# GUJARAT TECHNOLOGICAL UNIVERSITY
## MCA INTEGRATED– SEMESTER-III EXAMINATION –SUMMER-2020

**Subject Code:2638603**                                               **Date:06-11-2020**

**Subject Name:**Structured and Object Oriented Analysis and Design Methodology (SOOADM)

**Time:02:30 PM to 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** | **(a)** | State following statements are true or false with justification. | **07** |
| | |   1) Implementation is the first phase of SDLC. | |
| | |   2) Interview is one of the methods of requirement gathering. | |
| | |   3) Constraints are used to create new building blocks in UML. | |
| | |   4) Use case diagram represents the dynamic aspect of the system. | |
| | |   5) Abstract class has no direct instances. | |
| | |   6) do activity is associated with transition. | |
| | |   7) Sequence diagram represents time ordering of messages. | |
| | **(b)** | Write a short notes on following- | **07** |
| | |   1) Open ended question [02] | |
| | |   2) Role of system analyst [02] | |
| | |   3) interface [02] | |
| | |   4) Actor [01] | |
| **Q.2** | **(a)** | Discuss the various types of system for users with suitable example. | **07** |
| | **(b)** | Draw the context level and level-0 data flow diagram (DFD) for online admission system. | **07** |
| | | **OR** | |
| | **(b)** | Explain decision tree and table by taking suitable example.[05] Discuss any two advantages of decision tree.[02] | **07** |
| **Q.3** | **(a)** | State and explain how presentations of output are unintentionally biased. What are the ways to avoid biasing output? | **07** |
| | **(b)** | Discuss the guidelines for designing good websites. | **07** |
| | | **OR** | |
| **Q.3** | **(a)** | How will you validate user input? Describe different methods for input validation. | **07** |
| | **(b)** | Explain the types of user interfaces in detail. | **07** |
| **Q.4** | **(a)** | Discuss the building blocks of UML in brief. | **07** |
| | **(b)** | Draw the class and object diagram for bank management system. | **07** |
| | | **OR** | |
| **Q.4** | **(a)** | Explain generalization, dependency and realization relationship with example. | **07** |
| | **(b)** | Define component.[01] Compare class and component.[02] Discuss the characteristics of component.[04] | **07** |
| **Q.5** | **(a)** | Draw the use case diagram for online grocery order system. Explain the purpose of <<include>> and <<extends>> in use case diagram. | **07** |
| | **(b)** | Explain forking, joining and object flow in activity diagram with example. | **07** |
| | | **OR** | |
| **Q.5** | **(a)** | Draw the sequence and collaboration diagram for use cases issue book and return book for library management system. | **07** |
| | **(b)** | What is state and event? Draw the state chart diagram for washing machine. | **07** |

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