GUJARAT TECHNOLOGICAL UNIVERSITY
MCA - SEMESTER– II• EXAMINATION – SUMMER 2016

Subject code: 620003   **Date: 26-05-2016**
Subject Name: Object Oriented Concepts and Programming
Time: 10.30A.M. To 01.00p.m.   **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)**	Compare inline functions with macros. Discuss the advantages of making the function inline. Also discuss the disadvantage of the same.	**07**
	(b)	How do we achieve runtime polymorphism? Explain with example.	**07**
Q.2	**(a)**	1. Differentiate early binding and late binding.	**03**
		2. Compare reference datatype with pointers.	**04**
	(b)	Why do we overload the operators? Discuss the limitations that a programmer has to follow with overloading operator. List the operators that have to be overloaded as members of a class.	**07**
		OR	
	(b)	Explain the static data members and static function of a class. Compare static data members with normal variables of a class.	**07**
Q.3	**(a)**	1. Compare new with malloc	**03**
		2. In a special type of hybrid inheritance, how do you avoid the duplication of member of grandparent in the child class?	**04**
	(b)	How do we achieve type conversion of an object of class1 into object of class2. Explain with example.	**07**
		OR	
Q.3	**(a)**	1. Explain the concepts of abstraction and encapsulation	**03**
		2. Explain the importance of MIL with example.	**04**
	(b)	Can we overload constructors and destructors? Justify you answer. If overloaded, also discuss all the prototypes of the same.	**07**
Q.4	**(a)**	1. Why cin and cout are are not considered as keywords?	**03**
		2. Compare template instantiation with function overloading.	**04**
	(b)	Explain static_cast, reinterpret_cast and const-cast	**07**
		OR	
Q.4	**(a)**	1. Explain the functions to read and write to a binary file.	**03**
		2. Explain the behavior of static data member of a class template.	**04**
Q.4	**(b)**	Explain typeinfo object. Also explain the usage of typeid operator.	**07**
Q.5	**(a)**	1. Explain uncaught_exception() with example.	**03**
		2. Give the advantages of readymade components of STL.	**04**
	(b)	What is unnamed namespace. Discuss its use with example.	**07**
		OR	
Q.5	**(a)**	1. What is rethrow? Explain its significance.	**03**
		2. Differentiate between set and map containers of STL.	**04**
	(b)	Explain the concept of nesting the namespace. Also explain namespace alias.	**07**

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