**Multiple Choice Questions (MCQs) – Total: 4 Marks**

1. **Which of the following diagrams shows the dynamic behavior of a system?**
   * A) Class Diagram
   * B) Use-case Diagram
   * C) Sequence Diagram
   * D) Component Diagram
2. **In which phase of software engineering is the SRS (Software Requirements Specification) document prepared?**
   * A) Design
   * B) Implementation
   * C) Requirements Specification
   * D) Maintenance
3. **Which software development model emphasizes iterative development and incremental delivery?**
   * A) Waterfall Model
   * B) Agile Model
   * C) Spiral Model
   * D) V-Model
4. **What is the primary purpose of a use-case diagram?**
   * A) To define system components
   * B) To depict interactions between actors and the system
   * C) To describe database design
   * D) To represent software architecture
5. **Which element is NOT part of a UML class diagram?**
   * A) Attributes
   * B) Associations
   * C) Messages
   * D) Operations
6. **Which process is concerned with the management of people, resources, and schedules?**
   * A) Software Modeling
   * B) Software Project Management
   * C) Software Testing
   * D) Requirements Elicitation
7. **What is the relationship between two classes where one class makes use of another class without owning it?**
   * A) Aggregation
   * B) Composition
   * C) Dependency
   * D) Inheritance
8. **Which UML diagram models the life cycle of an object?**
   * A) Class Diagram
   * B) State Diagram
   * C) Activity Diagram
   * D) Sequence Diagram

**Short Answer Questions – Total: 5 Marks**

1. **Explain the significance of an SRS document and describe how it benefits both developers and clients.**  
   **Answer:**
2. **Discuss the differences between Agile and Waterfall software development models, highlighting when each model is most suitable.**  
   **Answer:**

**Diagram Questions – Total: 16 Marks**

1. **Draw a use-case diagram for a simple Library Management System, showcasing at least three actors and their interactions with the system.**  
   **Instructions:** Your diagram should include the following:
   * At least three actors (e.g., Librarian, Member, and Guest)
   * At least four use-cases (e.g., Borrow Book, Return Book, Search Catalog, Renew Membership)
   * Proper associations between actors and use-cases.
2. **Draw a class diagram to model an Online Shopping System.**  
   **Instructions:** Your diagram should include:
   * At least five classes (e.g., Customer, ShoppingCart, Product, Order, Payment)
   * Appropriate attributes and methods for each class
   * Relationships between the classes, such as associations, aggregation, or inheritance.
   * Label multiplicities where necessary.