

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE - SEMESTER-IV EXAMINATION – WINTER 2015**

**Subject Code: 140704****Date: 06/01/2016****Subject Name: Object Oriented Concept and Programming****Time: 02:30pm to 05:00pm****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 object oriented programming and explain its features. **07**  
(b) Explain friend function with example. Also write advantage of using it. **07**

- Q.2** (a) Define Inheritance and explain types of inheritance. **07**  
(b) Explain functional modeling with example. **07**

**OR**

- (b) Explain link, association and multiplicity with example. **07**

- Q.3** (a) Explain object oriented methodology and themes. **07**  
(b) Explain copy constructor with example. **07**

**OR**

- Q.3** (a) Explain dynamic modeling with example. **07**  
(b) Explain function overloading and constructor overloading with examples. **07**

- Q.4** (a) Explain virtual function and abstract class with example. **07**  
(b) Attempt following questions: **07**  
    i) Aggregation v/s Generalization.  
    ii) Constructor v/s Destructor.

**OR**

- Q.4** (a) Attempt following: **07**  
    i) Explain Inline function with example.  
    ii) Differentiate order and sequence.  
(b) What is type conversion. Explain various type conversion with example **07**

- Q.5** (a) Draw state diagram for phone call. **07**  
(b) Write a program to overload < (less than) and > (greater than) operator. **07**

**OR**

- Q.5** (a) Draw data flow diagram for banking system. **07**  
(b) Write a program to find area of Rectangle and Square by creating function **07**  
    find\_area() using function overloading.  
    Note: Area of Rectangle=(Length\*Width) and  
    Area of square=(Length\*Length)

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