

GUJARAT TECHNOLOGICAL UNIVERSITY**MCA Integrated- SEMESTER- IV EXAMINATION – WINTER 2019****Subject Code: 4440604****Date: 02/12/2019****Subject Name: UML & Object-oriented Modeling****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)** Do as Directed: **07**
1. Define Action State.
 2. UML stands for _____.
 3. Justify the following statement with reason(TRUE/FALSE).
Interface is a general purpose mechanism for organizing elements into group.
 4. Define Relationship.
 5. Draw the symbol for template class in UML.
 6. What is a Navigation in UML?
 7. List the phases of SDLC process.
- (b)** 1) Write a difference between Aggregation and Composition. **03**
2) Write the difference between include and extend relationship. **04**
- Q.2 (a)** Draw the use case diagram for the online Pizza ordering system. **07**
(b) List building blocks of UML. Explain Things in detail. **07**
- OR**
- (b)** Explain following: **07**
- 1) Generalization
 - 2) Realization
- Q.3 (a)** Differentiate Sequence and Collaboration Diagram. **07**
(b) List common mechanisms in UML. Explain it in detail. **07**
- OR**
- Q.3 (a)** Explain System's architecture in UML. **07**
(b) Why model is required? Explain principles of modeling. **07**
- Q.4 (a)** Explain activity diagram and its UML notation with suitable example. **07**
(b) Draw the class diagram for library management system. **07**
- OR**
- Q.4 (a)** Draw the sequence and activity diagram for use case "Add product" for online shopping system. **07**
(b) Define following with example: **07**
- 1) Association class
 - 2) Qualification
- Q.5 (a)** Define Event and Signal. What is State Diagram? Draw state chart diagram of Washing machine system. **07**
(b) Define sub state. Write the difference between sequential and concurrent sub state. **07**
- OR**
- Q.5 (a)** Define Component and Component Diagram. Explain the relationship between Component and Class and Component and Interface. **07**
(b) Write a short note on Deployment and Deployment Diagram. **07**
