

GUJARAT TECHNOLOGICAL UNIVERSITY**M. E. - SEMESTER – I • EXAMINATION – WINTER 2012****Subject code: 712303N****Date: 12-01-2013****Subject Name: Object Oriented Methodology****Time: 02.30 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 are the reasons of evolving the Object Oriented Methodology in programming? Explain with real world example. **07**
- (b) Create one class, constructor, interface, objects and implement interface. Explain with real world example. **07**
- Q.2** (a) Explain relationships among three OOM models. How are they correlated with each other? **07**
- (b) Short note: Multiple Inheritance. **03**
- OR**
- What is RTTI? How is it done in java?
- (c) Short Note: Differences among Aggregation, Association, Generalization by example. **04**
- OR**
- Draw the DFD of windowed graphics display.
- Q.3** (a) Explain Observer design pattern in detail with suitable example. **07**
- (b) Explain cloneable interface and runnable interface by example. **07**
- OR**
- Q.3** (a) Implement Java Remote Method Invocation application of message transfer or chat server. **07**
- (b) A directory file contains information about files in directory, including both ordinary files as well as other directory files. Prepare an object diagram which models directory files and ordinary files. **07**
- Q.4** (a) Write the statement of “Liskov’s substitution principle”. Explain with example. **04**
- (b) Write a program of comparing two objects and Explain. **03**
- (c) Explain following terms with example: metadata, patterns, candidate keys, constraints, and derived object, prepare a portion of an object diagram for a banking loan approval system. **07**
- OR**
- Q.4** (a) Draw the event trace diagram of phone call. **04**
- (b) Explain Iterator design pattern with example **03**
- (c) Create a Use case diagram for registering new member in library management system. Draw a Sequence diagram for same. And also draw a Sequence diagram for issuing a book in library system. **07**
- Q.5** (a) Explain client server architecture system by example. **07**
- (b) What is pattern based architecture? Explain. **04**
- (c) Explain differences between JSP and servlet. **03**
- OR**
- Q.5** (a) Write a note on MVC architecture. **07**
- (b) Explain exception handling in Java. How is it done? **04**
- (c) Explain why mistakes made in the requirements analysis stage are the costliest to correct? **03**
