

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

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

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**MCA Integrated - SEMESTER– IV- EXAMINATION – WINTER 2018**

**Subject Code: 4440604**

**Date: 06-12-18**

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

**Time: 02.30 pm to 5.00 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) Define the Following. 07  
1) Multiplicity  
2) Collaborations  
3) UML  
4) Composition  
5) Association  
6) Constraints  
7) Actors
- (b) 1) Do as Directed. 03  
I. What are the four relationships in UML?  
II. Public visibility specified by \_\_\_\_\_ symbol?  
III. Generalization is sometimes called \_\_\_\_\_ relationship.
- 2) List the Principles of modeling. 04
- Q.2(a) Write a short note on SDLC. 07
- (b) Explain Relationships in Unified Modeling Language in detail. 07  
OR
- (b) Differentiate between Aggregation / Composition. 07
- Q.3(a) Differentiate between Specialization/Generalization. 07
- (b) Explain the Dependency in detail. 07  
OR
- (a) Define Package. Explain Import and Export and Generalization Relationship in packages. 07
- (b) Describe about Object Diagram in detail. 07
- Q.4(a) Draw Activity Diagram for online examination system. 07
- (b) Define Component and Explain Component Diagram with Example. 07  
OR
- (a) Draw class diagram for Railway Reservation system. 07
- (b) What do you mean by Interaction? Explain Interaction Diagrams with Example. 07
- Q.5(a) Draw Use case diagrams for a video store system. 07
- (b) Explain State diagram with example. 07  
OR

- (a) Draw a Sequence diagram for “Appointment of patient” of Hospital Management System. 07
- (b) Explain Top down approach in dynamic system. 07

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