

Code No: R1631053

R16**SET - 1**

III B. Tech I Semester Regular Examinations, October/November - 2018
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**
- ~~~~~

PART -A

- | | | |
|-------|--|------|
| 1. a) | Write the significance of model building. | [2M] |
| b) | Define Conceptual Clustering. | [2M] |
| c) | Write the importance of notational things in UML. | [2M] |
| d) | Write the purpose of Fork node in UML. | [3M] |
| e) | Write the different parts of a state in a state diagram. | [2M] |
| f) | How do you model an API? | [3M] |

PART -B

- | | | |
|-------|--|------|
| 2. a) | Elaborate the importance of canonical form of a complex system. | [7M] |
| b) | How does one properly identify the classes and objects that are relevant to a particular application? Explain. | [7M] |
| 3. a) | Discuss how the quality of an abstraction can be measured. | [7M] |
| b) | Explain the procedure to identify key abstractions. | [7M] |
| 4. a) | Write the four kinds of relationships available in the UML. | [7M] |
| b) | Draw the class diagram for stock maintenance system. | [7M] |
| 5. a) | Write the features that distinguish sequence diagrams from collaboration diagrams. | [7M] |
| b) | Draw the use case diagram for online railway reservation system. | [7M] |
| 6. a) | Write the procedure to handle events in active and passive objects. | [7M] |
| b) | Draw the state chart diagram for university management system. | [7M] |
| 7. a) | Discuss about the structural aspects of collaboration. | [7M] |
| b) | Draw the component diagram for Aadhar management system. | [7M] |

Code No: R1631053

R16**SET - 2**

III B. Tech I Semester Regular Examinations, October/November - 2018
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**
- ~~~~~

PART - A

- | | | | |
|----|----|--|------|
| 1. | a) | Write any two fundamental limiting factors of human cognition. | [2M] |
| | b) | Write the importance of polymorphism in OOAD. | [2M] |
| | c) | Define association in UML. | [2M] |
| | d) | Write the significance of Join node in UML. | [3M] |
| | e) | Define thread in behavioral modeling. | [3M] |
| | f) | How do you model tables and files. | [2M] |

PART - B

- | | | | |
|----|----|--|------|
| 2. | a) | What are the limitations of the human capacity for dealing with complexity? Explain. | [7M] |
| | b) | Why software is inherently complex? Explain. | [7M] |
| 3. | a) | Discuss about the three approaches to classification in detail. | [7M] |
| | b) | Write the reason behind the difficulty of classification. | [7M] |
| 4. | a) | Write the procedure to model an object structure. | [7M] |
| | b) | Draw class diagram for an online railway reservation system. | [7M] |
| 5. | a) | Write the features that distinguish collaboration diagrams from sequence diagrams. | [7M] |
| | b) | Draw the use case diagram for library management system. | [7M] |
| 6. | a) | How do you model the lifetime of an object? Explain. | [7M] |
| | b) | Draw the state chart diagram for airline management system. | [7M] |
| 7. | a) | Discuss about the behavioral aspects of collaboration. | [7M] |
| | b) | Draw the component diagram for bank management system. | [7M] |

Code No: R1631053

R16**SET - 3**

III B. Tech I Semester Regular Examinations, October/November - 2018
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**
- ~~~~~

PART -A

- | | | | |
|----|----|---|------|
| 1. | a) | Write the importance of typing and persistence in OOAD. | [2M] |
| | b) | Write the two kinds of object relationships in OOAD. | [2M] |
| | c) | Define realization in UML. | [2M] |
| | d) | Write the purpose of Swim lanes in UML. | [3M] |
| | e) | Define process in behavioral modeling. | [3M] |
| | f) | How do you model processors and devices. | [2M] |

PART -B

- | | | | |
|----|----|--|-------|
| 2. | | Explain the five attributes of a complex system in detail. | [14M] |
| 3. | a) | Aggregation is a specialized kind of association. Justify the validity of the statement. | [7M] |
| | b) | Discuss about identification of key mechanisms in classification. | [7M] |
| 4. | a) | What are the four things that a well-structured class diagram should have? Explain. | [7M] |
| | b) | Draw the class diagram for library management system. | [7M] |
| 5. | a) | Forward engineering is possible for both sequence and collaboration diagrams. Justify the validity of the statement. | [7M] |
| | b) | Draw the activity diagram for online quiz management system. | [7M] |
| 6. | a) | How do you model interprocess communication? Explain. | [7M] |
| | b) | Draw the state chart diagram for voter card management system. | [7M] |
| 7. | a) | Write the five standard stereotypes that can be applied to components in UML. | [7M] |
| | b) | Draw the deployment diagram for online shopping management system. | [7M] |

Code No: R1631053

R16**SET - 4**

III B. Tech I Semester Regular Examinations, October/November - 2018
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**
- ~~~~~

PART -A

1. a) Write the importance of modularity and concurrency in OOAD. [2M]
b) Write the three common kinds of multiplicity across an association. [3M]
c) Define generalization in UML. [2M]
d) Write the characteristics of a well-structured interaction diagram. [2M]
e) Write the different parts of a state in a state diagram. [3M]
f) How do you model a source code? [2M]

PART -B

2. a) Discuss about the key hierarchies of complex systems in detail. [7M]
b) What are the management implications of using object-oriented design? Explain. [4 M]
c) Write the importance of model building. [3 M]
3. a) Classification is fundamentally a problem of clustering. Justify the validity of the statement. [7M]
b) Explain the significance of classical categorization and conceptual clustering. [7M]
4. a) How do you model a logical database schema? Explain. [7M]
b) Draw the class diagram for course registration system. [7M]
5. a) How do you use interaction diagrams when you model dynamic aspects of a system? Explain with an example. [7M]
b) Draw collaboration and sequence diagram for simple telephone call. [7M]
6. a) Write the procedure to build thread-safe abstractions. [7M]
b) Draw the state chart diagram for railway management system. [7M]
7. a) Discuss about mapping between logical and physical models. [7M]
b) Draw the deployment diagram for mobile network management system. [7M]
