Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

MCA INTEGRATED- SEMESTER– IV • EXAMINATION – SUMMER 2016

Subject Code: 4440601 **Date:03/05/2016**

Subject Name: C++ With Class Libraries

Time: 10:30 A.M To 1:00 P.M **Total Marks: 70**

Instructions:

1. **Attempt any five questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1 **(a)** Fill in the blanks: **07**

1) When a class is defined inside another class, it is said to be _____.
2) More than one function with the same name but different set of arguments is known as _____.
3) MIL stands for _____.
4) Dynamic binding enables the function to be linked at _____ time.
5) Cout is an object of _____ stream.
6) In map container, the elements are automatically sorted on the _____ item at the time of insertion.
7) _____ function is used to specify the precision of the floating point number.

(b) I) List the difference between public, private and protected access modifier. **04**

II) Explain the concept of local class. **03**

Q.2 **(a)** Explain basic concept of object oriented programming. **07**

(b) Explain friend function with suitable example. **07**

OR

Q.2 **(b)** Write a short note on:

I) Parameterized Constructor **03**

II) Copy Constructor **04**

Q.3 **(a)** What is Inheritance? Explain all types of inheritance. **07**

(b) What is need of namespace? Explain the concept of nested namespace with example. **07**

OR

Q.3 **(a)** What are templates? What are function and class templates? Explain the concept of overloading a template function. **07**

(b) What is RTTI? Explain how typeid and dynamic_cast are used for RTTI. **07**

Q.4 **(a)** I) Explain the roles of seekg(),seekp(),tellg() and tellp() functions in the process of random access. **04**

II) Which are the ways to open a binary file? **03**

(b) What is exception handling? What is the role of each components of the exception handling mechanism? **07**

OR

Q.4 **(a)** What is STL? List out generic algorithm. Explain any one generic algorithm with example. **07**

(b) What is polymorphism? How can we achieve run-time polymorphism in C++. Explain this with example. **07**

P.T.O

Q.5	**(a)**	What is operator overloading? Explain unary operator overloading with example.	**07**
	(b)	What is manipulator? List out the manipulator. Write a program to demonstrate use of manipulator.	**07**

OR

Q.5	**(a)**	Explain virtual base class concept with suitable example.	**07**
	(b)	What is pure virtual function? Explain it with example.	**07**

****