

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI (NEW) EXAMINATION – SUMMER 2023****Subject Code:3160922****Date:10-07-2023****Subject Name:Object Oriented Programming****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.
4. Simple and non-programmable scientific calculators are allowed

		Marks
Q.1	(a) Identify any 6 Major differences between C++ and C language	03
	(b) Define identifier and its use. Write down the rules to follow while defining the identifiers.	04
	(c) Write a short note on three pillars of the Object-Oriented Programming.	07
Q.2	(a) Define type casting and give a suitable example.	03
	(b) Explain numerical data types with example.	04
	(c) Write a program to demonstrate the basic arithmetic operations using switch statement in C++ language. Consider any error in calculation for special case.	07
	OR	
	(c) Write a program to sort array of N elements in ascending order using OOP in C++.	07
Q.3	(a) Give comparison between private and public members of a Class. Give any example.	03
	(b) What is operator overloading? and stat the case when we require operator overloading.	04
	(c) Demonstrate the use of function overloading with at list one example. Explain the case in detail.	07
	OR	
Q.3	(a) Define constructor and destructor regards to class and object.	03
	(b) Explain exception Handling using an example.	04
	(c) Write a program to demonstrate the use of scope resolution operator :: with variable name.	07
Q.4	(a) Explain data encapsulation with example.	03
	(b) Enlist and discuss various types of Access Specifiers	04
	(c) Classify different types of Inheritance and explain in short each of them.	07
	OR	
Q.4	(a) Explain polymorphism with an example.	03
	(b) Elaborate INLINE Function.	04
	(c) Write a simple program that multiple two numbers and then also divides the two numbers. (Use Inline functions)	07
Q.5	(a) Enlist different types of exception in C++ programming.	03
	(b) Write a program for finding the volume of various objects, demonstrating the polymorphism phenomenon in Constructors.	04
	(c) Demonstrate the use of try, catch and throw using a program.	07
	OR	
Q.5	(a) Define stream in C++ programming.	03
	(b) What are manipulators?	04
	(c) List out various file management functions for formatted and unformatted output.	07