

SQL Topics and Questions for DBMS Exam

This document contains SQL-related questions extracted from the provided content, additional related questions, and a list of important topics to focus on for the exam.

Topics to Learn for the Exam:

1. Basic SQL Queries: SELECT, INSERT, UPDATE, DELETE.
2. Aggregate Functions: COUNT, SUM, AVG, MAX, MIN.
3. Joins: Inner Join, Left Join, Right Join, Full Outer Join.
4. Subqueries and Nested Queries.
5. Group By and Having Clauses.
6. Keys and Constraints: Primary Key, Foreign Key, Unique, Check.
7. Relational Algebra to SQL Translation.
8. Creating and Modifying Tables with DDL (CREATE, ALTER, DROP).
9. Indexing and Optimization Techniques.
10. Transactions and ACID Properties.

SQL Questions:

1. Write a query to list all students in the CSTE department.
2. Write a query to count the number of books borrowed by each student.
3. Write a query to find customers who live on the same street as 'Smith'.
4. Write a query to assign grades to students based on their scores.
5. Write a query to find the total quantity sold for an item with item_id = 7.
6. Write a query to find all branches with customers living in 'Harrison'.
7. Write a query to delete the record of a student with student_id = 20.
8. Write a query to display the details of all pending timecards.
9. Write a query to list the most expensive item in a store database.

10. Write a query to add a new accident record to the insurance database.

Additional Related Questions:

1. What is the difference between INNER JOIN and OUTER JOIN? Provide examples.
2. Write SQL queries to demonstrate the use of GROUP BY and HAVING clauses.
3. Explain how indexing improves query performance and write a query to create an index.
4. Write a query to calculate the total sales for each customer using GROUP BY.
5. Write a nested query to find students who scored above the average in a class.
6. Explain the ACID properties of transactions with examples.
7. Write a query to update the manager of an employee in an employee table.
8. Write a query to find all employees who have not submitted their timecards.
9. Write a query to find duplicate records in a table.
10. Write a query to calculate the total balance of all customers in a bank.