

1. Difference between NULL and 0?

- **NULL** means **no value**, unknown, or missing data.
- **0** is a **valid numeric value**.
- $\text{NULL} \neq 0$
- NULL is not equal to anything, even NULL itself.

2. What is a default constraint?

A **DEFAULT constraint** automatically inserts a predefined value into a column **when the user does not provide any value**.

Example:

```
marks INTEGER DEFAULT 0
```

3. How does IS NULL work?

IS NULL is used to check whether a column contains a **NULL value**.

Example:

```
SELECT * FROM Students WHERE email IS NULL;
```

4. How do you update multiple rows?

Use UPDATE with a WHERE condition that matches more than one row.

Example:

```
UPDATE Students
```

```
SET city = 'Mumbai'
```

```
WHERE marks > 80;
```

5. Can we insert partial values?

Yes.

We can insert values into selected columns only.

Remaining columns take **NULL** or **DEFAULT** values.

Example:

```
INSERT INTO Students (id, name)
```

```
VALUES (5, 'Neha');
```

6. What happens if a NOT NULL field is left empty?

The query gives an **error**.

Example error:

```
ERROR: Column 'name' cannot be NULL
```

7. How do you rollback a deletion?

Use **ROLLBACK** (only works inside a transaction).

Example:

```
BEGIN;
```

```
DELETE FROM Students WHERE id = 3;
```

ROLLBACK; -- deletion is undone

8. Can we insert values into specific columns only?

Yes, by specifying column names.

Example:

```
INSERT INTO Students (id, name)
VALUES (10, 'Rohit');
```

9. How to insert values using SELECT?

Use INSERT INTO ... SELECT.

Example:

```
INSERT INTO BackupStudents
SELECT * FROM Students WHERE marks > 80;
```

10. What is ON DELETE CASCADE?

ON DELETE CASCADE is a **foreign key rule** that automatically deletes child table rows when the parent row is deleted.

Example:

Delete a student → their course records automatically deleted.

```
FOREIGN KEY (student_id)
REFERENCES Students(id)
ON DELETE CASCADE
```