

Seat No. **OCT-NOV 2025 WINTER EXAMINATION****1154 B.Tech. CBCS****Sub. Name: Object Oriented Modeling and Design****Sub. Code: 80796/81035****Day and Date: Wednesday, 17-12-2025****Total Marks: 70****Time: 02:30 PM To 05:00 PM****Instructions: 1. All questions are compulsory**

- Q1) Solve MCQs. (2 Marks Each) [14]**
1. Which aspect of objects are addressed by analysis model? [2]
 - i. Static structure
 - ii. Sequencing of instructions
 - iii. Data transformations
 - iv. All of the above
 2. _____ reduces the effective multiplicity of this association. [2]
 - i. classification
 - ii. role name
 - iii. qualification
 - iv. ordering
 3. A _____ is a physical and replaceable part of system that conforms to and provides the realization of a set of interfaces. [2]
 - i. interface
 - ii. component
 - iii. state
 - iv. none of these
 4. One-shot state diagrams represent objects with _____ lives. [2]
 - i. Finite
 - ii. Infinite
 - iii. Both (A) and (B)
 - iv. None of the above
 5. Select the graphical symbol for rendering constraints or comments attached to an element or group of elements [2]
 - i. Note
 - ii. Tagged Values
 - iii. Constraints
 - iv. Stereotypes

6. An _____ is an active object that drive data flow graph by producing or consuming values [2]
- actor
 - data flows
 - data stores
 - none of these
7. A _____ is an architectural pattern that provides an extensible template for applications within a domain. [2]
- mechanism
 - pattern
 - framework
 - none of these

Q2) Solve any 2 (each 7 marks) [14]

1. Compare aggregation with Generalization [7]
2. Explain multiple inheritance with example. [7]
3. Explain in detail the actions taken by designer in design optimization [7]

Q3) Solve any 2 (each 7 marks) [14]

1. Explain the several phases of the OMT Methodology. [7]
2. Explain the Class Diagram, its properties , contents and common uses. [7]
3. Describe the overview of analysis process with neat diagram [7]

Q4) Solve any 2 (each 7 marks) [14]

1. Explain the Conceptual Model of UML [7]
2. Explain extensibility mechanisms in UML [7]
3. Explain the following terms with respect to Activity diagram: i) Action states [7]
ii) Transitions iii) Branching

Q5) Solve any 2 (each 7 marks) [14]

1. Explain Activity diagram with example. [7]
2. What is component? Give difference between components and classes. [7]
3. Explain patterns and frameworks. [7]

End Of Question Paper

Important Note for Chief Exam Officer / SRPD Coordinator / Sr Supervisor/ Student -

This Question Paper may be distributed for following Subjects as common code.

सदरची प्रश्नपत्रिका खालील विषयांकरिता वितरित करता येईल.

- 1] (1154) B.Tech. CBCS (80796) Object Oriented Modeling and Design Part 3 SEM 5
- 2] (101) Bachelor of Engineering (81035) Object Oriented Modeling and Design Part 3 SEM 5

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