

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-IV (NEW) - EXAMINATION – SUMMER 2017

Subject Code: 2140705

Date: 12/06/2017

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.

		MARKS
Q.1	Short Questions	14
	1 What is the full form of OOPS?	1
	2 What is an object?	1
	3 Define Data Abstraction.	1
	4 What is a constructor?	1
	5 What is the purpose of 'delete' operator?	1
	6 Why do we need the preprocessor directive #include<iostream>?	1
	7 Define Reusability.	1
	8 What does this pointer point to?	1
	9 Define std::cout and use it in a C++ statement.	1
	10 What is the difference between an array and a simple variable?	1
	11 How does a C++ Structure differ from a C++ Class?	1
	12 Can We have more than one constructor in a Class?	1
	13 Enlist Derived data types in C++.	1
	14 How is a member function of a class defined?	1
Q.2	(a) Describe, with examples, the uses of enumeration data types.	3
	(b) Explain the basic concepts of Object Oriented Programming.	4
	(c) What is a User Defined Data type? What is the scope and life time of variable? Explain using C++ program	07
	OR	
	(c) Define a class complex with real and imaginary as two data member, add necessary constructors and member function to initialize and display data of class. Class should overload the + operator to add two complex objects and return the results. Invoke the statements like C3=C1+C2 in main ().	07
Q.3	(a) When do we declare a member of a class static?	03
	(b) Describe the importance of destructors.	04
	(c) Explain the type conversion from basic type to class type and from class type to basic type with proper example.	07
	OR	
Q.3	(a) How many arguments are required in the definition of and overloaded unary operator?	03
	(b) When will you make a function inline? Why?	04
	(c) By giving an example, illustrate use and working of nested try blocks and re -throwing of an exception.	07
Q.4	(a) Describe the syntax of the single inheritance in C++.	03
	(b) What is an abstract class? What is virtual base class?	04
	(c) Explain Runtime polymorphism. Explain and demonstrate, how virtual function to achieve runtime polymorphism?	07
	OR	
Q.4	(a) How do the I/O facilities in C++ differ from that in C?	03
	(b) Explain reference variables.	04
	(c) Declare a class called book having members like book_title, publisher and author_name. Overload extractor and inserter	07

operators (>> and <<) for class book.

Q.5	(a)	Compare structured programming with object oriented programming..	03
	(b)	Discuss the different ways by which we can access public member functions of an Object.	04
	(c)	Explain various file mode parameters in C++. Write a program to copy the contents of a source file student1.txt to a destination file student2.txt character by character.	07
		OR	
Q.5	(a)	Describe the major parts of a C++ Program.	03
	(b)	Explain friend function with the help of an example	04
	(c)	What is an exception? What are the advantages of using exception handling in a program? Illustrate C++ exception handling mechanism	07
