Seat No.:	Enrolment No.

Subject Code: 140705

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-IV • EXAMINATION - SUMMER 2015

Date: 05/06/2015

	•	Name: Object Oriented Programming with C++	
		0.30am-01.00pm Total Marks: 7	70
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Q.1	(a)	(i) Explain "this" pointer by an example.(ii) Distinguish between Dynamic binding and message passing	04 03
	(b)	Write a program in C++ to find the sum of two entered complex numbers from different classes and display the sum using a common friend function of both classes.	07
Q.2	(a)	What is Exception Handling and how is it implemented in C++? Write a C++ program that throws an arithmetic exception whenever the result of arithmetic computation becomes odd.	07
	(b)	Write a C++ program to overload the + operator to concatenate two strings. OR	07
	(b)	The effect of a default argument can be alternatively achieved by overloading. Discuss with an example.	07
Q.3	(a)	What are Virtual functions? Where are they needed? Are virtual functions inherited? Justify your answer with the help of an example.	07
	(b)	Write a single C++ program to explain the concept of both constructor and destructor.	07
		OR	
Q.3	(a)	(i)Describe, with examples, the uses of enumeration data types.	04
		(ii) What is Type conversion? Explain Basic to class type conversion with example.	03
	(b)	Define copy constructor. Explain its significance. Under which condition is it invoked? Describe your answer with a C++ program.	07
Q.4	(a)	Write a C++ program to explain Objects as function arguments. Define a class name VALUE with two data member variable, two member functions for inputting data and displaying the result. Define third member function that takes two objects as arguments and adds the objects.	07
	(b)	(i)Explain function overloading with an example?(ii)Write a program in C++ to generate Fibonacci Series by using recursion.	04 03
Q.4	(a)	Write a single C++ program to explain static member and static member function.	07
	(b)	What is Inheritance? What are the different visibility modes observed while deriving a class from a base class. Explain with C++ Program.	07
Q.5	(a)	(i)Explain member dereferencing operator and memory management operator in C++.	04
		(ii)What is STL? Describe the use of STL.	03

	(b)	What is template? Explain function templates and class templates with example.	07
0.5	(a)	OR (i) Can we overload an assignment operator using friend function? Justify your	Ω4
Ų.S	(a)	answer.	V4
		(ii) Differentiate Compile time polymorphism and Runtime polymorphism.	03
	(b)	Explain the class istream and class ostream with hierarchy along with their member.	07
