

III B. Tech I Semester Supplementary Examinations, Dec/Jan- 2022
OBJECT ORIENTED ANALYSIS & DESIGN USING UML
 (Computer Science Engineering)

Time: 3 hours

Max. Marks: 70

- Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B**)
 2. Answer **ALL** the question in **Part-A**
 3. Answer any **FOUR** Questions from **Part-B**
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PART -A**(14 Marks)**

1. a) List the five attributes of a complex system. [2M]
- b) What is state of an object? [2M]
- c) What is the purpose of having multiple diagrams in UML? [2M]
- d) What is the purpose of swimlanes? [3M]
- e) List different components of a state chart diagram. [3M]
- f) Define simple and extended components. [2M]

PART -B**(56 Marks)**

2. a) Differentiate between algorithmic and object-oriented decompositions. [7M]
- b) Discuss the benefits of object-oriented modeling. [7M]
3. a) Explain about different types of relationships among classes. [7M]
- b) Discuss about the approaches for identifying and refining key abstractions. [7M]
4. a) Write and explain four basic principles of modeling. [7M]
- b) Explain the process of reverse engineering an object diagram. [7M]
5. a) Explain how to model behavior of an element with use cases. [7M]
- b) What are the components of interaction diagrams? Explain how to model flow of control by time ordering. [7M]
6. a) With an example, explain how timing constraints are modeled in UML. [7M]
- b) Assuming a simple scenario, draw the state chart diagram for an online banking system. [7M]
7. a) What are nodes and components? How they are organized in deployment diagrams. [7M]
- b) Explain the need and process of modeling APIs and source code. [7M]