

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

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

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**MCA INTEGRATED- SEMESTER– IV• EXAMINATION – SUMMER 2015**

**Subject Code: 4440604**

**Date: 18 /05 2015**

**Subject Name: UML & Object-oriented Modeling**

**Time: 10:30 a.m. to 1:00 p.m.**

**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) i. \_\_\_\_\_ is the relationship between Interface and Class. **07**  
ii. You use case diagrams to illustrate the static design view of a system. Justify  
iii. Action state can't be decomposed. Justify  
iv. An \_\_\_\_\_ is the vertical dashed line that represents the existence of an object over a period of time in sequence Diagram.  
v. Define Signal Class.  
vi. The process of transforming the model into code is called \_\_\_\_\_.  
vii. Dependency is represented with symbol \_\_\_\_\_
- (b) Define the Following **07**  
i. UML  
ii. Instance  
iii. Time Event  
iv. Links and Associations  
v. Collaborations.  
vi. Note  
vii. Multiplicity
- Q.2** (a) Write a short on Relationships in UML. **07**  
(b) Explain State chart Diagram. Draw state Diagram of Telephone line. **07**
- OR**
- (b) Explain Structural and Behavioral Things in UML **07**
- Q.3** (a) Define Package. Explain Import and Export and Generalization Relationship in packages. **07**  
(b) Write a short note on Deployment Diagram and prepare Deployment Diagram for ATM System. **07**
- OR**
- Q.3** (a) List and Explain Common Mechanisms of UML. **07**  
(b) What is Constraint? How you apply constrain with Objects and links explain with example. **07**
- Q.4** (a) What do you mean by Interaction? Explain Interaction Diagrams with example **07**  
(b) Explain Attributes and methods of class diagram with syntax and also explain Visibility of Class. **07**
- OR**
- Q.4** (a) Define Component and explain Component Diagram with example. **07**  
(b) Define Aggregation and Composition. Differentiate both the terms and provide pictorial representation **07**

- Q.5**    **(a)**    Draw Use Case and Activity Diagram for Online Exam website.    **07**  
         **(b)**    Define Activity Diagram. Explain Forking, joining and Swimlanes in Activity Diagram with example.    **07**
- OR
- Q.5**    **(a)**    Define Class Diagram and draw class diagram for Railway Reservation System    **07**  
         **(b)**    Define Use Case Diagram. Explain Generalization, extends and include in Use case with example.    **07**

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