

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA INTEGRATED– SEMESTER - III EXAMINATION- SUMMER-2023

Subject Code: 2638603**Date: 06/07/2023****Subject Name: Structured and Object Oriented Analysis and Design Methodology****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.
4. Use of simple calculators and non-programmable scientific calculators are permitted.

- Q.1 (a)** Write the following within one or two sentences: - **07**
- 1) TPS
 - 2) scrum
 - 3) generalization
 - 4) data dictionary
 - 5) fork and join
 - 6) JAD
 - 7) DSS
- (b)** Define the term SDLC. Explain the steps of SDLC with suitable diagram. **07**
- Q.2 (a)** Consider an online shopping web site, where customer selects the items and adds into cart. The customer will proceed for payments later. Design activity diagram for online shopping checkout system. **07**
- (b)** What is an interview? Discuss open-ended and closed-ended interview question and describe the advantages of open-ended question. **07**
- OR**
- (b)** What is analysis? Discuss the different feasibility study. **07**
- Q.3 (a)** Discuss the fact-finding techniques with suitable example. **07**
- (b)** Describe seven sections of a form in input design. **07**
- OR**
- Q.3 (a)** Explain in detail how system analyst reacts to working with the prototype and how good the fit is between their needs and the prototyped features of the system. **07**
- (b)** Explain the factors to consider when choosing output technology. **07**
- Q.4 (a)** Define data warehouse. Compare data warehouse with traditional databases. **07**
- (b)** Design Data Flow Diagram for hospital management system. The DFD diagram provides information about the inputs and outputs of each process and entity of hospital such as patient, staff, and doctor. **07**
- OR**
- Q.4 (a)** Explain the Types of Error on DFD with Example. **07**
- (b)** Discuss the Various Types of Interfaces in HCI Design. **07**
- Q.5 (a)** Draw class diagram for ATM management system with proper explanation of classes and relationships. **07**
- (b)** What do you understand by interaction? Explain types of interaction diagram with suitable example. **07**
- OR**
- Q.5 (a)** What is use case diagram in UML? Design the use case diagram with actors and use cases for the social networking site. **07**
- (b)** Define state diagram. Design the state chart diagram with state, events, and transaction for ATM management system. **07**