**SRM University, Kattankulathur, Chennai 603203**

**Information Technology**

**IT1006 OOAD CT2 Sample Questions**

**Part-B [4 marks]**

1. What is n-ary association? Give examples with neat sketches.
2. Draw UML diagram for aggregation and Composition and explain their differences.
3. Define the terms a) State b) transition. Illustrate UML state with an example and notations followed.
4. Explain Object Oriented Design Axioms and list the Corollaries.
5. How do design axioms help to avoid design pitfalls?
6. What is cohesion? Explain different types of cohesion.
7. Explain corollary-3 and its benefits.
8. What are use cases? Explain with examples “Include” and “Extend” use case relationships.
9. Draw Sequence diagram for “Invalid PIN” use case. Tabulate the merits and demerits of Sequence and collaboration diagrams.
10. Explain the purpose of UML activity diagram and briefly explain i) Join iii) Fork iv) Swim lanes.
11. Define the two design axioms and discuss their importance in the OO Design process.
12. What is coupling? Briefly explain different types of coupling.
13. List the visibility types and its symbols. Explain each type and its purpose.
14. Explain the steps in OO Design process with a neat sketch.
15. Define a) Include b) Extend Use Case relationship
16. Define the terms a) Life Line b) actor c) Association class d) multiplicity

**Part-C [13 marks]**

1. Define the terms i) Aggregation ii) Generalization iii) Composition and iv) Qualifier and give suitable examples with clear sketches indicating UML notations used.
2. Imagine that you are a shop keeper and you want to expand your business and get worldwide customers via online. Analyze and draw Use Case and Class Diagram with necessary functionalities clearly indicating different notations for the given application.
3. Explain in detail the Object Oriented Design Process in Unified Approach. Explain various activities involved with a diagram.
4. Mr. John is the owner of a movie theatre. He is very much concerned in selling the a good number of tickets and providing a good service and earn profit. So John tries to automate manual theatre operations by a portal. Try to sketch the use case and class diagrams for the afore said scenario.
5. A book shop owner want to automate his operations and introduces a portal to sell his books online. Explain the scenario by drawing UML activity diagram to show various work flows

and draw a class diagram showing important attributes, methods for each class. Show various relationships between classes showing the navigability, multiplicity , generalization, and aggregation relationships.

1. Define Design Axioms and Corollaries. Explain in detail each corollary, its purpose and advantages.
2. What are implementation diagrams? Explain in detail with an example and neat sketch UML

Deployment diagram.

1. What are package diagrams? Explain with examples UML Package and UML Component diagram.