Name of the Bundle	Proficient Bundle V1(2025)	Subject	Interview Skills in Programming V1
Topic	Data Constraints	Last updated on	08 August 2025

- 1. Which SQL feature controls what kind of data can be stored in a table?
 - a. Constraints
 - b. Variables
 - c. Functions
 - d. Procedures

Answer: a. Constraints

Explanation: Constraints are rules applied to table columns to ensure accuracy, consistency, and data integrity. They help prevent invalid or unwanted data entry.

- 2. What does a NULL value represent in SQL?
 - a. No value
 - b. Zero
 - c. Space
 - d. Error

Answer: a. No value

Explanation: A NULL means the field is empty and has no value; it is different from zero or spaces.

- 3. Which integrity rule ensures no duplicate rows in a table?
 - a. Domain Integrity
 - b. Entity Integrity
 - c. Referential Integrity
 - d. User-Defined Integrity

Answer: b. Entity Integrity

Explanation: Entity integrity ensures that every row in a table is unique, often using a primary key.

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- 4. Which integrity type controls the type, format, or range of column values?
 - a. Domain Integrity
 - b. Referential Integrity
 - c. Entity Integrity
 - d. User Integrity

Answer: a. Domain Integrity

Explanation: Domain integrity validates that values in a column meet defined type, format, or range rules.

- 5. Which integrity type prevents deleting rows used by other records?
 - a. Entity Integrity
 - b. Domain Integrity
 - c. Referential Integrity
 - d. Custom Integrity

Answer: c. Referential Integrity

Explanation: Referential integrity maintains links between tables, preventing deletion that breaks relationships.

- 6. Which constraint uniquely identifies each row and cannot be NULL?
 - a. FOREIGN KEY
 - b. UNIQUE
 - c. CHECK
 - d. PRIMARY KEY

Answer: d. PRIMARY KEY

Explanation: A primary key uniquely identifies each record and automatically enforces NOT NULL.

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- 7. What is used to link a column in one table to a primary key in another table?
 - a. FOREIGN KEY
 - b. PRIMARY KEY
 - c. DEFAULT
 - d. AUTO_INCREMENT

Answer: a. FOREIGN KEY

Explanation: A foreign key enforces relationships by referencing a primary key in another table.

- 8. Which constraint ensures a column always has a value?
 - a. NOT NULL
 - b. UNIQUE
 - c. CHECK
 - d. DEFAULT

Answer: a. NOT NULL

Explanation: NOT NULL prevents a column from being left empty during insert or update.

- 9. Which constraint ensures all column values are different?
 - a. UNIQUE
 - b. PRIMARY KEY
 - c. CHECK
 - d. AUTO_INCREMENT

Answer: a. UNIQUE

Explanation: UNIQUE ensures no two rows have the same value in the specified column.

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10. Which constraint sets a value if none is provided during insert?

- a. UNIQUE
- b. DEFAULT
- c. CHECK
- d. NOT NULL

Answer: b. DEFAULT

Explanation: DEFAULT assigns a preset value when no explicit value is provided during insertion.

11. Which constraint limits inserted values based on a condition?

a. UNIQUE

b. CHECK

c. PRIMARY KEY

d. AUTO_INCREMENT

Answer: b. CHECK

Explanation: CHECK enforces that column values satisfy a specified condition.

12. Which constraint generates a unique number for each new row?

a. DEFAULT

b. CHECK

c. UNIQUE

d. AUTO_INCREMENT

Answer: d. AUTO_INCREMENT

Explanation: AUTO_INCREMENT automatically generates sequential numbers, usually for primary keys.

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- 13. Which SQL command adds a primary key to an existing table?
 - a. CREATE TABLE PRIMARY KEY
 - b. ADD CONSTRAINT PRIMARY KEY
 - c. ALTER TABLE ADD PRIMARY KEY
 - d. MODIFY PRIMARY KEY

Answer: c. ALTER TABLE ADD PRIMARY KEY

Explanation: The ALTER TABLE command adds a primary key to an existing table's column(s).

- 14. How many primary keys can a table have?
 - a. One
 - b. Two
 - c. Unlimited
 - d. Depends on rows

Answer: a. One

Explanation: A table can only have one primary key, but it can be composed of multiple columns.

- 15. What is a composite primary key?
 - a. Primary key with multiple columns
 - b. Primary key with NULL
 - c. Primary key with same name
 - d. Duplicate key

Answer: a. Primary key with multiple columns

Explanation: Composite primary keys use a combination of columns to uniquely identify each row.

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16. Which command removes a primary key from a table?

- a. DELETE PRIMARY KEY
- b. ALTER TABLE DROP PRIMARY KEY
- c. REMOVE PRIMARY KEY
- d. DROP INDEX

Answer: b. ALTER TABLE DROP PRIMARY KEY

Explanation: ALTER TABLE DROP PRIMARY KEY deletes the existing primary key from the table.

17. Why name a constraint in SQL?

- a. Easier to modify or drop
- b. Faster query execution
- c. Increases storage
- d. Prevents NULL

Answer: a. Easier to modify or drop

Explanation: Naming constraints makes them easier to reference, manage, and debug later.

18. What must be known before dropping a foreign key?

- a. Its column name
- b. Its table size
- c. Its constraint name
- d. Its data type

Answer: c. Its constraint name

Explanation: The foreign key's constraint name is required to drop it from the table.

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- 19. Which constraint allows NULL values but only one NULL per column?
 - a. PRIMARY KEY
 - b. UNIQUE
 - c. CHECK
 - d. NOT NULL

Answer: b. UNIQUE

Explanation: UNIQUE permits one NULL value but ensures all other entries are distinct.

- 20. How are UNIQUE constraints stored internally?
 - a. As indexes
 - b. As triggers
 - c. As tables
 - d. As keys

Answer: a. As indexes

Explanation: UNIQUE constraints are implemented as indexes, enabling quick uniqueness checks.

- 21. Which SQL statement drops a UNIQUE constraint?
 - a. DROP UNIQUE
 - b. DROP INDEX
 - c. ALTER TABLE DROP UNIQUE
 - d. REMOVE UNIQUE

Answer: b. DROP INDEX

Explanation: Since UNIQUE is an index, the DROP INDEX command removes it.

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22. Which command sets a column's default value in an existing table?

- a. ALTER TABLE ALTER column_name SET DEFAULT value
- b. CREATE DEFAULT value
- c. MODIFY DEFAULT value
- d. UPDATE DEFAULT value

Answer: a. ALTER TABLE ALTER column_name SET DEFAULT value

Explanation: This ALTER TABLE syntax adds or changes a default value for an existing column.

23. Which DEFAULT keyword sets the current date?

- a. GETDATE()
- b. CURRENT_DATE
- c. NOW()
- d. SYSDATE

Answer: b. CURRENT_DATE

Explanation: DEFAULT CURRENT_DATE sets the default column value to the current date.

24. Which constraint ensures a student's age must be at least 18?

- a. CHECK (age >= 18)
- b. UNIQUE (age)
- c. NOT NULL (age)
- d. DEFAULT 18

Answer: a. CHECK (age >= 18)

Explanation: CHECK enforces the age condition, rejecting rows where age is less than 18.

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25. What happens if a CHECK constraint fails during insert?

- a. Warning
- b. Error
- c. Auto-correct
- d. Nullify

Answer: b. Error

Explanation: A failed CHECK constraint triggers an error, preventing the invalid data insert.

26. Which command removes a CHECK constraint by name?

- a. ALTER TABLE DROP CHECK name
- b. DROP CHECK name
- c. DELETE CHECK name
- d. REMOVE CHECK name

Answer: a. ALTER TABLE DROP CHECK name

Explanation: This command deletes the named CHECK constraint from the table.

- 27. What does MySQL do if a CHECK constraint is unnamed?
 - a. Auto-generates a name
 - b. Ignores it
 - c. Drops it
 - d. Disables it

Answer: a. Auto-generates a name

Explanation: MySQL creates a system-generated name like chk_1 if none is specified.

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28. Which advantage comes from naming a CHECK constraint?

- a. Clearer error messages
- b. Faster queries
- c. Smaller tables
- d. More storage

Answer: a. Clearer error messages

Explanation: Named constraints provide meaningful error messages and easier schema management.

29. Which constraint is commonly paired with PRIMARY KEY for IDs?

- a. AUTO_INCREMENT
- b. CHECK
- c. DEFAULT
- d. NOT NULL

Answer: a. AUTO_INCREMENT

Explanation: AUTO_INCREMENT is often applied to primary key columns to generate IDs automatically.

- 30. Which type must an AUTO_INCREMENT column be?
 - a. Text
 - b. Integer
 - c. Date
 - d. Float

Answer: b. Integer

Explanation: AUTO_INCREMENT works only with integer-based columns.

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31. How many AUTO_INCREMENT columns are allowed per table?

- a. One
- b. Two
- c. Unlimited
- d. Depends on rows

Answer: a. One

Explanation: A table can have only one AUTO_INCREMENT column.

32. Which keyword sets AUTO_INCREMENT starting point during table creation?

a. AUTO_INCREMENT = value

b. START = value

c. BEGIN = value

d. RESET = value

Answer: a. AUTO_INCREMENT = value

Explanation: This sets the starting value for automatically generated numbers.

- 33. What happens if a manual value is inserted into an AUTO_INCREMENT column?
 - a. Sequence restarts
 - b. Sequence continues from highest value
 - c. Sequence breaks
 - d. Sequence stops

Answer: b. Sequence continues from highest value

Explanation: The next generated value will be higher than the manually inserted one.

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34. Which constraint prevents leaving a mandatory field blank?

- a. NOT NULL
- b. DEFAULT
- c. UNIQUE
- d. CHECK

Answer: a. NOT NULL

Explanation: NOT NULL enforces that the field must be filled during data entry.

35. Which constraint can be composite like a primary key?

- a. UNIQUE
- b. NOT NULL
- c. CHECK
- d. DEFAULT

Answer: a. UNIQUE

Explanation: UNIQUE can also be applied to multiple columns as a composite key.

36. Which constraint enforces allowed values without linking to another table?

- a. FOREIGN KEY
- b. CHECK
- c. PRIMARY KEY
- d. AUTO_INCREMENT

Answer: b. CHECK

Explanation: CHECK validates values based on conditions without needing relationships.

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- 37. Which constraint can be set using CURRENT_TIMESTAMP as default?
 - a. DEFAULT
 - b. UNIQUE
 - c. NOT NULL
 - d. AUTO_INCREMENT

Answer: a. DEFAULT

Explanation: DEFAULT can use expressions like CURRENT_TIMESTAMP for automatic time-stamping.

- 38. Which constraint is automatically applied to all PRIMARY KEY columns?
 - a. NOT NULL
 - b. DEFAULT
 - c. CHECK
 - d. UNIQUE

Answer: a. NOT NULL

Explanation: PRIMARY KEY columns cannot be NULL, and this is enforced automatically.

- 39. What must exist in the parent table for a foreign key insert to succeed?
 - a. Matching unique value
 - b. Matching primary key value
 - c. Matching default value
 - d. Matching check condition

Answer: b. Matching primary key value

Explanation: Foreign keys require that the inserted value exists in the referenced parent key.