRAMMING THROUGH C++**

[Maximum marks: 100]

[Time: 3 Hours]

**PART – A**

**Maximum marks: 10**

**I** (Answer *all* the questions in one or two sentences. Each question carries **2** marks)

1. Define tokens in c++.
2. Name any two storage classes.
3. What is data hiding?
4. Describe abstract class.
5. Write about pure virtual functions.

(5 x 2 = 10)

**PART – B**

**Maximum marks: 30**

**II** (Answer any *five* of the following questions. Each question carries **6** marks)

1. Explain switch-case statement with its syntax.
2. Explain inline function with an example.
3. Explain about memory management operators.
4. What are the limitations of operator overloading?
5. Explain about access specifiers.
6. Demonstrate base and derived constructors with the help of an example.
7. Explain function template with an example.

(5 x 6 = 30)

**PART – C**

**Maximum marks: 60**

(Answer *one full* question from each unit. Each full question carries **15** marks)

**UNIT –I**

- III.** (a) Explain looping control structures with example. (9)
- (b) Write a program to print first 100 natural numbers, divisible by 7. (6)

**OR**

- IV.** (a) Explain the following data types with its syntax.  
(i) structure (ii) class (iii) Enumeration (9)  
(b) Write short notes on arrays. (6)

**UNIT-II**

- V.** (a) What is the structure of c++ program and explain how a member functions of a class can be defined. (9)  
(b) Write a C++ program to read name and marks in three subjects of a student and check whether he passed the exam or not based on total mark which shall be above 40. (6)

**OR**

- VI.** (a) Define function overloading and explain it with an example. (9)  
(b) Explain any two constructors with example. (6)

**UNIT-III**

- VII.** (a) Define operator overloading and write program to implement a class 'time' that has separate data members for hours and minutes Overload+Operator to add two times (object). (9)  
(b) Explain about friendly functions. (6)

**OR**

- VIII.**(a) Describe different types of inheritances with diagram. (9)  
(b) Write a c++ program to multiply two numbers using multiple inheritance. (6)

**UNIT-IV**

- IX.** (a) Explain virtual functions and illustrate its use with an example. (9)  
(b) Discuss input output operators. (6)

**OR**

- X.** What is Exception handling and discuss its mechanism using an example. (15)

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