Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. E. - SEMESTER – II • EXAMINATION – WINTER • 2014

Subject code: 1720105 **Date: 04-12-2014**

Subject Name: Object Oriented Methodology and Design

Time: 02:30 pm - 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.**

Q.1		Answer the following questions.	**14**
	(a)	What is are different OMT phases ?	
	(b)	Define Conceptual Classes? What are Three Strategies to Find Conceptual Classes?	
	(c)	What is an Attributes? What About Attributes in Code?	
	(d)	What is Generalization? What is Aggregation? What is Composition?	
Q.2	**(a)**	Draw and explain the Use case and Activity diagram for Automatic Teller Machine Operations.	**07**
	(b)	List the components that decide the template of pattern with reasoning.	**07**
		OR	
	(b)	What are patterns? Explain Façade pattern.	**07**
Q.3	**(a)**	Describe the different types of relationships among classes with examples.	**07**
	(b)	Draw and explain the Sequence and State diagram for Cell Phone scenario.	**07**
		OR	
Q.3	**(a)**	Explain in detail the object oriented design process with suitable example.	**07**
	(b)	Implement a Simple Factory using any Standard factory design pattern.	**07**
Q.4	**(a)**	Explain the techniques followed in in designing interface object with suitable java code.	**07**
	(b)	Show the Basic model of MVC architecture and also an alternate view of MVC architecture and implement the Observable and Observer pattern using MVC.	**07**
		OR	
Q.4	**(a)**	Define Following terms (i) State (ii) Sheet (iii) multi-level inheritance (iv) Qualifier (v) delegation using aggregation (vi) actors	**07**
	(b)	Explain Singleton pattern with a diagram.	**07**
Q.5	**(a)**	Draw the class diagram and use case diagram of Railway reservation system.	**07**
	(b)	What do you mean by long term storage of objects? Explain storage and retrieval of objects with example.	**07**
		OR	
Q.5	**(a)**	Draw the class hierarchy for the following items : Man, Cat, Tiger, Crow, table, fan, computer hardware .	**07**
	(b)	What is the significance of Iterator design pattern? Explain with suitable example.	**07**

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