GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER–VI(NEW) EXAMINATION – WINTER 2022

Subject Code:3160922   **Date:15-12-2022**
Subject Name:Object Oriented Programming
Time:02:30 PM TO 05:00 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)**	Explain the benefits of Object-Oriented Programming.	03
	(b)	Explain 'if… else….' conditional statement with proper example.	04
	(c)	Write a program to generate the following series in C++ using class 'Fibonacci': 1 1 2 3 5 8 …..	07
Q.2	**(a)**	Explain differences between structure and class.	03
	(b)	Explain >> and << operators.	04
	(c)	Explain User Defined Data type in details.	07
		OR	
	(c)	What do you mean by *call by value* and *call by reference*? Justify your answer with suitable example.	07
Q.3	**(a)**	Describe inline function.	03
	(b)	Distinguish the abstract class and virtual base class.	04
	(c)	Explain the use of *static variables* and *static functions* with a program.	07
		OR	
Q.3	**(a)**	Explain 'this' pointer.	03
	(b)	What is friend function? Explain the need of friend function.	04
	(c)	Write a function for finding the minimum value from an array and main program to which can call the above function and print the minimum value.	07
Q.4	**(a)**	What is pure virtual function?	03
	(b)	How is polymorphism achieved during compile time and run time?	04
	(c)	Explain different types of Inheritance with example.	07
		OR	
Q.4	**(a)**	Explain Scope Resolution Operator (::).	03
	(b)	Explain the difference between two statements: Date D2(D1) and Date D2= D1; where D1 and D2 are objects of Date class.	04
	(c)	Write a C++ program that overloads + operator to add two complex numbers.	07
Q.5	**(a)**	What is protected members in inheritance?	03
	(b)	Describe the various approaches by which we can detect the end of file condition.	04
	(c)	Explain the use of binary files in C++ with a program.	07
		OR	
Q.5	**(a)**	Discuss *new* and *delete* keywords.	03
	(b)	Explain different types of constructors with an appropriate example.	04
	(c)	Explain exception handling in C++ with suitable program.	07

****