SIDDHARTH GROUP OF INSTITUTIONS :: PUTTUR
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QUESTION BANK (DESCRIPTIVE)

Subject with Code : OR(13A03701) **Course & Branch**: MCA

Year & Sem: II-MCA & II-Sem **Regulation:** R13

UNIT –I

1. a) Explain the importance of modeling. [5M]

   b) Describe the principles of modeling. [5M]

2. a) Explain object oriented modeling. [5M]

   b) Describe the conceptual model of the UML? [5M]

3. a) Describe the software development life cycle. [5M]

   b) Explain the structural modeling. [5M]

4. a) Describe the behavioral things in the model. [5M]

   b) Explain the grouping things . [5M]

5. a) Explain the relationships in the UML. [5M]

   b) Briefly describe the diagrams in the UML? [5M]

6. a) Describe UML based applications? [6M]

   b) Explain an overview of UML. [4M]

7. a) What are rules of the unified modeling language? [4M]

   b) Explain the Modeling system architecture of UML? [6M]

8. a) Explain Annotation things and its importance? [6M]

   b) Explain grouping things and their importance? [4M]

9. Describe the importance and principles of software development life cycle with suitable example? [10M]

10. a) Explain the building blocks of the UML [5M]

    b) Explain the importance of relationships in the UML [5M]

UNIT-II

1. a) Describe the terms and concepts of classes. [5M]

   b) Explain responsibilities of classes. [5M]

2. a) What is stereotypes in the classes and explain with suitable examples ? [5M]

   b) Explain other features of classes. [5M]

3. a) Describe the common modeling techniques for classes? [4M]

   b) Explain Modeling the Distribution of Responsibilities in a System. [6M]

4. a) Explain Modeling of Non software Things [6M]

   b) Describe Terms and Concepts of relationships. [4M]

5. a) Describe the Common Modeling Techniques for relationships? [5M]

   b) Explain Modeling Single Inheritance. [5M]

6. a) Describe the Modeling Structural Relationships. [6M]

   b) Explain Stereotypes, tagged values, and constraints. [4M]

7. a) What is Modeling in new semantics? [5M]

   b) Explain the Modeling New Building Blocks. [5M]

8. a) Briefly explain Advanced structural modeling? [6M]

   b) Explain the importance of advanced classes? [4M]

9. a) Explain advanced relationships with examples. [6M]

   b) Describe the importance of interfaces and their roles? [4M]

10. a) Lists the Modeling of New Properties with suitable examples? [4M]

    b) Explain the importance of packages in the UML with examples. [6M]

UNIT-III

1. a) Explain Class and object diagrams with suitable examples. [7M]

   b) Describe the importance of class modeling techniques. [3M]

2. a) Explain the common properties of classes. [4M]

b) Describe the common uses of objects? [6M]

3. a) Explain the common properties of objects. [5M]

b) Describe the common uses of classes. [5M]

4. a) Explain the Modeling Simple Collaborations in classes. [6M]

b) Describe the Modeling a Logical Database Schema. [4M]

5. a) Explain Forward and Reverse Engineering? [5M]

b) Describe the Abstract and Concrete Classes and Operations? [5M]

6. a) Explain Multiplicity with suitable examples. [5M]

b) What are the basic properties of dependencies? [5M]

7. a) Explain Multiple Inheritance? [5M]

b) Explain the basic properties of generalizations? [5M]

8. a) Explain the basic properties of associations? [5M]

b) Describe Modeling static and dynamic types of interfaces? [5M]

9. a) Explain the Association Classes. [4M]

b) Describe the Realization in classes with suitable examples? [6M]

10. a) Describe the Modeling Webs of Relationships. [5M]

b) Explain the Interfaces, types, roles, and realization. [5M]

UNIT-IV

1. a) Explain Roles, links, messages, actions, and sequences of interactions. [10M]

2. a) Describe Modeling flows of control. [5M]

b) List how to Creating well structured algorithms? [5M]

3. a) Explain Links and Associations of interactions with suitable examples. [5M]

b) Explain Procedural Sequence and Flat Sequence. [5M]

4. a) Explain the Representation of interaction diagrams. [6M]

b) Describe the Modeling a Flow of Control in interaction diagrams. [4M]

5. a) What are the Modeling flows of control by time ordering? [5M]

   b) Explain Forward and reverse engineering in interaction diagrams. [5M]

6. a) Describe the common mechanisms for interaction diagrams? [6M]

   b) Explain the Modeling flows of control by organization. [5M]

7. a) Explain the terms and concepts of interaction diagrams. [5M]

   b) Describe the importance of interaction diagram? [5M]

8. Briefly describe basic behavioral modeling concepts and its importance in real time? [10M]

9. a) Describe the importance of interaction diagrams in project development. [5M]

   b) What are the rules and regulations for designing interaction diagram with example? [5M]

10. a) Explain sequence diagram and its importance. [4M]

    b) List out the common properties of sequence diagrams. [3M]

    c) Explain the collaboration diagram and its importance. [3M]

UNIT-V

1. a) Explain in details of Use cases, actors, include, and extend with suitable example? [7M]

   b) Explain the importance of Forking and Joining, Swimlanes. [3M]

2. a) Write a short notes on Modeling the behavior of an element? [4M]

   b) Explain the Realizing use cases with collaborations? [6M]

3. a) How can analysis the Actors and Use Cases in UML? [6M]

   b) Explain the terms and concepts of Use Case diagrams. [4M]

4. a) Describe the Use Cases and Flow of Events. [5M]

   b) Explain Use Cases and its Scenarios. [5M]

5. a) Explain Use Cases and Collaborations? [5M]

   b) Explain the importance of Organizing Use Cases. [5M]

6. a) Explain the Generalization, Include, and Extend in detail. [4M]

   b) Describe the Modeling the context of a system in Use Case diagram. [6M]

7. a) Discuss about Common Modeling Techniques in Use Cases? [5M]

b) Explain Modeling the requirements of a system? [5M]

8. a) Briefly explain Dependency, generalization, and association relationships ? [5M]

b) What are the importance of Forward and Reverse Engineering in Use Case diagrams? [5M]

9. a) Explain the rules of A well-structured use case diagram. [5M]

b) Explain the activity diagram common properties? [5M]

10. a) Describe the importance of activity diagram. [4M]

b) Explain Modeling a workflow and Modeling an operation in activity diagrams? [6M]

UNIT-VI

1. a) Briefly describe the terms and concepts of events? [5M]

b) Explain Modeling a family of signals. [5M]

2. a) What is Call Events and explain Time and Change Events? [5M]

b) Describe Modeling exceptions? [5M]

3. a) Explain Handling events in active and passive objects. [6M]

b) What is States, transitions, and activities? [4M]

4. a) Explain the importance of Modeling the lifetime of an object. [6M]

b) What is Transitions and explain it clearly. [4M]

5. a) Explain the terms and concepts of state machines? [5M]

b) Explain the Advanced States and Transitions. [5M]

6. a) Explain the Active objects, processes, and threads. [5M]

b) List out Modeling multiple flows of control. [5M]

7. a) Explain Modeling interprocess communication? [6M]

b) Describe the Synchronization? [4M]

8. a) Briefly explain Modeling timing constraints? [6M]

b) How many types of Modeling objects that migrate? [4M]

9. a) How to Dealing with real time and distributed systems. [5M]

   b) Explain the terms and concepts of state chart diagrams? [5M]

10. Explain the common modeling techniques for state chart diagrams with suitable example. [10M]

UNIT-VII

1. a) What are the Components, interfaces, and realization? [5M]

   b) Explain the Modeling executables and libraries. [5M]

2. a) Describe Modeling tables, files, and documents? [4M]

   b) Describe Modeling source code? [6M]

3. a) Briefly explain Modeling an API? [5M]

   b) Explain Mapping between logical and physical models. [5M]

4. a) Explain the terms and concepts of component diagrams? [5M]

   b) Explain the importance of deployment diagram. [5M]

5. a) Explain terms and concepts of deployment diagram. [4M]

   b) Explain the importance of component diagrams. [6M]

6. a) Explain the Components and Classes. [6M]

   b) Describe the Binary Replaceability. [4M]

7. a) Discuss about Simple and Extended Components? [5M]

   b) Explain the Components and Interfaces? [5M]

8. a) Briefly explain Standard Elements? [5M]

   b) What are the Nodes and connections in deployment? [5M]

9. a) Explain Modeling processors and devices in deployment. [5M]

   b) Explain the terms and concepts of node? [5M]

10. a) Explain the Nodes and Components. [4M]

    b) Briefly describe Common Modeling Techniques? [6M]

UNIT-VIII

1. a) List out the Patterns and frameworks? [5M]

   b) Explain Modeling design patterns. [5M]

2. a) Write a short notes on Modeling architectural patterns? [5M]

   b) Explain the Making patterns approachable? [5M]

3. a) How can analysis the Mechanisms and Frameworks? [4M]

   b) Explain Patterns and Architecture. [6M]

4. a) Describe the Frameworks and its importance? [5M]

   b) Explain Modeling the Behavioral Aspect of a Design Pattern. [5M]

5. a) Describe Modeling the Structural Aspect of a Design Pattern? [5M]

   b) Explain the importance of artifact diagrams. [5M]

6. a) Explain the patterns importance in UML. [5M]

   b) Describe the patterns for library management. [5M]

7. a) Discuss about common modeling techniques? [4M]

   b) Explain the importance of software reengineering? [6M]

8. a) Briefly explain an artifacts and its principles? [6M]

   b) What are the software reengineering activities? [4M]

9. Draw class diagram, sequence diagram, activity diagram, component diagram and collaboration diagram for library management system? [10M]

10. Explain the unified library application in detail. [10M]

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