

III B. Tech II Semester Regular/Supplementary Examinations, May/June-2024
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) What are the problems of characterizing the behavior of discrete systems? [7M]
Explain.
- b) Explain the white-box activity diagram for control launch of satellite navigation system [7M]

(OR)

2. a) What is the importance of model building? Explain the elements of software design methodologies [7M]
- b) Discuss about requirements for the satellite navigation System. [7M]

UNIT-II

3. a) What are terms and concepts of classes? Explain with examples. [7M]
- b) Explain about train schedule planning in TTMS. [7M]

(OR)

4. a) What is the importance of modeling? Explain in detail. [7M]
- b) Describe system architecture and subsystem planning in TTMS. [7M]

UNIT-III

5. a) Discuss about forward and reverse engineering with example. [7M]
- b) Describe defining the boundaries of the problem in Cryptanalysis. [7M]

(OR)

6. a) What are eight stereotypes that apply to dependency relationships among classes and objects in class diagrams? Explain with suitable examples. [7M]
- b) Explain about designing specialized knowledge sources in Cryptanalysis. [7M]

UNIT-IV

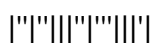
7. a) How to model flow of control? Explain with example. [7M]
- b) Describe the Use case model of the Vacation Tracking System. [7M]

(OR)

8. a) Explain about behavioral modeling the requirements of a system. [7M]
- b) Discuss about the web pages and the user interface of the Vacation Tracking System. [7M]

UNIT-V

9. Explain the following:
 - a) State machines. [7M]
 - b) Primary use cases for the Weather monitoring system. [7M]
- (OR)
10. Explain the following:
 - a) Component diagrams. [7M]
 - b) Classes of the Weather Monitoring System. [7M]



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UNIT-I

1. a) Describe various categories of analysis and design methods. [7M]
b) Draw and explain the deployment diagram for the satellite navigation system. [7M]
(OR)
2. a) What are the five attributes of a complex system? Explain. [7M]
b) Explain post-transition of the satellite navigation system. [7M]

UNIT-II

3. a) What are building blocks of the UML? Explain. [7M]
b) Explain about the use case diagram for the train traffic management system. [7M]
(OR)
4. a) List and explain nine diagrams in UML with examples. [7M]
b) Describe message passing in Train Traffic Management System. [7M]

UNIT-III

5. a) What are terms and concepts of class diagrams? Explain. [7M]
b) Explain about blackboard objects in Cryptanalysis. [7M]
(OR)
6. a) Describe basic and advanced properties of association relationship with examples. [7M]
b) Discuss about the architecture of the blackboard framework in Cryptanalysis. [7M]

UNIT-IV

7. a) Discuss about modeling flows of control by organization. [7M]
b) Describe entities of the Vacation Tracking System. [7M]
(OR)
8. a) What are terms and concepts of use cases? Explain with examples. [7M]
b) Explain about the user experience model of the Vacation Tracking System. [7M]

UNIT-V

9. Explain the following:
a) State chart diagrams. [7M]
b) The display mechanism of Weather monitoring station. [7M]
(OR)
10. Explain the following:
a) Deployment diagrams. [7M]
b) Use case scenarios of Weather monitoring station. [7M]

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UNIT-I

1.
 - a) Discuss about the complexity of the problem domain. [7M]
 - b) Draw and explain the component diagram for the satellite navigation system. [7M]

(OR)
2.
 - a) Describe the canonical form of a complex system. [7M]
 - b) Explain the white-box activity diagram for initialize operations in satellite-based navigation. [7M]

UNIT-II

3. a) What are common mechanisms in the UML? Explain. [7M]
b) Explain about train schedule planning in TTMS. [7M]
- (OR)
4. a) Describe software development life cycle in detail. [7M]
b) Draw and explain the deployment diagram for the Train Traffic management system. [7M]

UNIT-III

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|----|----|---|------|
| 5. | a) | Explain common modeling techniques of Packages in detail. | [7M] |
| | b) | Describe generalizing the knowledge sources in Cryptanalysis. | [7M] |
| | | (OR) | |
| 6. | a) | Discuss about classifiers, visibility and scope of advanced class diagrams. | [7M] |
| | b) | Explain about designing the blackboard objects in Cryptanalysis. | [7M] |

UNIT-IV

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|----|----|---|------|
| 7. | a) | Explain about modeling flows of control by time ordering. | [7M] |
| | b) | Describe the deployment view of the Vacation Tracking System. | [7M] |
| | | (OR) | |
| 8. | a) | Explain about modeling a Workflow in activity diagrams. | [7M] |
| | b) | Draw object and communication diagrams describing a request validation collaboration of the Vacation Tracking System. | [7M] |

UNIT-V

9. Explain the following:
- a) Events and signals. [7M]
 - b) The frame mechanism of Weather monitoring station. [7M]
- (OR)
10. Explain the following:
- a) Processes and threads. [7M]
 - b) Defining the boundaries of the problem of Weather monitoring station. [7M]

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UNIT-I

1. a) Distinguish between algorithmic decomposition and object-oriented decomposition. [7M]
- b) Discuss about allocating nonfunctional requirements and Specifying interfaces in satellite-based navigation. [7M]

(OR)

2. a) Describe the structure of personal computer and social institutions. [7M]
- b) Explain the black-box activity diagram for initialize operations in satellite-based navigation. [7M]

UNIT-II

3. a) Define modeling. What are principles of modeling? Explain. [7M]
- b) Explain about defining the TTMS architecture. [7M]

(OR)

4. a) What are basic relationships used in the UML? Explain. [7M]
- b) Discuss about requirements for the train traffic management system. [7M]

UNIT-III

5. a) How to model a logical database schema? Explain with example. [7M]
- b) Explain about dependency and affirmation classes in Cryptanalysis. [7M]

(OR)

6. a) Describe terms and concepts of interfaces, types and roles. [7M]
- b) Discuss about integrating the blackboard framework in Cryptanalysis. [7M]

UNIT-IV

7. a) Explain about modeling an operation in activity diagrams. [7M]
- b) Give a summary of the written specification for the Manage Time use case of the Vacation Tracking System. [7M]

(OR)

8. a) Discuss about terms and concepts of use case diagrams. [7M]
- b) Explain in detail about the logical view of the Vacation Tracking System. [7M]

UNIT-V

9. Explain the following:
 - a) Common modeling techniques of state machines. [7M]
 - b) Weather monitoring system use cases and components. [7M]

(OR)

10. Explain the following:
 - a) Common modeling techniques of deployment diagrams. [7M]
 - b) The user interface mechanism of Weather monitoring system. [7M]