

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA - SEMESTER-II • EXAMINATION – SUMMER • 2014

Subject Code: 2620002**Date: 17-06-2014****Subject Name: Object Oriented Programming Concepts and Programming****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) State Whether Statements True or False** **07**
1. “this” pointer is the pointer to invoking an object implicitly when a member function is called.
 2. The generic function outlined by specification of a generic type using template keyword.
 3. Rethrowing is the exception, once handled by a handler, can be rethrown to a higher block
 4. Inheritance means the ability to reuse the data values of one object by other objects.
 5. cin and cout are built-in functions.
 6. = operator overloading function can be declared as friend function within a class.
 7. When a function returns a value, the entire function call can be assigned to a variable.
- (b)** I) What is dynamic constructor? Where can it be useful? **03**
II) What are the advantages of using “new” and “delete” operators over malloc () and free() functions. **04**
- Q.2 (a)** What are const object and constant function? Why do we need constant objects? **07**
- (b)** I) List the differences between member and non-member functions. **04**
II) What is the role of following functions? **03**
seekg(), seekp(), tellg(), tellp().
- OR**
- (b)** Distinguish between macro definition, normal function and inline function. What are the advantages and disadvantages of inline function? **07**
- Q.3 (a)** I)What is copy constructor? **03**
II)What is the advantage of function pointers. **04**
- (b)** Differentiate between overloading of unary operators and overloading of binary operators. Explain with code. **07**
- OR**
- Q.3 (a)** I) Explain the following **03**
(1)try, catch, throw
(2)Multiple catch,
(3)catch All
- II) What is RTTI? Explain with code. **04**

	(b) I) Explain the statements “The private members are treated under different types of inheritance”.	03
	II) What is the purpose of local class?	04
Q.4	(a) I) What are the different types of inheritance?	03
	II) Explain virtual class? What is the need of that class?	04
	(b) I) Overload + and – for a stack class such that + provides push and – provides pop operation.	04
	II) Explain friend Function with examples	03
	OR	
Q.4	(a) I) What is the differences between generic and non-generic (type and non-type) arguments to function template?	04
	II) Explain static data member and member function	03
	(b) Design classes such that they support the following statements: Ruppee r1,r2; Dollar d1,d2; d1 = r1; // converts rupee (Indian Currency) to dollar (US currency) r2 = d2; // converts dollar (US Currency) to rupee (Indian currency) NOTE: Assume 1 dollar = 54 Rupees	07
Q.5	(a) I) What is the differences between IO using put() and get() and IO using getline() and write()?	03
	II) Explain Following manipulators. (1) setw() (2) setprecision()	02
	III) What is the difference between a structure and a class in C++?	02
	(b) I) What is unnamed namespace? What is the use of unnamed namespace?	04
	II) Explain the C++ Stream Classes Hierarchy.	03
	OR	
Q.5	(a) I) Explain the process of open, read, write and close for files.	04
	II) Write a program to read text file and count number of characters in it.	03
	(b) I) What is Standard Template Library(STL). Which three types of containers are there in STL?	03
	II) How are the constructors and destructors called in inheritance?	04
