Seat No.: Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER- IV • EXAMINATION - SUMMER- 2015

•	Subject Code: 140703 Date: 01/06/2015 Subject Name: Object Oriented Analysis Design and UML				
_	e: 1(0.30am-01.00pm Total Marks: 70			
	1. 2. 3.				
Q.1	(a)	Explain Object Oriented Model, Dynamic Model, Functional Model and Interaction Model & Relation among these models.	07		
	(b)	Draw the state of a Car as an aggregation of part states (ignition, transmission, accelerator, brake). Draw the state diagrams of all the part states.	07		
Q.2	(a)	What is inheritance? List the different types of inheritance and explain how it encourages reusability and sharing.	07		
	(b)	Explain 'ordered', 'bags', 'sequences' in class diagram with suitable examples. OR	07		
	(b)	Define following Terms: Derived data, Abstract Class, Generalization, Multiplicity, Constrains, Metadata, Package.	07		
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)		07		
Q.3	(a)	What is the purpose of one shot state diagram? What is the difference between continuous loops or one shot life cycle state diagrams? Draw the one shot diagram for the chess game.	07		
	(b)		07		
Q.4	(a)	Write Scenario and Sequence diagram for Operation of a car cruise control include an encounter with slow-moving traffic that requires you to disengage and then resume control.	07		
	(b)	Which steps are required to construct an "Application Interaction Model"? Discuss in detail.	07		
0.4	(0)	OR	07		
Q.4	(a) (b)	List and explain the steps of constructing domain class model. Define the purpose of following terms with suitable example and UML notations (i) swimlane (ii) use case generalization (iii) activity (iv)effect	07 07		
Q.5	(a)	Explain the following terms in relation to class design. (a) Refactoring (b) reification	07		
	(b)	Explain how to choose a Software Control Strategy OR	07		
Q.5	(a) (b)	Give the list of common architectural styles. Explain batch transformation in detail. What is the purpose of design optimization? Briefly discuss the tasks of design optimization.	07 07		

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