

GUJARAT TECHNOLOGICAL UNIVERSITY**M.Sc Integrated – SEMESTER – II - EXAMINATION – SUMMER 2023****Subject Code: 1320504****Date: 28/06/2023****Subject Name: Object Oriented Programming in C++****Time: 10:30 AM TO 01:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1 (A) Define following terms. (03)**
1) global variable.
2) Identifier.
3) Class and object.
- (B) Explain the feature of OOP language. (04)**
(C) Explain the function definition, function prototype and function call with relative example. (07)
- Q.2 (A) What is the difference between 'call by value' and 'call by reference'? (03)**
(B) Explain public, private and protected access specifiers. (04)
(C) Write a program Illustrating Class Declarations, Definition, and Accessing Class Members. (07)
- OR**
- (C) What is class template? Explain with suitable example. (07)**
- Q.3 (A) What is the significance of static data and static member functions in C++? (03)**
(B) Explain following with respect to C++ with examples. (04)
1) new operator 2) delete operator
(C) Explain Difference between Type Casting and Type Conversion. What are explicit and implicit type casting explain with example. (07)
- OR**
- Q.3 (A) Explain rules of operator overloading. (03)**
(B) Explain different uses of scope resolution operator in C++. (04)
(C) What does inheritance means in C++? Explain different forms of inheritance with example. (07)
- Q.4 (A) Explain this pointer and return pointer reference with example. (03)**
(B) What is Try, Catch and Throw? Explain with example. (04)
(C) What is constructor? List out different type of constructor. (07)
- OR**
- Q.4 (A) What is reference variable? Explain with example. (03)**
(B) Explain inline functions with example. (04)
(C) What is polymorphism? Explain Types of Polymorphism with example. (07)
- Q.5 (A) What is Virtual Base Classes? Explain with example. (03)**
(B) Explain STL components. (04)
(C) Write a program for Exception Handling with Multiple Catch Using C++ Programming. (07)
- OR**
- Q.5 (A) Explain abstract class with the help of suitable example. (03)**
(B) What is stream? Enlist various stream classes. (04)
(C) To write a C++ program for swapping two values using function templates. (07)