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