

GUJARAT TECHNOLOGICAL UNIVERSITY**MCA - SEMESTER-II • EXAMINATION – WINTER • 2014****Subject Code: 620003****Date: 01-12-2014****Subject Name: Object Oriented Concepts and Programming (OOCp)****Time: 02:30 pm - 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.

- Q.1** (a) 1. Explain this pointer with example. **03**
 2. How can ++ operator (for both prefix and postfix) be overloaded? Explain with example. **04**
- (b) What is object-oriented programming? Explain the basic features of object oriented programming. **07**
- Q.2** (a) Write short note on operator overloading. **07**
 (b) What is template function? Explain how a template function is overloaded with example. **07**
- OR**
- (b) Define inheritance. List and explain various types of inheritance with example. **07**
- Q.3** (a) Define reference variable. Also explain the various uses of reference variable with example. **07**
 (b) What is inline function? Explain inline function with example. Also describe the pros and cons of inline function. **07**
- OR**
- Q.3** (a) Define constructor. Also explain various types of constructor with example. **07**
 (b) Construct a class distance having member variables int kilometers and int meters. Also design the length class having member variable int centimeters. Perform the following to make possible various conversions. **07**
 (i) To convert distance class into the basic data type int, this will represent the total number of meters of the class.
 (ii) To convert a basic data type int to distance class.
 (iii) To convert distance class to length class.
- Q.4** (a) Explain class template with generic stack class example. **07**
 (b) Explain virtual base class and abstract class with example. **07**
- OR**
- Q.4** (a) Explain virtual function with example. **07**
 (b) What is exception? Discuss the various components of the exception handling mechanism. **07**
- Q.5** (a) What is stream? List and discuss various member functions of ios used for formatting IO. **07**
 (b) 1. Write short note on unnamed namespace. **03**
 2. Define: seekg(), seekp() , tellg() and tellp(). **04**
- OR**
- Q.5** (a) 1. Explain the difference between text and binary streams. **03**
 2. What is the use of “namespace”? How namespace is defined? Explain with example. **04**
 (b) What is container? List and explain different types of containers. **07**
