

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA - SEMESTER-III • EXAMINATION – WINTER • 2014

Subject Code: 630001**Date: 24-12-2014**

**Subject Name: Structured and Object Oriented Analysis
and Design Methodology**

Time: 10:30 am - 01:00 pm**Total Marks: 70**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1 (a)** Define the following: **07**
1. Stereotype
 2. Aggregation
 3. Metadata
 4. HCI
 5. Multiplicity
 6. Speech recognition
 7. RFID
- (b)** 1. Discuss Structured English with example. **04**
2. Differentiate between open ended question and closed ended question. **03**
- Q.2 (a)** 1. Define Abstract class, Actor, Bags & Sequences. **04**
2. Differentiate between include and extend relationship. **03**
- (b)** List and briefly define the different phases of SDLC. **07**
- OR**
- (b)** Perfect Pizza wants to install a system to record orders for pizza. When regular customers call perfect pizza on the phone, they are asked their phone number. When the number is typed into a computer, the name, address and the last order date is automatically brought up on the screen. Once the order is taken, the total, including tax and delivery, is calculated. Then the order is given to the cook. A receipt is printed. Special offers (if available) are printed so the customer can get a discount. Drivers who make deliveries give customers a copy of the receipt. Write a summary of business activities for taking an order at Perfect Pizza. **07**
Draw a Data Flow Diagram for above case study.
- Q.3 (a)** Define the Data Dictionary. Also discuss any two categories of data dictionary. **07**
(b) The order processing system of a computer supplier company follows some discount policy on payment of customers. It gives discount if payment is done within 10 days. If amount of payment is greater \$10,000 give 3% discount, if amount is between \$5,000 to \$10,000 give 2% discount and if amount is less than \$5,000 then do not apply any discount. **07**
Draw Decision Tree and Decision Table for above case study.
- OR**
- Q.3 (a)** Discuss the guidelines for designing good web site. **07**
(b) Explain the captioning and different sections of form with example. **07**
- Q.4 (a)** Discuss the various types of coding with example. **07**
(b) 1. What is Multiple inheritance? Explain disjoint class & overlapping class for Multiple inheritance. **04**
2. Discuss the Three object oriented Models. **03**

OR

- Q.4 (a)** Define state, state transition and condition. Also draw state diagram for ATM system. **07**
- (b)** What is object-orientation? Discuss the various stages of object-oriented methodology. **07**
- Q.5 (a)** List building blocks of UML. Explain any six Structural Things with its graphical representation. **07**
- (b)** Draw sequence diagram and activity diagram for online shopping system. **07**
- OR**
- Q.5 (a)** List various component of Activity diagram. Discuss any six components with example. **07**
- (b)** Draw Use case diagram and class diagram for student registration system. **07**
