Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–IV EXAMINATION – SUMMER 2016

Subject Code:140703 **Date:03/06/2016**

Subject Name:Object Oriented Analysis Design And Uml

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.**

Q.1	**(a)**	Explain Object Oriented Model, Dynamic Model, Functional Model and Interaction Model & Relation among these models.	**07**
	(b)	Briefly explain following characteristics and themes of object oriented systems: Classification,identity,inheritance,encapsulation,polymorphism,sharing,synergy.	**07**
Q.2	**(a)**	What is inheritance? List the different types of inheritance and explain how it encourages reusability and sharing.	**07**
	(b)	Differentiate state and event. List and explain different types of events.	**07**
		OR	
	(b)	Explain ‘ordered’, ‘bags’, ‘sequences’ in class diagram with suitable examples.	**07**
Q.3	**(a)**	List and explain the steps of constructing application interaction model.	**07**
	(b)	Define following Terms: Aggregation, Abstract Class , Generalization, Reification, Constrains, Metadata, Package	**07**
		OR	
Q.3	**(a)**	What is the purpose of class modeling? Explain following concept with example. i) Aggregation versus association ii) Aggregation versus composition	**07**
	(b)	What is a constraint? Explain constraints on objects, constraints on generalization sets and constraints on links.	**07**
Q.4	**(a)**	What do you mean by object-orientation? Briefly discuss the characteristics of OO approach.	**07**
	(b)	Explain the tasks involved in design optimization.	**07**
		OR	
Q.4	**(a)**	Briefly describe the steps for constructing a domain State model.	**07**
	(b)	Explain following concepts with reference to system design: i) Reusable components and their use ii) Methods of breaking system into subsystems	**07**
Q.5	**(a)**	Explain how to choose a Software Control Strategy.	**07**
	(b)	What tasks are involved in design optimization?	**07**
		OR	
Q.5	**(a)**	Explain the following terms in relation to class design. a. Refactoring b. reification	**07**
	(b)	Give the list of common architectural styles. Explain batch transformation in detail.	**07**

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