

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-IV • EXAMINATION – WINTER 2013

Subject Code: 140704**Date: 30-12-2013****Subject Name: Object Oriented Concept and 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) Explain Three Models and their relationship in detail. **07**
(b) What is the use of friend function? Write characteristics of friend function and also explain with proper example. **07**

- Q.2** (a) Answer following questions. **07**
(1) Difference between Object Oriented Programming and Procedure Oriented Programming.
(2) Explain Private member function.
(b) Explain Object Oriented Methodology with its five stages. **07**

OR

- (b) Write a scenario for a session with an online stock-broker. Draw sequence diagram for same. **07**

- Q.3** (a) Explain link and association with multiplicity. **07**
(b) Write a C++ Program to overload unary minus operator using member function and friend function. **07**

OR

- Q.3** (a) Explain aggregation with respect to object model with example. **07**
(b) Write a C++ program to overload Binary plus operator using friend function. **07**

- Q.4** (a) What is state diagram? Draw State Diagram for buying beverage (drink) from vending machine. **07**
(b) What is constructor? Write characteristics of constructor. Explain parameterized constructor with proper example. **07**

OR

- Q.4** (a) Draw data-flow diagram for banking system. **07**
(b) What is polymorphism? Write types of polymorphism. Explain run time polymorphism with virtual function. **07**

- Q.5** (a) Explain Virtual Base class in inheritance with proper program. **07**
(b) Explain static variable and static function. **07**

OR

- Q.5** (a) Explain single and multiple inheritances with proper program. **07**
(b) Answer following questions. **07**
(1) Explain Scope resolution operator.
(2) Explain memory management operator.
