

**GUJARAT TECHNOLOGICAL UNIVERSITY****MCA Integrated- SEMESTER– IV EXAMINATION – WINTER 2019****Subject Code: 4440601****Date: 26/11/2019****Subject Name: C++ with Class Libraries****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) Answer the Following Questions.**
- i. What do you mean by Abstract class? **03**
  - ii. What is the use of constructor? List out the types of constructor **04**
- (b) Do as Follows. 07**
- i. Friend Function should invoke like a normal member function. (True/False).
  - ii. cout is an object of \_\_\_\_\_ and cin is an object of \_\_\_\_\_.
  - iii. More than one base classes and one derived class is called as \_\_\_\_\_ inheritance.
  - iv. To use manipulator, we need to include \_\_\_\_\_ header file.
  - v. RTTI stands for \_\_\_\_\_.
  - vi. Destructor can be more than one in a class. (True/False)
  - vii. We cannot change the basic meaning of an operator in operator overloading. (True/ False)
- Q.2 (a) Differentiate between C and C++. 07**
- (b) What do you mean Reusability/Inheritance? How it is used? List out the types of Reusability with figure. 07**
- OR**
- (b) What is the use of static member data? Explain with its characteristics with suitable example. 07**
- Q.3 (a) What do you mean C++ Stream? Discuss get (), put (), getline () and write () with suitable example. 07**
- (b) What do you mean by Type Conversion? List out the type conversion methods and explain any one method with suitable example. 07**
- OR**
- Q.3 (a) What do you mean by generic programming? Explain Template Class with suitable example. 07**
- (b) How we can resolve problem of ambiguity in a “diamond-shaped” inheritance? Explain with suitable example. 07**
- Q.4 (a) What do you mean by typeid, dynamic\_cast and reinterpret\_cast? How it is used? Explain. 07**
- (b) How destructor is used? Explain with its characteristics with example. 07**
- OR**
- Q.4 (a) What do you mean by friend Function?? Explain with example. 07**
- (b) How Runtime polymorphism concept is achieved? Explain with suitable example. 07**
- Q.5 (a) How many ways we can open files? Explain different File Modes with suitable example. 07**
- (b) What do you mean by Operator overloading? By how many ways, we can overload the operators? Explain. 07**
- OR**
- Q.5 (a) What do you mean by :: operator? What is the need of this operator? Explain. 07**
- (b) What is the need of Exception handling? Explain the exception handling mechanism with suitable example. 07**