Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

MCA - SEMESTER–II • EXAMINATION – WINTER 2013

Subject Code: 620003 **Date: 26-12-2013**

Subject Name: Object Oriented Concepts & Programming (OOCP)

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.**

Q.1	**(a)**	Define following terms. (1) this pointer (2) Operator overloading (3) Constant pointer (4) Pointer to constant (5) Containership (6) Template (7) Access specifier	**07**
	(b)	What is OOP? Explain various concepts of OOP supported by C++.	**07**
Q.2	**(a)**	Explain all the cases of friend function with example programs.	**07**
	(b)	Explain the concept of 'static' in terms of data member and member function.	**07**
		OR	
	(b)	Explain various types of constructors available in C++, also give example program.	**07**
Q.3	**(a)**	Explain member dereferencing operators.	**03**
	(b)	Explain various access modifiers.	**04**
	(c)	What is inline function? Discuss the situations where compiler does not allow a function to be inline. Differentiate it with macros.	**07**
		OR	
Q.3	**(a)**	Define constructor and destructor. Differentiate between both. Write the properties of constructor and destructor.	**07**
	(b)	Explain the concept of Call by value & call by reference with suitable example.	**07**
Q.4	**(a)**	Explain function with default argument with suitable example.	**03**
	(b)	Explain memory management operators with example.#	**04**
	(c)	Discuss 'virtual function' and 'pure virtual function' with example.	**07**
		OR	
Q.4	**(a)**	Overload ++ and – – for stack class so that ++ provides push operation and – – provides pop operation.	**07**
	(b)	Explain virtual base class with example.	**05**
	(c)	Differentiate between static polymorphism and dynamic polymorphism.	**02**
Q.5	**(a)**	State and explain various file opening modes.	**04**
	(b)	Differentiate between writing text file and writing binary file.	**03**
	(c)	Explain function template and class template with suitable example.	**07**
		OR	
Q.5	**(a)**	What is an exception? List and explain components of exception handling mechanism.	**07**
	(b)	Explain following terms. (1) static_cast (2) const_cast (3) reinterprete_cast (4) dynamic_cast	**07**

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