

GUJARAT TECHNOLOGICAL UNIVERSITY**MCA- IInd SEMESTER-EXAMINATION –JUNE - 2012****Subject code: 2620002****Date: 09/06/2012****Subject Name: Object Oriented Programming Concepts & Programming (OCP)****Time: 10:30 am – 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.

- Q.1** (a) I When static data member is declared in a class? Explain with suitable example. 04
- II What is difference between a default constructor provided by compiler and a user-defined default constructor? 03
- (b) Explain the following terms.
- I Constant pointer and pointer to constant. 04
- II Constant object and constant member function. 03
- Q.2** (a) Distinguish between macro definition, normal function and inline function. What are the advantages and disadvantages of inline function? 07
- (b) What is the need of friend function within a class? Explain with proper real-life example. 07
- OR**
- (b) What are the advantage and disadvantage of using MIL over assignment? 07
- Q.3** (a) I How is the memory allocated to the object of a class? Explain with example. 04
- II Explain : Abstraction and Encapsulation 03
- (b) I How is polymorphism related to function overloading 03
- II How can prefix ++ and postfix ++ operator be overloaded? Explain with C++ code. 04
- OR**
- Q.3** (a) I Explain user defined conversion function which converts user-defined object to built-in data type. 04
- II How a template function is overloaded? Explain with example. 03
- (b) I What is the need of virtual base class? Explain with code. 04
- II What is the need of for dynamic allocation in a constructor? Explain a case where such type of constructor is needed. 03
- Q.4** (a) I What are the difference between public, private and protected inheritance? 04
- II Explain abstract class. 03
- (b) How can >> and << operator be overloaded? 07

OR

Q.4	(a)	What do you mean by Exception? Describe the role of keywords try , catch and throw in exception handling with C++ code.	07
	(b)	I What is the STL(Standard Template Library). Which three types of containers are there in STL?	03
		II What is the use of keyword “namespace”? How namespace is defined? Explain with example.	04
Q.5	(a)	I What is the role of following functions seekg(), seekp(), tellg(), tellp()	04
		II Explain the virtual function with proper example.	03
	(b)	Why do we need RTTI? What is need for type_info object ? What is the role of typeid operator in RTTI?	07
		OR	
Q.5	(a)	Describe Text and Binary Streams and explain the process steps to read and write from text and binary files.	07
	(b)	Explain the following terms in brief with suitable examples	
		I Destructor	03
		II Keyword “this”	02
		III Pointer to object	02
