1 Attempt any three
   a  What is Data independence? Explain using three levels of Database Architecture.
   b  Draw an ERD for Library Information system.
   c  Discuss advantages of DBMS over file system and also explain characteristics of it.
   d  Explain projection in Relational Algebra.

2 Attempt any three
   a  Explain Transitive dependency using 3NF. And convert a database into 3NF.
   b  DISCUSS READ ONLY VIEWS with example.
   c  Explain conversion functions in SQL.
   d  What is Join? Explain INNER JOIN with example.
3  a  What is primary key, Foreign key and UNIQUE? Explain.  
   b  Explain ALTER TABLE statement in SQL.

4  Attempt any Three
   a  What is DEADLOCK? Explain deadlock prevention Techniques.
   b  What is serializability? Explain conflict serializability.
   c  Explain 2PL protocol.
   d  What is Recovery? Explain shadow paging.

5  Attempt any Three
   a  What is user defined exception? Explain.
   b  Write a PL/SQL program to display customer names and total no. of vowels in that name from customer table.

   Customer [cnum, cname, city, rating]

   c  Write a PL/SQL program to check weather given no. is prime or not.
   d  Explain parameterized cursor.

6  a  Explain block structure of PL/SQL program.
   b  Explain iterative controls.