**Q1.** Create a table students with columns: id (INT), name (VARCHAR, NOT NULL), and age (INT with default 18).

A screenshot of a computer code

AI-generated content may be incorrect.

**Q2.** Insert into students: (1, NULL, 20). What will happen?



**Q3.** Insert into students: (2, 'Ravi'). What will be stored in age?

A screenshot of a computer

AI-generated content may be incorrect.

**Q4.** Why will the following query fail?

INSERT INTO students (id) VALUES (3);



**Q5.** Modify the students table so that the age column default changes from 18 to 21.

A screenshot of a computer

AI-generated content may be incorrect.

**Q6.** Drop the NOT NULL constraint on the name column. Write the query.

A close-up of a computer code

AI-generated content may be incorrect.

**Q7.** Create a table department with columns: dept\_id (INT, PRIMARY KEY), dept\_name (VARCHAR).

**Q8.** Insert (1,'IT') and (1,'HR'). What error will you get?-

A close-up of a computer code

AI-generated content may be incorrect.

**Q9.** Can a table have two PRIMARY KEYS? Demonstrate with a query.

A screenshot of a computer code

AI-generated content may be incorrect.



**Q10.** Create a table enrollment with composite primary key (student\_id, course\_id).

A screenshot of a computer code

AI-generated content may be incorrect.

**Q11.** Try inserting (101, 'DBMS') twice into enrollment. What happens?

A screenshot of a computer code

AI-generated content may be incorrect.

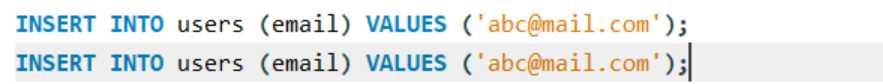


**Q12.** Create a table users with columns: user\_id (INT, PRIMARY KEY, AUTO\_INCREMENT), email (VARCHAR, UNIQUE).

A close up of text

AI-generated content may be incorrect.

**Q13.** Insert ('abc@mail.com') twice. What error occurs?





**Q14.** Does the following query work? Why?

INSERT INTO users (email) VALUES (NULL);

INSERT INTO users (email) VALUES (NULL);



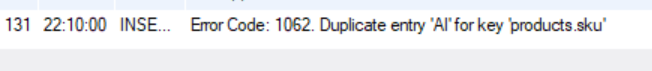
**Q15.** Create a table products with UNIQUE constraint on (sku, region).

A close-up of a text

AI-generated content may be incorrect.

**Q16.** Insert (sku='A1', region='US') twice. What error?





**Q17.** Create a table department with primary key dept\_id. Then create employee table with foreign key dept\_id referencing department.

A computer code with text

AI-generated content may be incorrect.

**Q18.** Insert into employee (emp\_id=1, name='Asha', dept\_id=99) when no such dept exists. What error?

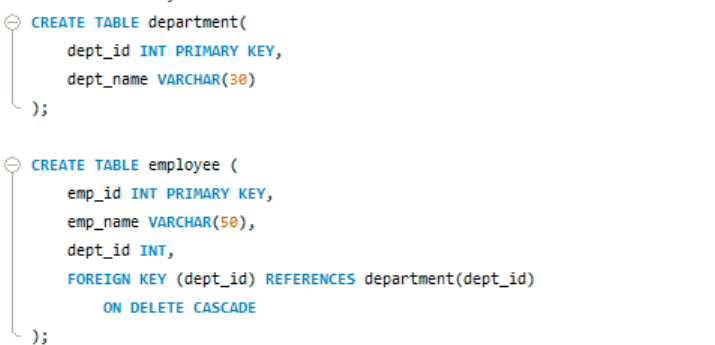




**Q19.**Delete dept\_id=1 from department when employees exist. What error without ON DELETE CASCADE?

A screenshot of a computer code

AI-generated content may be incorrect.**Q20.** Recreate employee table with ON DELETE CASCADE. What happens if you delete department 1?



**Q21.** Use ON DELETE SET NULL in the foreign key. What happens when parent is deleted?

**ON DELETE SET NULL** means that when a parent row is deleted, the foreign key in the child table is automatically set to NULL.  
This keeps the child record but removes its link to the parent.  
The foreign key column must allow NULL values, or the operation will fail.  
It's useful for preserving data while breaking the relationship cleanly.

**Q22.** Write a query to drop a foreign key constraint fk\_emp\_dept.



**Q23.** Add a new foreign key constraint fk\_manager in employee table referencing itself (manager\_id).

A close-up of a computer screen

AI-generated content may be incorrect.

**Q24.** Create table accounts with balance >= 0 using CHECK.

A screenshot of a computer code

AI-generated content may be incorrect.

**Q25.** Insert (id=1, balance=-100). What happens?

A screenshot of a computer code

AI-generated content may be incorrect.

**Q26.** Modify the constraint so that balance must be between 100 and 1,000,000.

A close-up of a number

AI-generated content may be incorrect.

**Q27.** Try to insert (id=2, balance=50). What error do you get?



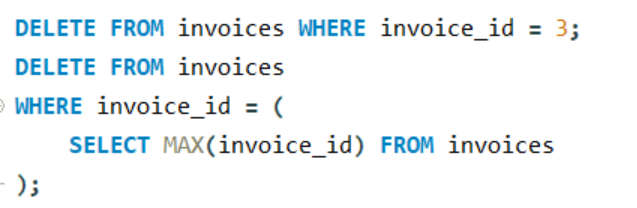
**Q28.** Create table invoices with invoice\_id AUTO\_INCREMENT PRIMARY KEY. Insert 3 rows. What will be the IDs?

A screenshot of a computer

AI-generated content may be incorrect.

**Q29.** Delete last row. Insert again. Will AUTO\_INCREMENT reuse the deleted number?

A screenshot of a computer

AI-generated content may be incorrect.

**Q30.** Write queries to:

1. Add a UNIQUE constraint on phone column in users.  
   A close up of words

   AI-generated content may be incorrect.
2. Drop the UNIQUE constraint from users.

A screenshot of a computer

AI-generated content may be incorrect.

**Q31.** Create a table library with a composite primary key (book\_id, branch\_id) and a UNIQUE constraint on (isbn, branch\_id).

**Q32.** Insert (book\_id=1, branch\_id=101, isbn='A123') twice. What error occurs?

**Q33.** Insert (book\_id=1, branch\_id=102, isbn='A123'). Will it work? Why?

A screenshot of a computer code

AI-generated content may be incorrect.



**Q34.** Can you have a table with **PRIMARY KEY** and **multiple UNIQUE constraints**? Write a query.

A screenshot of a computer

AI-generated content may be incorrect.

**Q35.** Try to create a table with both PRIMARY KEY(id) and UNIQUE(id). What happens?

A close up of text

AI-generated content may be incorrect.

09:15:26 CREATE TABLE tab{ id int PRIMARY KEY, id int UNIQUE ) **Error Code: 1064. You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near '{ id int PRIMARY KEY, id int UNIQUE )' at line 1** 0.000 sec

**Q36.** Create table exam\_results with composite primary key (student\_id, exam\_id) and CHECK constraint marks BETWEEN 0 AND 100 .

A computer code with blue and white text

AI-generated content may be incorrect.

**Q37.** Create table orders referencing customers with ON UPDATE CASCADE. Update customer\_id in parent – what happens in child?

A computer screen shot of a computer code

AI-generated content may be incorrect.



**Q38.** Try to use ON DELETE SET DEFAULT in a foreign key. What happens in MySQL?

**Q39.** Create a self-referencing foreign key categories(parent\_id) referencing categories(id). Insert parent and child categories.

A screen shot of a computer code

AI-generated content may be incorrect.

**Q40.** What happens if you delete a parent row in categories without ON DELETE CASCADE?



14:32:57 DELETE FROM categories WHERE id = 1 **Error Code: 1451. Cannot delete or update a parent row: a foreign key constraint fails (`constraints`.`categories`, CONSTRAINT `categories\_ibfk\_1` FOREIGN KEY (`parent\_id`) REFERENCES `categories` (`id`))** 0.031 sec

**Q41.** Write a query to temporarily disable foreign key checks and insert invalid data.

**Disable foreign key   
SET FOREIGN\_KEY\_CHECKS = 0;**

**Q42.** Write a query to re-enable foreign key checks.

**Re-enable foreign key `  
SET FOREIGN\_KEY\_CHECKS = 1;**

**Q43.** Explain with a query why indexes are automatically created when foreign keys are added.

**Q44.** Create a table employees with CHECK that salary > 20000.

A screenshot of a computer code

AI-generated content may be incorrect.

**Q45.** Insert (id=1, salary=15000). What error code will you get?



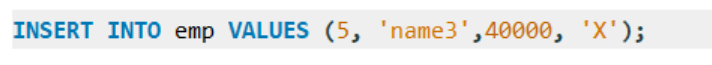


**Q46.** Add a CHECK constraint on gender column so only 'M' or 'F' is allowed.

A close-up of a computer code

AI-generated content may be incorrect.

**Q47.** Try inserting gender='X'. What happens?





**Q48.** Add a foreign key constraint on employee.dept\_id referencing department.dept\_id.

A close-up of a white background

AI-generated content may be incorrect.

**Q49.** Drop a primary key constraint from table library. What query do you use?

A close up of a name

AI-generated content may be incorrect.

**Q50.** Rename a foreign key constraint fk\_emp\_dept to fk\_employee\_department.