

Enroll No

Q.P. Code
UT 3035

Unit Test -I (2025-26)

S.Y. B.Tech.-Information Technology (MDM-I)

Course Code: OE361 Course Name: Object Oriented Modeling and Design

Day & Date: Wednesday 13/08/2025

Time: 2.30PM-3.30PM

Max Marks- 25

- Instructions:**
- 1) All questions are compulsory.
 - 2) Figures in rounded () brackets within the question, indicate the scheme of marking for respective part of the question, whereas, figures in the first right column indicate total marks for that whole question.
 - 3) CO is the index number of the Course Outcome statement.
 - 4) The Bloom's taxonomy level (BL) for 1,2,3,4,5 and 6 is remember, understand, apply, analyze, evaluate and create respectively.
 - 5) Assume suitable data if necessary.
 - 6) Use of non-programmable calculators is allowed

		Marks	BT Level	COs
Q.1	A	5	1	1
	Define object-oriented development (1M). Explain key themes Inheritance and Polymorphism with suitable example (each carries 2M).			
	B	5	2	2
	Classify different types of models (2M). Explain each in detail (3M).			
	C	5	4	3
	Design a Class Diagram for a Library Management System that supports book lending operations.			
	1. Book			
	<ul style="list-style-type: none"> Attributes: isbn, title, author, isIssued Operations: issueBook (), returnBook () 			
	2. Member			
	<ul style="list-style-type: none"> Attributes: memberId, name, contact Operations: borrowBook (), returnBook () 			
	3. Librarian			
	<ul style="list-style-type: none"> Attributes: empId, name Operations: addBook (), removeBook () 			
	4. Transaction			
	<ul style="list-style-type: none"> Attributes: transactionId, issueDate, returnDate Operations: calculateFine() 			
Q.2	A	5	2	2
	Describe the concepts of events (3M) and states (2M) in dynamic modeling.			
	B	5	3	3
	Create a state chart diagram for an Phoneline showing different states (3M) and Explain (2M).			
	OR			
	Create a state chart diagram for an ATM machine showing different states (3M) and Explain (2M).			
		5	3	3

