Seat No.: _____   Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA - SEMESTER– III EXAMINATION – SUMMER 2016

Subject Code:630001   **Date: 24/05/2016**
Subject Name:Structured and Object Oriented Analysis and Design Methodology
Time:02:30 P.M. to 05:00 P.M.   **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)** **Define the following terms**   **07**
1. Data Dictionary
2. DFD
3. CASE Tools
4. Process
5. Generalization
6. Association
7. Composition

(b)   **07**
1. A _____ is data at rest.
2. _____ is a modified form of English that is used to specify the content of process boxes in a DFD.
3. A _____ is the sequence in which information is displayed to and obtained from a user.
4. The _____ describes the structure of objects in a system.
5. An _____is an instance or occurrence of a class.
6. A _____ is a physical or conceptual connection among objects.
7. A _____is an ordered collection of element with duplicates allowed.

Q.2 **(a)** Explain points to be considered during dialog design.   **07**
(b) List all Fact Finding Techniques and discuss any two of it.   **07**

OR

(b) Explain various stages of System Development Life Cycle.

Q.3 **(a)** "The CSI", a monthly magazine published from New Delhi is send to subscriber by post. The subscription is accepted for one year or two years, Three months before the expiry of subscription, remainder 1 is send. If there is no reply from subscriber, remainder 2 is send before one month of expiry of subscription. If no reply is received up to 10 days before expiry of subscription, name is removed from mailing list and subscriber is informed. Draw Limited Entry Decision Table and Decision Tree for the above case.   **07**
(b) Explain general guidelines for designing Web Sites.   **07**

OR

Q.3 **(a)** Describe different validation testing.   **07**
(b) Write short note on structural diagrams in UML.   **07**

Q.4 **(a)** Explain state diagram. Draw state diagram for telephone line.   **07**
(b) Discuss the concept of modeling simple dependency, and simple inheritance.   **07**

OR

Q.4 **(a)** Draw a sequence diagram showing complete interaction for filling railway reservation form for a passenger and getting conformed tickets from railway officer.   **07**
(b) Explain generalization and its use. Describe generalization in multilevel inheritance with example.   **07**

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Q.5 **(a)** Consider the following object class and prepare object diagrams including all necessary details and relationships. **07**
CashAccount, Stock, Bond, Security, Property.
(b) Draw Use case diagram and Class diagram of ATM system with proper explanation of classes. **07**

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OR

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Q.5 **(a)** Draw Context Level, 0-Level Data Flow Diagram (DFD) & Use Case Diagram for a Restaurant Management System. **07**
(b) Identify various possible classes for Restaurant Management System and draw the class diagram. **07**

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