DBE Question bank for CIE 2

1. List and explain the types of Join in SQL.
2. Why is the Domain Constraint called as elementary Database constraint?
3. List and explain aggregate functions of SQL with appropriate examples.
4. List and explain the variants of Two Phase Lock Protocol
5. When does a collision occur in hashing? Illustrate various collision resolution techniques.
6. List and explain in brief the ways of Organization of Records in Files.
7. Define the terms Dense Index and Sparse Index. Differentiate between them on basis of the Evaluation Criteria for indices
8. What is transaction? Explain its ACID properties of transaction
9. Draw and explain the Transaction State Diagram
10. State and explain various classes of failure in database system.
11. Explain Shadow paging in detail.
12. Explain log-based recovery technique.
13. Explain with appropriate example the following terms
    a. Recoverable Schedules
    b. Cascadeless Schedules
14. Consider the following Database design

    Customer (cid, custname, custstreet, custcity)

    Account (accno, branchname, balance)

    Loan (loanno, branchname, amount)

    Borrower (cid, loanno)

    Branch (branchname, branchcity, asset)

    Depositor (cid, accno)

    Solve the following queries in SQL

    a. Display the name of customers who have both account and loan at the bank.

    b. Update amount of loan to 10000 where loan number is "L-101".

    c. Change the column name custcity to ccity.

    d. Find all customers who an account but no loan at bank.

15. The following relations keep track of Library Management system.

    Book_info(bookid, bname, bauthor, price, edition, publication, pur_date,)

    Student(lib_car_num, stud_name, class, branch, roll_no)

Issue_table(issue_date, sub_date, bookid, lib_car_num, due)

Write the following SQL queries:

      a. Find the details of the books issued to the library card number 1.

      b. Give all the information about student and the book issued with ascending order of

      library card number

      c. Find the author, edition, price of book.

      d. Find the names of the students with dues on the book issue.