Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

MCA - SEMESTER–III EXAMINATION – SUMMER 2017

Subject Code:630001 **Date: 31-05-2017**

Subject Name: Structured & Object Oriented Analysis & Design Methodology **Total Marks: 70**

Time:02:30 pm - 05:00 pm

Instructions:

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

Q.1 Write a short note on **07**

i. CASE Tools
ii. Data Dictionary
iii. HCI
iv. Class and object
v. Nested state
vi. Stereotype
vii. Include and Extends

Q.2 **(a)** Explain open ended and closed ended questions. What are the different structures used in arranging questions in a logical sequence? **07**

(b) Draw Context Level, 0-Level Data Flow Diagram (DFD) for mailing system like Gmail. **07**

OR

(b) Explain decision tables and decision trees with suitable example. **07**

Q.3 **(a)** Explain the factors to consider when choosing output technology. **07**

(b) Discuss classification code, Block sequence code, significant digit subset code, and function code for effective coding. **07**

OR

Q.3 **(a)** Explain the graphical user interface design elements. **07**

(b) Discuss the points to be considered during dialog design. **07**

Q.4 **(a)** Define the following terms. **07**

i. Aggregation and composition
ii. Reification
iii. Entry and Exit activity
iv. Composite state
v. Qualified associations

(b) Draw the class diagram for online shopping system (like Amazon). **07**

OR

Q.4 **(a)** How could you synchronize the concurrent activities in state diagram? Discuss constraints on links. **07**

(b) Draw the state diagram for washing machine. **07**

Q.5 **(a)** Explain common mechanism for UML. **07**

(b) Define the term use cases and actor. Draw the use case diagram for messaging system (like whatsapp). **07**

OR

Q.5	**(a)**	Differentiate Sequence Diagram and Collaboration Diagram. Discuss the structured control used in sequence diagram.	**07**
	(b)	Draw the sequence diagram and activity diagram for the use cases of book ticket and cancel ticket for online railway reservation system	**07**

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