

## GUJARAT TECHNOLOGICAL UNIVERSITY

**BE - SEMESTER-IV (OLD) EXAMINATION – WINTER 2018**

**Subject Code: 140703**
**Date: 05/12/2018**
**Subject Name: Object Oriented Analysis Design And Uml**
**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) What is object orientation? Explain OO themes. **07**  
 (b) What is inheritance? List the different types of inheritance and explain how it encourages reusability and sharing. **07**
- Q.2** (a) Define following Terms: Derived data , Abstract Class , Generalization, Multiplicity, Constrains, Metadata, Package. **07**  
 (b) List all kinds of control information represented by Dynamic model. Prepare State chart diagram for Two Party Phone Call. **07**
- OR**
- (b) Describe guidelines for use case Models. **07**
- Q.3** (a) Draw a sequence diagram for issuing a book and renewing a book in online library management system. **07**  
 (b) What is concurrency? Explain 'aggregation concurrency' and 'concurrency Within an object' represented by state model with suitable example. **07**
- OR**
- Q.3** (a) Prepare sequence diagram for booking a train ticket on line. **07**  
 (b) Explain 'ordered', 'bags', 'sequences' in class diagram with suitable examples. **07**
- Q.4** (a) Describe the criteria for discarding unnecessary and incorrect classes. Give example to justify the answer. **07**  
 (b) Define the purpose of following terms with suitable example and UML notations (i) swimlane (ii) use case generalization (iii) activity **07**
- OR**
- Q.4** (a) Which are the different criteria to keep the right association in domain class Model. **07**  
 (b) "Iterative development life cycle is better than the waterfall development life cycle." Explain with Example. **07**
- Q.5** (a) Give the list of common architectural styles. Explain continuous transformation in detail. **07**  
 (b) What is the purpose of design optimization? Briefly discuss the tasks of design optimization. **07**
- OR**
- Q.5** (a) Explain the following terms in relation to class design. **07**  
     a. Refactoring                      b. Reification  
 (b) Mention the importance of analysis and design stages in software development process. Differentiate Domain analysis and Application analysis. **07**

\*\*\*\*\*