

GUJARAT TECHNOLOGICAL UNIVERSITY**BE – SEMESTER- V EXAMINATION-SUMMER 2023****Subject Code: 3151604****Date: 26/06/2023****Subject Name: Object Oriented Analysis and Design****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.
4. Simple and non-programmable scientific calculators are allowed.

		MARKS
Q.1	(a) What is Object-Oriented Analysis and Design?	03
	(b) Discuss the difference between multiplicity and cardinality?	04
	(c) Explain Following Terms: a) Identity b) Classification c) Polymorphism d) Metadata e) Abstraction f) Encapsulation	07
Q.2	(a) What is concurrency? Explain aggregation concurrency.	03
	(b) What is model? Explain types of models.	04
	(c) What is inheritance? List the different types of inheritance and explain how it encourages reusability and sharing.	07
	OR	
	(c) Differentiate Association, Generalization and Aggregation with example.	07
Q.3	(a) What is an event? Explain types of events.	03
	(b) Explain nested states with appropriate diagram.	04
	(c) Prepare sequence diagram for booking a Bus ticket on-line.	07
	OR	
Q.3	(a) Differentiate active, passive and transient object in sequence diagram.	03
	(b) Why Call a Domain Model a "Visual Dictionary"?	04
	(c) Prepare a use case diagram for an online shopping system.	07
Q.4	(a) Explain methods of breaking system into subsystems to system design.	03
	(b) Explain Development Lifecycle in detail.	04
	(c) Explain how to choose a Software Control Strategy.	07
	OR	
Q.4	(a) Explain the tasks involved in design optimization.	03
	(b) Compare and contrast waterfall and iterative development life cycle model.	04
	(c) Explain Architecture of the ATM system.	07
Q.5	(a) Explain refactoring with respect to class design.	03
	(b) List and explain the steps of constructing application interaction model.	04
	(c) Differentiate following with respect to analysis and design stages:	07

i) Domain analysis vs. Application analysis

ii) System design vs. Class design

OR

Q.5 (a) How to Identifying Concurrency in System Design? 03

(b) Explain the steps for preparing a problem statement. 04

(c) List out the decisions you make during system design and briefly 07

explain the objectives of following:

i)frame works ii) patterns iii) libraries ii) layers iii) partition
