

**IM.Sc (CS) (Old) Sem.4, Examination**  
**Structured and Object Oriented Analysis & Design**  
**June-2025**

Date : 23/6/2025, Monday

Time : 3-00 Hours]

[ Max. Marks : 70

**Instructions:**

- Write both the Sections in the separate answer book.
- Both Sections having equal weightage.
- Draw Diagrams wherever necessary.
- Make Assumptions wherever necessary.

**SECTION – I**

- Q-1** Define following terms (Any 5) **15**
1. System analyst
  2. encapsulation
  3. transaction processing system
  4. object oriented design
  5. SDLC
  6. Unified process lifecycle
- Q-2** Attempt the following (Any 2) **10**
1. With example explain data flow diagram.
  2. With example explain functional requirements.
  3. Explain closed ended questions with examples.
- Q-3** Draw level-0, level-1 and level-2(for 2 processes)DFD for the online food ordering system like 'Swiggy' and 'Zomato' **10**

**OR**

Explain with example decision tree and decision table.

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SECTION – II

**Q-4** With example explain the following (Any 3) **15**

1. Generalization
2. Activities in state transition diagram
3. Class diagram
4. Scope and visibility

**Q-5** Attempt following (Any 2) **10**

1. Explain the purpose of use case diagram
2. Explain nested state diagrams with example.
3. Explain swimlane activity diagram
4. Explain multiple inheritances.

**Q-6** a) Draw Use case diagram for a system of Home delivery of grocery and payment. **10**  
b) Draw activity diagram for placing the order for the above system.

**OR**

- a) Draw class diagram for a system of Home delivery of grocery and payment.
- b) Draw Sequence diagram for placing the order for the above system.

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