Q1 What is joins? How to optimize joins in mySQL?

Ans. • A JOIN clause is used to combine rows from two or more tables, based on a related column between them

• It is used to retrieve data from multiple tables

• It is performed when you need to fetch records from two or more tables

→ optimizing joins in mySQL:-

1 Use Explicit JOINS

2 Analyze your queries - use EXPLAIN

3. Use EXISTS instead of IN

4. Avoid Select *

5. Use LIMIT and OFFSET judiciously

Q2 Difference between inner join and outer join.

Ans	Inner Join	Outer join
•	It returns the combined tuple between two or more tables.	• It returns the combined tuple from a specified table even if the join condition fails.
•	Used clause INNER JOIN and JOIN.	• Used clause LEFT OUTER JOIN, RIGHT outer Join, FULL OUTER JOIN, etc.
•	When any attributes are not common then it will return nothing.	• It does not depend upon the common attributes. If the attribute is blank then there is already placed NULL.

• JOIN and INNER JOIN both clauses ~~the same~~. work the same.	• FULL OUTER JOIN and FULL JOIN both the clauses work the same.

Q3. How many types of JOIN are supported by mysql? Which are they? Explain.

Ans. The types of JOIN supported in mysql :-

1. INNER JOIN

• Inner join joins two table when there is atleast one match between two tables.

• Innea join works as simple joins.

→ Syntax :-

• Select column_list from ~~Table~~ Table1 INNER JOIN Table2 on CJOIN_condition)

2. Outer Join

i) Left outer join :

• The dominant table of the outer join appears to the left of the keyword 'outer join'.

ii) Right outer join :

• The dominant table of the outer join appears to the right of the keyword 'outer join'.

iii) Full outer join :

• In full outer join, both the tables acts as dominant tables alternatively.

• A full outer join returns all of the rows for which the join condition is true.

→ Syntax :-

• Select column_list from Table1 [LEFT | RIGHT | FULL] outer join Table2 ON CJOIN_ Condition)

Q4. What are advantages and disadvantages of database view?

Ans. Advantages:

1. Views doesn't store data in a physical location.
2. views can be used to hide some of the columns from the table.
3. Views can provide access restriction, since data insertion, update and deletion is not possible on the view.

→ Disadvantages:-

- When a table is dropped, associated view becomes irrelevant.
- Since views are created when a query requesting data from view is triggered, it's a bit slow
- when views are created for large tables, it occupy more memory.

Qs. What is use of sub-queries? Explain.

Ans. A subquery is embedded inside another query and acts as input or output for that query.

- Subqueries are also called inner queries and they can be used in various complex operations.
- Subqueries help in executing queries with dependency on the output of another query.
- Subqueries are enclosed in parentheses.

→ Employee table

empid	name	salary	department
100	Jacob A	20000	Sales
101	Jacob T	50000	IT
102	Riya S	30000	IT

→ Departments Table

deptid	department
1	IT
2	Accounts
3	support

→ SELECT * FROM Employee WHERE department = (SELECT department from DEPARTMENTS where deptid=1);

//output:

empid	name	salary	department
101	Tanmay	50000	IT
102	Riyas	30000	IT