Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–V (NEW) EXAMINATION – SUMMER 2021

Subject Code:3151604 Date:09/09/2021

Subject Name:Object Oriented Analysis and Design

Time:10:30 AM TO 01:00 PM Total Marks: 70

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Simple and non-programmable scientific calculators are allowed.**

			Marks
Q.1	**(a)**	What does Design Reuse mean?	**03**
	(b)	How to write a Problem Statement? What does it include?	**04**
	(c)	What is object orientation? Explain OO themes.	**07**
Q.2	**(a)**	How to identify design subsystems?	**03**
	(b)	What is Class? What is Class Diagram? Give benefits of Class Diagram.	**04**
	(c)	Explain Nested State Diagram with suitable example.	**07**
		OR	
	(c)	Which steps are required to construct an "Application Interaction Model"? Discuss in detail	**07**
Q.3	**(a)**	Explain Static Binding.	**03**
	(b)	How to Identifying Concurrency in System Design?	**04**
	(c)	Draw activity diagram that visualizes an end-to-end activity flow for processing an order.	**07**
		OR	
Q.3	**(a)**	Explain in brief System Analysis.	**03**
	(b)	Discuss the relationships among Class model, state model and Interaction model.	**04**
	(c)	What is inheritance? List the different types of inheritance and explain how it encourages reusability and sharing.	**07**
Q.4	**(a)**	What is domain interaction model?	**03**
	(b)	Explain Ordered and Sequence in association with suitable example.	**04**
	(c)	Differentiate Association, Generalization and Aggregation with example.	**07**
		OR	
Q.4	**(a)**	What are the different aspects to handle Boundary Conditions?	**03**
	(b)	Explain Association Classes.	**04**
	(c)	Explain Scope and Visibility with respect to class modeling.	**07**
Q.5	**(a)**	Prepare class Bank_Account with operation parameters.	**03**
	(b)	Explain Refactoring and Reification terms in relation to class design.	**04**
	(c)	Explain Object Oriented Model, Dynamic Model, Functional Model and Interaction Model & Relation among these models.	**07**
		OR	
Q.5	**(a)**	Explain "Reusable components and their use" concepts with reference to system design.	**03**
	(b)	Draw state diagram that shows the states of a digital clock, which involves idle, setting hours and setting mins.	**04**
	(c)	Prepare domain class model for hospital management system.	**07**