

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER– IV (New) EXAMINATION – WINTER 2019****Subject Code: 2142005****Date: 16/12/2019****Subject Name: Programming Methodology using 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.

		MARKS
Q.1	(a) Define POP, inheritance, encapsulation	03
	(b) Explain applications of OOP.	04
	(c) Explain type conversion with example.	07
Q.2	(a) Define keywords private, protected, public.	03
	(b) What is DMA? How to allocate and de-allocate memory dynamically.	04
	(c) What is Constructor? Explain copy constructor with example.	07
	OR	
	(c) Write a C++ program to add two complex numbers using friend function.	07
Q.3	(a) Differentiate Call by value and Call by reference.	03
	(b) Describe inline function with example.	04
	(c) Define operator overloading. Write a program to overload unary plus and unary minus operators.	07
	OR	
Q.3	(a) Describe Multiple and Hybrid inheritance.	03
	(b) Explain Manipulator with example	04
	(c) Write a C++ Program to demonstrate virtual function.	07
Q.4	(a) Differentiate static and dynamic binding.	03
	(b) Explain scope resolution operator with example.	04
	(c) Enlist types of inheritance and explain any one in detail with proper programming example	07
	OR	
Q.4	(a) Explain this pointer.	03
	(b) Explain tellg, tellp, seekg, seekp.	04
	(c) Design a class media having data member's title and publication. Derive a class book having a member to store number of pages in the book. Derive another class cd having a member to store the playing time. Define functions to read and display the data in the base class. Over-ride the same in both of the derived classes.	07
Q.5	(a) Justify statement "Constructor name is a same name as class name."	03
	(b) Define STL. Enlist Core components of STL.	04
	(c) Explain try, catch, and throw with suitable example.	07
	OR	
Q.5	(a) What is the need of preprocessor directive #include and why?	03
	(b) Explain Map container with example.	04
	(c) Why templates are used in programming? Explain with proper example.	07
