

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

# GUJARAT TECHNOLOGICAL UNIVERSITY

M.E –I<sup>st</sup> SEMESTER–EXAMINATION – JULY- 2012

Subject code: 712303N

Date: 09/07/2012

Subject Name: Object Oriented Methodology

Time: 2:30 pm – 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 class? What is object? Explain relationship between them in context to object oriented methodology and programming with example. **07**
- (b) Explain relationships among three OOM models. **07**
- Q.2** (a) Prepare class diagram and object diagram of ‘Engineering and its several disciplines and subjects’ (at least 5 disciplines and 3 subjects). **07**
- (b) Draw the state diagram of ATM transaction. **07**
- OR**
- (b) Draw the DFD of windowed graphics display. **07**
- Q.3** (a) What is RTTI? How is it done in java? **07**
- (b) Draw a Sequence diagram for registering new member in library management system. **07**
- OR**
- Q.3** (a) Explain exception handling in Java. How is it done? **07**
- (b) Explain the purpose of Façade pattern. Also give example. **07**
- Q.4** (a) Define the term “Design Pattern”. Explain Iterator design pattern with suitable example. **07**
- (b) Short note: runnable interface. **07**
- OR**
- Q.4** (a) Which design pattern is used to ensure that only one object of particular class can exist in application? Explain with proper example. **07**
- (b) Write the statement of “Liskov’s substitution principle”. Explain with example. **07**
- Q.5** (a) What is pattern based architecture? Explain. What are the different architectural patterns? **07**
- (b) Explain repository, client server, pipe and filter. **07**
- OR**
- Q.5** (a) Short note on RMI with example. **07**
- (b) Write a note on MVC architecture. **07**

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