

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA - SEMESTER-II • EXAMINATION – WINTER - 2017

Subject Code: 2620002

Date: 01-01-2018

Subject Name: Object-Oriented Programming 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) Define terms **07**
- i. Destructor
 - ii. Pure virtual function
 - iii. Data hiding
 - iv. Encapsulation
 - v. Generic programming
 - vi. Koenig lookup
 - vii. Virtual destructors
- (b) List out the advantages of inline function and also explain it with proper example. **07**
- Q.2** (a) How is constructor useful? Explain copy constructor in detail with a suitable example. **07**
- (b) Explain with example: static variable, static function and static class. **07**
- OR**
- (b) What is the difference between generic and non-generic arguments to function template? Explain class template. **07**
- Q.3** (a) Define operator overloading. Explain operator overloading with suitable example. **07**
- (b) How inheritance support OOPS? Explain different types of inheritance with an example. **07**
- OR**
- Q.3** (a) What is type casting? Explain type casting in detail with suitable examples. **07**
- (b) Why is abstract class used? Explain it with suitable example. **07**
- Q.4** (a) Explain the following with example. **07**
- i. Virtual function
 - ii. Virtual class
- (b) Write a short note on Exception handling. **07**
- OR**
- Q.4** (a) How can we achieve runtime polymorphism? Explain with suitable example. **07**
- (b) Write a program to demonstrate pointer to object and pointer to members of a class. **07**
- Q.5** (a) What is random access file? Explain read(), write(), seekg(), tellg(), seekp() and tellp() functions. **07**
- (b) Explain following: **07**
- i. Nested namespace
 - ii. Std namespace
 - iii. Namespace aliases
- OR**
- Q.5** (a) Explain manipulator functions defined in ios class with suitable example. **07**
- (b) Write a short note on Standard Template Library (STL). **07**
