

III B. Tech II Semester Supplementary Examinations, December -2023**OBJECT ORIENTED ANALYSIS AND DESIGN**

(Computer Science and Engineering)

Time: 3 hours

Max. Marks: 70

Answer any **FIVE** Questions **ONE** Question from **Each unit**

All Questions Carry Equal Marks

UNIT-I

1. a) Explain the structure of complex systems. [7M]
- b) Explain the properties of complex and simple software systems. [7M]

(OR)

2. a) Explain how to simplify the complex systems. [7M]
- b) Explain the elements of inherent complexity of software. [7M]

UNIT-II

3. a) Explain the importance of modeling. [7M]
- b) Explain the common mechanisms used in UML. [7M]

(OR)

4. a) Explain the conceptual model of the UML. [7M]
- b) Explain about association relationship and its adornments. [7M]

UNIT-III

5. a) Enumerate steps to model vocabulary of a system. [7M]
- b) What is Object diagram? Explain the purpose of Object diagram and also explain the notations used in object diagrams. [7M]

(OR)

6. a) Draw and explain the class diagram for credit card validation system. [7M]
- b) Explain about the package used in UML and also draw the package diagram for hotel management system. [7M]

UNIT-IV

7. a) State and explain the common modeling techniques of usecase diagrams. [7M]
- b) Draw a sequence diagram for issuing a book and renewing a book in online library management system. [7M]

(OR)

8. a) Prepare an activity diagram that elaborates the details of logging into an email system. Explain the steps with a neat diagram. [7M]
- b) Differentiate between sequence and collaboration diagram. [7M]

UNIT-V

9. a) What are components? Show the stereotypes that apply to components. [7M]
- b) Enumerate the steps to forward engineer and to reverse engineer in deployment diagram. [7M]

(OR)

10. a) Draw the state diagram for a telephone line. At the start of a call, the telephone line is idle. When the phone is removed from the hook, it emits a dial tone and can accept the dialing of digits. Upon entry of a valid number, the phone system tries to connect the call and route it to the Proper destination. The connection can fail if the number or trunk are busy. If the connection is successful the called phone begins ringing. If the called party answers the phone, a conversation can occur. When the called party hangs up the phone disconnects and rewards to idle when put on hook again. [7M]
- b) Explain the four kinds of events modeled by UML. [7M]