

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA - SEMESTER– • EXAMINATION – WINTER 2015

Subject Code: 2620002

Date: 02/12/ 2015

Subject Name: Object-Oriented Concepts & Programming

Time: 02.30 pm to 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) What is reference variable? Explain with suitable example: (i) Pass-by-reference and (ii) Returning a reference from a function. **07**

(b) What is the importance of static data members? Explain with suitable example: (i) static data members and (ii) static member functions. How do static members functions differ from non-static member functions? **07**

Q.2 (a) Discuss friend function with suitable example. **07**

(b) Discuss the terms: (i) mutable (ii) encapsulation (iii) new operator **07**

OR

(b) Discuss: (i) usage of const keyword in C++ **07**
(ii) container, iterator

Q.3 (a) What is MIL? Explain its importance with suitable examples. **07**

(b) Explain inline function with suitable example and its merits and demerits. Also differentiate between macro and inline function. **07**

OR

Q.3 (a) What is constructor? Discuss copy constructor along with its significance and suitable example. **07**

(b) List three differences between manipulators and ios functions? Discuss any two manipulators. **07**

Q.4 (a) Discuss overloading of the >>, << and == operators using suitable examples. **07**

(b) Discuss the concept of exception handling in C++ with suitable example. **07**

OR

Q.4 (a) Explain hybrid inheritance. Discuss virtual base class with example. **07**

(b) What is the need of overloading the = and [] operators overloading? Discuss overloading of the = and [] operators using suitable examples. **07**

Q.5 (a) Explain dynamic polymorphism. Explain virtual function using suitable example. **07**

(b) Discuss: seekg, this, virtual destructor **07**

OR

Q.5 (a) What is the importance of RTTI? Discuss the type_info object and typeid operator. **07**

(b) Explain namespace? Why is required? Can we use cin without 'using namespace std' in our program? What is unnamed namespace? **07**
