

Seat No.: _____

Enrolment No. _____

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 your answer. If overloaded, also discuss all the prototypes of the same. **07**

- Q.4** (a) 1. Why cin and cout 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 typeid object. Also explain the usage of typeid operator. **07**

- Q.5** (a) 1. Explain uncaught_exception() with example. **03**
2. Give the advantages of ready-made 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**
