

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA SEM-II Examination- Dec.-2011

Subject code: 620003**Date: 15/12/2011****Subject Name: Object Oriented Concepts & Programming (OOC)****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) (i) Distinguish between class and structure with suitable example. **03**
(ii) Define the following terms with examples: **04**
a. Static data member
b. Pointer to an object
- (b) (i) Explain the term inline function with suitable example in brief. **03**
(ii) Explain friend function with its advantages. **02**
(iii) Explain static function with suitable example. **02**
- Q.2** (a) What is constructor? Explain different types of constructors with suitable examples. **07**
(b) What is Operator Overloading? How binary operator is overloaded in C++? Explain it with suitable example. **07**
- OR**
- (b) How User Defined Type conversion is achieved in C++? Explain it in detail. **07**
- Q.3** (a) (i) How a template function is Over Loaded? Explain. **03**
(ii) What is the usage of Export keyword? **02**
(iii) Differentiate between Templates and Macros. **02**
(b) Explain the following with suitable examples:
(i) Abstract Class **03**
(ii) Composite Objects **04**
- OR**
- Q.3** (a) What do you mean by Exception? Describe the role of keywords try, catch and throw in exception handling. **07**
(b) (i) Explain inheritance with class template. **02**
(ii) Explain different access specifiers with suitable examples. **05**
- Q.4** (a) How multiple and multilevel types of inheritance are achieved in C++? Explain with examples. **07**
(b) Explain the following terms in brief with suitable examples:
(i) Pure Virtual Function **03**
(ii) Virtual destructors **02**
(iii) Run Type Identification **02**

OR

Q.4 (a)	(i) What do you mean by Terminate and Unexpected functions? Explain.	03
	(ii) What are the major drawbacks of exception handling approach? Explain.	02
	(iii) Explain the exception class.	02
Q.4 (b)	(i) Distinguish between compile time polymorphism and Run Time Polymorphism with suitable examples.	03
	(ii) How formatting is done using different ios members? Explain with suitable examples.	04
Q.5 (a)	(i) What is manipulator? How can we create our own manipulator? Explain with example.	04
	(ii) What are the different opening modes of file? Explain their operations in brief.	03
	(b) (i) What is STL? Explain in brief.	03
	(ii) Describe any four functions of a vector class with their operations.	04
	OR	
Q.5 (a)	(i) How random files are managed in C++? Explain.	03
	(ii) Explain the various error handling functions of files in C++.	04
(b)	Explain the following with examples:	
	(i) Nested namespaces	03
	(ii) std namespace	02
	(iii) Text V/S Binary streams	02
