GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER–IV (NEW) EXAMINATION – WINTER 2021

Subject Code: 2140705   **Date: 04/01/2022**
Subject Name: Object Oriented Programming With 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.**
4. **Simple and non-programmable scientific calculators are allowed.**

Q.1	**(a)**	Explain >> and << operators.	**03**
	(b)	Explain merits and demerits of inline functions.	**04**
	(c)	Enlist and explain the basic characteristics of OOP in detail.	**07**
Q.2	**(a)**	Explain destructor with suitable example.	**03**
	(b)	Explain function overloading with suitable example.	**04**
	(c)	What is a constructor? Explain types of constructor with examples.	**07**

OR

	(c)	Explain the use of setw(), setfill() and setprecision() manipulator with example.	**07**
Q.3	**(a)**	Describe the following terms in C++ : i) Reference Variable ii) Portability iii) Dynamic Binding	**03**
	(b)	Explain Default Argument with suitable example.	**04**
	(c)	What is friend function? Explain it with suitable example.	**07**

OR

Q.3	**(a)**	Define with examples: a) Macro b) Binary file c) this pointer	**03**
	(b)	Explain virtual base class with suitable example.	**04**
	(c)	i) Write short note on: Memory Management operators of C++ with examples. ii) Explain scope resolution operator (**::**) with an example.	**07**
Q.4	**(a)**	Explain inline function with suitable example.	**03**
	(b)	Explain various forms of inheritance with suitable diagrammatic illustrations.	**04**
	(c)	What is the purpose of using template in C++? Explain template function and template class with example.	**07**

OR

Q.4	**(a)**	Define Overriding. Explain with suitable example.	**03**
	(b)	Enlist and explain different file management functions.	**04**
	(c)	Explain type conversion from class type to basic type and one class type to another class type with suitable example.	**07**
Q.5	**(a)**	Explain Private, Protected and Public access specifiers.	**03**
	(b)	Demonstrate the use of static variables and static functions with a program.	**04**
	(c)	i) Explain **tellg** and **seekp** functions. ii) Explain STL with its core components.	**07**

OR

Q.5 **(a)** What is an Exception? Demonstrate try...catch block.   **03**

(b) Explain Exception Handling Mechanism. Give example with multiple catch blocks.   **04**

(c) What is a stream? Describe various stream classes for console I/O operations.   **07**

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