

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/  
COMMERCIAL PRACTICE – NOVEMBER – 2022**

**OBJECT ORIENTED PROGRAMMING THROUGH C++**

(Maximum Marks : 100)

(Time : 3 hours)

**PART – A**  
(Maximum Marks : 10)

Marks

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

1. List two derived data types in C++.
2. Write the syntax of function prototype.
3. Define encapsulation.
4. Name two operators that cannot be overloaded.
5. Write the purpose of exception handling mechanism. (5x2=10)

**PART –B**  
(Maximum Marks : 30)

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

1. Compare array and structure.
2. Explain any three features of Object Oriented Programming.
3. Write any program that illustrate the creation of a class and object.
4. Write notes on constructors in C++.
5. Differentiate between private, protected and public access specifiers.
6. Describe about composition.
7. Explain input output operators.

(5x6=30)

**PART – C**

(Maximum Marks : 60)

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

**UNIT – I**

- III.** (a) Explain about different operators in C++ . (9)  
(b) Explain any two control structures in C++ . (6)

**OR**

- IV.** (a) Develop a program to store and display the name, roll no and mark of 'N' students in a class. (9)  
(b) Describe about memory management operators. (6)

**UNIT – II**

- V.** (a) Explain inline function with an example. (7)  
(b) Explain different parameter passing methods. (8)

**OR**

- VI.** (a) Explain function overloading with an example. (9)  
(b) Explain the limitations of operator overloading. (6)

**UNIT –III**

- VII.** (a) Explain single level and multi-level Inheritance with examples. (15)

**OR**

- VIII.** (a) Write a program for any unary operator overloading. (9)  
(b) Explain Friend Function with an example. (6)

**UNIT – IV**

- IX.** (a) Explain exception handling in C++ . (10)  
(b) Write a short note on type cast operators. (5)

**OR**

- X.** (a) Write program to display the largest among two numbers using function templates. (9)  
(b) Explain the rules for using Virtual function. (6)

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