Module 4:

1. Explain the following:
   i) BCNF ii) 4NF iii) 5NF iv) Multivalued dependency.
2. Explain Closure Attribute. Write an algorithm to find closure of Attribute.
3. Write an algorithm to find a minimal cover for set of FD.
4. Explain Inference Rules for Functional Dependencies.
5. Explain Equivalence of Sets of Functional Dependencies and its problems.
6. Explain with an algorithm for Nonadditive (Lossless) Join Property of Decomposition and its problem.
7. Explain Dependency Preserving and Nonadditive (Lossless) Join Decomposition into 3NF Schemas.

Module 5:

1. Why we need concurrency control and what are the problem occurs due to interleaving execution.
2. Why recovery is needed. What are the problems occurs due to system failure.
3. Explain with neat diagram for stateTransaction and System Concepts.
4. Explain different types of Desirable Properties of Transactions.
5. What are the anomalies occurs due to interleave execution. Explain them with Example.
6. Explain the following terms with suitable example:

   i) UNDO and REDO Operation and recovery technique. ii)Time-Stamp ordering iii) Two phase locking (2PL).
7. Explain Characterizing Schedules based on Serializability.
8. What is Deadlock and Deadlock detection and resolution.