

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. **07**
- i) Aggregation versus association
- ii) Aggregation versus composition
- (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: **07**
- i) Reusable components and their use
- ii) Methods of breaking system into subsystems
- 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. **07**
- a. Refactoring b. reification
- (b)** Give the list of common architectural styles. Explain batch transformation in detail. **07**
