**SQL**

**Easy SQL Questions (25)**

**1. Which of the following is used to retrieve data from a database?**

* A) SELECT
* B) INSERT
* C) DELETE
* D) UPDATE
* **Answer: A) SELECT**

**2. Which SQL keyword is used to sort the result-set?**

* A) ORDER
* B) SORT
* C) ORDER BY
* D) GROUP
* **Answer: C) ORDER BY**

**3. What does the SQL WHERE clause do?**

* A) Defines the database
* B) Filters the result based on a condition
* C) Limits the number of rows
* D) Defines the sorting order
* **Answer: B) Filters the result based on a condition**

**4. Which of the following SQL statements is used to delete data from a database table?**

* A) DELETE
* B) REMOVE
* C) DROP
* D) TRUNCATE
* **Answer: A) DELETE**

**5. What is the default sorting order for the ORDER BY clause?**

* A) Descending
* B) Ascending
* C) Random
* D) None
* **Answer: B) Ascending**

**6. Which operator is used to combine two or more conditions in an SQL query?**

* A) AND
* B) OR
* C) BOTH
* D) LIKE
* **Answer: A) AND**

**7. Which SQL statement is used to add new data to a table?**

* A) INSERT
* B) UPDATE
* C) ADD
* D) CREATE
* **Answer: A) INSERT**

**8. What is the correct SQL syntax to retrieve all columns from the "Employees" table?**

* A) SELECT \* FROM Employees;
* B) SELECT FROM Employees;
* C) SELECT ALL FROM Employees;
* D) SELECT COLUMNS FROM Employees;
* **Answer: A) SELECT \* FROM Employees;**

**9. Which SQL clause is used to group rows that have the same values?**

* A) GROUP BY
* B) ORDER BY
* C) HAVING
* D) FILTER
* **Answer: A) GROUP BY**

**10. How do you add a new column to an existing table in SQL?**

* A) ALTER TABLE table\_name ADD column\_name column\_type;
* B) ALTER TABLE table\_name UPDATE column\_name column\_type;
* C) CREATE TABLE table\_name ADD column\_name column\_type;
* D) MODIFY TABLE table\_name ADD column\_name column\_type;
* **Answer: A) ALTER TABLE table\_name ADD column\_name column\_type;**

**11. Which SQL keyword is used to prevent duplicate values in the result set?**

* A) DISTINCT
* B) UNIQUE
* C) ONLY
* D) NO DUPLICATES
* **Answer: A) DISTINCT**

**12. Which of the following is the correct SQL statement to find the number of records in a table?**

* A) SELECT COUNT() FROM table\_name;
* B) SELECT COUNT(\*) FROM table\_name;
* C) SELECT NUM() FROM table\_name;
* D) SELECT COUNT\_RECORDS FROM table\_name;
* **Answer: B) SELECT COUNT(\*) FROM table\_name;**

**13. Which of the following is the correct SQL statement to select all the columns from the "Customers" table where the country is 'USA'?**

* A) SELECT \* FROM Customers WHERE Country = 'USA';
* B) SELECT \* FROM Customers WHERE Country = USA;
* C) SELECT \* FROM Customers WHERE Country == 'USA';
* D) SELECT \* FROM Customers WHERE Country = 'USA' ORDER BY Country;
* **Answer: A) SELECT \* FROM Customers WHERE Country = 'USA';**

**14. Which SQL function is used to return the largest value of the selected column?**

* A) MAX()
* B) MIN()
* C) AVG()
* D) SUM()
* **Answer: A) MAX()**

**15. Which SQL statement is used to modify existing data in a table?**

* A) MODIFY
* B) UPDATE
* C) CHANGE
* D) SET
* **Answer: B) UPDATE**

**16. What is the correct SQL syntax to create a new table?**

* A) CREATE TABLE table\_name;
* B) CREATE table\_name;
* C) CREATE TABLE table\_name (column1 datatype, column2 datatype);
* D) CREATE NEW TABLE table\_name;
* **Answer: C) CREATE TABLE table\_name (column1 datatype, column2 datatype);**

**17. How do you rename a table in SQL?**

* A) ALTER TABLE table\_name RENAME TO new\_table\_name;
* B) RENAME TABLE table\_name TO new\_table\_name;
* C) CHANGE TABLE table\_name TO new\_table\_name;
* D) MODIFY TABLE table\_name RENAME TO new\_table\_name;
* **Answer: A) ALTER TABLE table\_name RENAME TO new\_table\_name;**

**18. Which SQL function is used to count the number of rows in a database table?**

* A) COUNT()
* B) SUM()
* C) TOTAL()
* D) NUM()
* **Answer: A) COUNT()**

**19. Which SQL clause is used to filter the records after the GROUP BY clause?**

* A) HAVING
* B) WHERE
* C) FILTER
* D) AFTER
* **Answer: A) HAVING**

**20. Which of the following is used to remove all records from a table without deleting the table itself?**

* A) DROP
* B) DELETE
* C) TRUNCATE
* D) REMOVE
* **Answer: C) TRUNCATE**

**21. Which of the following SQL statements will update the "Price" column in the "Products" table to 200 where the product is "Laptop"?**

* A) UPDATE Products SET Price = 200 WHERE Product = 'Laptop';
* B) MODIFY Products SET Price = 200 WHERE Product = 'Laptop';
* C) ALTER Products SET Price = 200 WHERE Product = 'Laptop';
* D) SET Products Price = 200 WHERE Product = 'Laptop';
* **Answer: A) UPDATE Products SET Price = 200 WHERE Product = 'Laptop';**

**22. What does the SQL INNER JOIN do?**

* A) Combines rows from two or more tables based on a condition
* B) Deletes rows from the table
* C) Displays only unmatched rows
* D) Filters out duplicate rows
* **Answer: A) Combines rows from two or more tables based on a condition**

**23. Which clause in SQL is used to specify a condition that must be met for the records to be included in the result set?**

* A) WHERE
* B) IF
* C) WHEN
* D) CONDITION
* **Answer: A) WHERE**

**24. Which of the following SQL statements is used to add a new row to a table?**

* A) INSERT INTO table\_name (col1, col2) VALUES (value1, value2);
* B) ADD INTO table\_name (col1, col2) VALUES (value1, value2);
* C) CREATE ROW INTO table\_name (col1, col2) VALUES (value1, value2);
* D) NEW INTO table\_name (col1, col2) VALUES (value1, value2);
* **Answer: A) INSERT INTO table\_name (col1, col2) VALUES (value1, value2);**

**25. What will be the result of the following query?**

sql

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SELECT DISTINCT column\_name FROM table\_name;

* A) Returns only unique values from the specified column
* B) Returns all values from the specified column
* C) Returns the first value from the specified column
* D) Returns an error
* **Answer: A) Returns only unique values from the specified column**

**Medium SQL Questions (25)**

**1. What will be the output of the following SQL statement?**

sql

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SELECT \* FROM employees LIMIT 5;

* A) Selects the first 5 rows from the table
* B) Selects all rows from the table
* C) Selects the first 5 columns from the table
* D) Selects the first 5 columns and rows from the table
* **Answer: A) Selects the first 5 rows from the table**

**2. Which SQL function is used to find the average value of a numeric column?**

* A) SUM()
* B) COUNT()
* C) AVG()
* D) MAX()
* **Answer: C) AVG()**

**3. How can you retrieve only the unique values from a column in SQL?**

* A) SELECT column\_name FROM table\_name UNIQUE;
* B) SELECT DISTINCT column\_name FROM table\_name;
* C) SELECT column\_name FROM table\_name GROUP BY column\_name;
* D) SELECT column\_name FROM table\_name;
* **Answer: B) SELECT DISTINCT column\_name FROM table\_name**

**4. Which SQL statement is used to remove a column from an existing table?**

* A) REMOVE COLUMN column\_name FROM table\_name;
* B) ALTER TABLE table\_name DROP COLUMN column\_name;
* C) DELETE COLUMN column\_name FROM table\_name;
* D) DROP COLUMN column\_name FROM table\_name;
* **Answer: B) ALTER TABLE table\_name DROP COLUMN column\_name**

**5. What is a foreign key in SQL?**

* A) A key that uniquely identifies each row in a table
* B) A key used to prevent NULL values in a column
* C) A column that creates a relationship between two tables
* D) A key used to enforce the uniqueness of values
* **Answer: C) A column that creates a relationship between two tables**

**6. What is the difference between WHERE and HAVING in SQL?**

* A) WHERE is used before grouping, and HAVING is used after grouping
* B) WHERE is used after grouping, and HAVING is used before grouping
* C) Both are the same
* D) WHERE is used for numerical values, and HAVING is used for strings
* **Answer: A) WHERE is used before grouping, and HAVING is used after grouping**

**7. Which clause is used to filter records after the GROUP BY clause?**

* A) HAVING
* B) WHERE
* C) FILTER
* D) ORDER BY
* **Answer: A) HAVING**

**8. What will be the output of the following SQL query?**

sql

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SELECT \* FROM employees WHERE salary BETWEEN 3000 AND 5000;

* A) Displays rows where salary is between 3000 and 5000
* B) Displays rows where salary is less than 3000
* C) Displays rows where salary is greater than 5000
* D) Displays an error
* **Answer: A) Displays rows where salary is between 3000 and 5000**

**9. Which of the following SQL operators is used to check for NULL values?**

* A) IS NULL
* B) IS NOT NULL
* C) NULL
* D) BOTH A and B
* **Answer: D) BOTH A and B**

**10. Which SQL function is used to count the number of non-NULL values in a column?**

* A) COUNT()
* B) COUNT\_DISTINCT()
* C) SUM()
* D) COUNT\_NULL()
* **Answer: A) COUNT()**

**11. What is the result of the following query?**

sql

CopyEdit

SELECT name, COUNT(\*) FROM employees GROUP BY name;

* A) Counts the number of rows for each name
* B) Displays the total count of rows in the table
* C) Displays all records without counting
* D) Displays the first column only
* **Answer: A) Counts the number of rows for each name**

**12. What is the purpose of the JOIN clause in SQL?**

* A) Combines rows from two or more tables
* B) Deletes records from the table
* C) Groups data together
* D) Filters records
* **Answer: A) Combines rows from two or more tables**

**13. What is the SQL statement to find the maximum value in the "salary" column?**

* A) SELECT MAX(salary) FROM employees;
* B) SELECT SUM(salary) FROM employees;
* C) SELECT MAX(salary) FROM employees WHERE salary > 2000;
* D) SELECT MAX(salary) FROM employees WHERE salary BETWEEN 1000 AND 5000;
* **Answer: A) SELECT MAX(salary) FROM employees;**

**14. What does the SQL LIKE operator do?**

* A) Performs a comparison between numeric values
* B) Compares a column with a pattern
* C) Compares two tables
* D) Used for logical AND condition
* **Answer: B) Compares a column with a pattern**

**15. Which of the following statements is correct to get the second highest salary from the employees table?**

* A) SELECT MAX(salary) FROM employees WHERE salary != (SELECT MAX(salary) FROM employees);
* B) SELECT SECOND(salary) FROM employees;
* C) SELECT MAX(salary) FROM employees GROUP BY salary;
* D) SELECT TOP 1 salary FROM employees ORDER BY salary DESC LIMIT 1, 1;
* **Answer: A) SELECT MAX(salary) FROM employees WHERE salary != (SELECT MAX(salary) FROM employees);**

**16. Which SQL function is used to return the current date and time?**

* A) CURRENT\_DATE()
* B) GETDATE()
* C) NOW()
* D) CURRENT\_TIMESTAMP()
* **Answer: B) GETDATE()**

**17. What does the SQL UNION operator do?**

* A) Combines results from two or more SELECT statements
* B) Combines columns from two tables
* C) Joins tables on common columns
* D) Adds new rows to a table
* **Answer: A) Combines results from two or more SELECT statements**

**18. How can you prevent duplicate records in the result set?**

* A) Use DISTINCT
* B) Use GROUP BY
* C) Use ORDER BY
* D) Use UNION
* **Answer: A) Use DISTINCT**

**19. Which of the following SQL statements is used to update data in a table?**

* A) ALTER
* B) MODIFY
* C) UPDATE
* D) INSERT
* **Answer: C) UPDATE**

**20. Which SQL clause is used to specify a condition on the grouped result in a query?**

* A) HAVING
* B) WHERE
* C) GROUP BY
* D) LIMIT
* **Answer: A) HAVING**

**21. Which keyword is used to rename an existing table in SQL?**

* A) RENAME
* B) CHANGE
* C) ALTER TABLE
* D) MODIFY
* **Answer: C) ALTER TABLE**

**22. How do you retrieve the first five records from a table?**

* A) SELECT \* FROM table LIMIT 5;
* B) SELECT \* FROM table FIRST 5;
* C) SELECT \* FROM table FETCH FIRST 5;
* D) SELECT \* FROM table OFFSET 5;
* **Answer: A) SELECT \* FROM table LIMIT 5;**

**23. What will be the result of the following query?**

sql

CopyEdit

SELECT AVG(salary) FROM employees WHERE department = 'IT';

* A) Returns the average salary of employees in the IT department
* B) Returns the total salary of employees in the IT department
* C) Returns the average salary of all employees
* D) Returns the total number of employees in the IT department
* **Answer: A) Returns the average salary of employees in the IT department**

**24. Which SQL function can be used to round the decimal value of a column?**

* A) ROUND()
* B) CEILING()
* C) FLOOR()
* D) ALL OF THE ABOVE
* **Answer: D) ALL OF THE ABOVE**

**25. Which clause is used to filter records before grouping?**

* A) WHERE
* B) HAVING
* C) GROUP BY
* D) ORDER BY
* **Answer: A) WHERE**

**Difficult question**

**1. Which of the following SQL queries will give the correct result to find the third highest salary from the employees table?**

* A) SELECT MAX(salary) FROM employees WHERE salary NOT IN (SELECT MAX(salary) FROM employees)
* B) SELECT salary FROM employees ORDER BY salary DESC LIMIT 2,1
* C) SELECT salary FROM employees ORDER BY salary DESC LIMIT 1 OFFSET 2
* D) SELECT salary FROM employees WHERE RANK() = 3
* **Answer: B) SELECT salary FROM employees ORDER BY salary DESC LIMIT 2,1**

**2. What does the SQL EXCEPT operator do?**

* A) Combines the result sets of two queries, excluding duplicates
* B) Returns rows from the first query that do not exist in the second query
* C) Returns rows that exist in both queries
* D) Deletes duplicate records in the result set
* **Answer: B) Returns rows from the first query that do not exist in the second query**

**3. What is the result of the following query?**

sql

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SELECT COUNT(DISTINCT department) FROM employees;

* A) Returns the total number of employees in the company
* B) Returns the number of departments in the company
* C) Returns the number of unique departments in the company
* D) Returns the sum of the departments in the company
* **Answer: C) Returns the number of unique departments in the company**

**4. Which clause is used to modify the result set by applying a calculation on each group?**

* A) ORDER BY
* B) GROUP BY
* C) HAVING
* D) WITH ROLLUP
* **Answer: D) WITH ROLLUP**

**5. Which of the following SQL statements is used to delete a table in SQL?**

* A) DROP TABLE
* B) DELETE TABLE
* C) REMOVE TABLE
* D) TRUNCATE TABLE
* **Answer: A) DROP TABLE**

**6. What is the output of the following SQL query?**

sql

CopyEdit

SELECT employee\_id, department\_id, COUNT(\*) OVER(PARTITION BY department\_id) FROM employees;

* A) Returns the total count of employees in the company
* B) Returns the employee count for each department, with each row showing the department count
* C) Returns the department\_id and the total number of departments
* D) Returns employee\_id and department\_id along with the total number of departments
* **Answer: B) Returns the employee count for each department, with each row showing the department count**

**7. Which of the following clauses is used with JOIN to return records with no matching values in one of the tables?**

* A) INNER JOIN
* B) OUTER JOIN
* C) RIGHT JOIN
* D) FULL JOIN
* **Answer: B) OUTER JOIN**

**8. What does the SQL ROW\_NUMBER() function do?**

* A) Returns the number of rows in the result set
* B) Assigns a unique sequential integer to rows within a partition of the result set
* C) Returns the number of rows per group
* D) Counts the number of rows from two tables joined
* **Answer: B) Assigns a unique sequential integer to rows within a partition of the result set**

**9. Which of the following queries will return only the unique rows between two SELECT queries?**

* A) SELECT \* FROM table1 UNION SELECT \* FROM table2;
* B) SELECT \* FROM table1 INTERSECT SELECT \* FROM table2;
* C) SELECT \* FROM table1 UNION ALL SELECT \* FROM table2;
* D) SELECT \* FROM table1 EXCEPT SELECT \* FROM table2;
* **Answer: A) SELECT \* FROM table1 UNION SELECT \* FROM table2**

**10. What does the SELF JOIN operation do in SQL?**

* A) Combines rows from two different tables based on a related column
* B) Joins the table to itself based on a related column
* C) Combines rows from multiple tables without any conditions
* D) Deletes rows from a table based on matching conditions
* **Answer: B) Joins the table to itself based on a related column**

**11. Which of the following is the correct syntax for using a CASE statement in SQL?**

* A) SELECT column, CASE WHEN condition THEN result ELSE default END FROM table;
* B) SELECT column, CASE WHEN condition THEN result; END FROM table;
* C) SELECT CASE column WHEN condition THEN result END FROM table;
* D) SELECT CASE column IF condition THEN result ELSE default; END FROM table;
* **Answer: A) SELECT column, CASE WHEN condition THEN result ELSE default END FROM table;**

**12. How do you perform a CROSS JOIN in SQL?**

* A) SELECT \* FROM table1 JOIN table2;
* B) SELECT \* FROM table1 CROSS JOIN table2;
* C) SELECT \* FROM table1 FULL OUTER JOIN table2;
* D) SELECT \* FROM table1 INNER JOIN table2;
* **Answer: B) SELECT \* FROM table1 CROSS JOIN table2;**

**13. Which of the following operators is used in SQL to match a pattern with the LIKE operator?**

* A) \*
* B) %
* C) \_
* D) Both B and C
* **Answer: D) Both B and C**

**14. Which SQL function is used to calculate the total sum of a column?**

* A) SUM()
* B) TOTAL()
* C) ADD()
* D) COUNT()
* **Answer: A) SUM()**

**15. Which SQL command is used to remove all records from a table without removing the table itself?**

* A) DELETE
* B) REMOVE
* C) TRUNCATE
* D) DROP
* **Answer: C) TRUNCATE**

**16. Which of the following query functions will return the minimum value from a column?**

* A) MIN()
* B) LEAST()
* C) LOWEST()
* D) GREATEST()
* **Answer: A) MIN()**

**17. What does the COALESCE() function do?**

* A) Returns the first non-null value in a list of arguments
* B) Replaces NULL values with a default value
* C) Returns the highest value in a list of arguments
* D) Returns a string with no null values
* **Answer: A) Returns the first non-null value in a list of arguments**

**18. Which of the following is the correct way to filter NULL values in a SQL query?**

* A) WHERE column IS NULL
* B) WHERE column = NULL
* C) WHERE column IS NOT NULL
* D) Both A and C
* **Answer: D) Both A and C**

**19. How would you add a foreign key constraint to an existing table?**

* A) ALTER TABLE table\_name ADD CONSTRAINT fk\_name FOREIGN KEY (column\_name) REFERENCES other\_table (column\_name);
* B) ALTER TABLE table\_name ADD CONSTRAINT fk\_name ON (column\_name) REFERENCES other\_table (column\_name);
* C) ALTER TABLE table\_name ADD FOREIGN KEY (column\_name) TO other\_table (column\_name);
* D) ALTER TABLE table\_name SET FOREIGN KEY (column\_name) TO other\_table (column\_name);
* **Answer: A) ALTER TABLE table\_name ADD CONSTRAINT fk\_name FOREIGN KEY (column\_name) REFERENCES other\_table (column\_name);**

**20. Which of the following will be the result of this SQL query?**

sql

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SELECT \* FROM employees WHERE salary = (SELECT MAX(salary) FROM employees);

* A) Returns employees with the highest salary
* B) Returns employees whose salary is less than the maximum
* C) Returns employees with average salary
* D) Returns the highest salary record
* **Answer: A) Returns employees with the highest salary**

**21. Which SQL function is used to extract the year from a date column?**

* A) YEAR()
* B) EXTRACT(YEAR)
* C) DATEPART(YEAR)
* D) ALL OF THE ABOVE
* **Answer: D) ALL OF THE ABOVE**

**22. Which of the following statements will execute a stored procedure in SQL Server?**

* A) EXEC procedure\_name;
* B) CALL procedure\_name();
* C) EXECUTE procedure\_name;
* D) Both A and C
* **Answer: D) Both A and C**

**23. Which of the following SQL clauses can be used to limit the number of rows returned in a query?**

* A) LIMIT
* B) TOP
* C) FETCH
* D) All of the above
* **Answer: D) All of the above**

**24. What will be the output of the following query?**

sql

CopyEdit

SELECT department\_id, AVG(salary) FROM employees GROUP BY department\_id HAVING AVG(salary) > 50000;

* A) Returns the average salary per department for all departments
* B) Returns the departments where the average salary is greater than 50000
* C) Returns the department\_id for employees with a salary greater than 50000
* D) Returns the average salary of all employees
* **Answer: B) Returns the departments where the average salary is greater than 50000**

**25. What does the WITH clause do in SQL?**

* A) Defines a subquery that can be referenced within a SELECT, INSERT, UPDATE, or DELETE statement
* B) Executes a subquery as a separate statement
* C) Defines a column alias
* D) Creates a new table
* **Answer: A) Defines a subquery that can be referenced within a SELECT, INSERT, UPDATE, or DELETE statement**

**Most difficult**

**1. Which SQL statement would you use to select all records from a table and include duplicate rows?**

* A) SELECT \* FROM table\_name;
* B) SELECT DISTINCT \* FROM table\_name;
* C) SELECT ALL \* FROM table\_name;
* D) SELECT DUPLICATE \* FROM table\_name;
* **Answer: A) SELECT \* FROM table\_name;**

**2. What is the output of this SQL query?**

sql

CopyEdit

SELECT department, COUNT(\*) FROM employees GROUP BY department HAVING COUNT(\*) > 5;

* A) Returns all employees in the departments with more than 5 employees
* B) Returns all employees in departments
* C) Returns the departments with more than 5 employees
* D) Returns departments with exactly 5 employees
* **Answer: C) Returns the departments with more than 5 employees**

**3. What does the INTERSECT operator do in SQL?**

* A) Returns rows that exist in both SELECT queries
* B) Returns rows that only exist in the first SELECT query
* C) Returns rows that exist in the second SELECT query but not in the first
* D) Combines the result set from two queries and eliminates duplicates
* **Answer: A) Returns rows that exist in both SELECT queries**

**4. Which of the following will return the first non-null value from a list of expressions in SQL?**

* A) COALESCE()
* B) ISNULL()
* C) NULLIF()
* D) IFNULL()
* **Answer: A) COALESCE()**

**5. Which of the following will remove all data from a table but keeps the structure of the table intact?**

* A) DROP
* B) DELETE
* C) TRUNCATE
* D) REMOVE
* **Answer: C) TRUNCATE**

**6. Which of the following functions in SQL can be used to check if a value is NULL?**

* A) ISNULL()
* B) NULLIF()
* C) ISNULL( ) or COALESCE( )
* D) IS NULL
* **Answer: D) IS NULL**

**7. Which SQL statement would you use to find the 5th highest salary from the employees table?**

* A) SELECT DISTINCT salary FROM employees ORDER BY salary DESC LIMIT 4, 1;
* B) SELECT MAX(salary) FROM employees WHERE salary NOT IN (SELECT MAX(salary) FROM employees LIMIT 4);
* C) SELECT DISTINCT salary FROM employees WHERE salary IN (SELECT salary FROM employees ORDER BY salary LIMIT 5);
* D) SELECT salary FROM employees ORDER BY salary DESC LIMIT 1 OFFSET 5;
* **Answer: A) SELECT DISTINCT salary FROM employees ORDER BY salary DESC LIMIT 4, 1;**

**8. In SQL, which of the following will not allow duplicate values in a column?**

* A) UNIQUE
* B) DISTINCT
* C) PRIMARY KEY
* D) Both A and C
* **Answer: D) Both A and C**

**9. Which of the following will return the row with the highest salary in the employees table, using only one query?**

* A) SELECT \* FROM employees WHERE salary = (SELECT MAX(salary) FROM employees);
* B) SELECT \* FROM employees WHERE salary = (SELECT MAX(salary) FROM employees GROUP BY salary);
* C) SELECT \* FROM employees WHERE salary = (SELECT MAX(salary) FROM employees LIMIT 1);
* D) SELECT \* FROM employees WHERE salary = (SELECT TOP 1 salary FROM employees);
* **Answer: A) SELECT \* FROM employees WHERE salary = (SELECT MAX(salary) FROM employees);**

**10. What is the output of the following query?**

sql

CopyEdit

SELECT employee\_id, department\_id, RANK() OVER (PARTITION BY department\_id ORDER BY salary DESC) FROM employees;

* A) Returns the rank of employees within each department based on salary
* B) Returns the rank of employees based on their department
* C) Returns the department\_id along with the rank of employees in that department
* D) Returns the department and salary of each employee
* **Answer: A) Returns the rank of employees within each department based on salary**

**11. What is a window function in SQL?**

* A) A function that can only be used to calculate window size
* B) A function that operates over a set of rows related to the current row
* C) A function that calculates aggregate values
* D) A function used to filter rows in a window
* **Answer: B) A function that operates over a set of rows related to the current row**

**12. How do you delete rows from a table based on a condition in SQL?**

* A) DELETE FROM table\_name WHERE condition;
* B) REMOVE FROM table\_name WHERE condition;
* C) TRUNCATE TABLE table\_name WHERE condition;
* D) DELETE \* FROM table\_name WHERE condition;
* **Answer: A) DELETE FROM table\_name WHERE condition;**

**13. What SQL clause can be used to filter groups in a GROUP BY statement?**

* A) HAVING
* B) WHERE
* C) FILTER
* D) WITH
* **Answer: A) HAVING**

**14. Which of the following SQL statements will create a view of a table?**

* A) CREATE VIEW view\_name AS SELECT \* FROM table\_name;
* B) CREATE TABLE view\_name AS SELECT \* FROM table\_name;
* C) CREATE VIEW SELECT \* FROM table\_name;
* D) CREATE TABLE AS SELECT \* FROM view\_name;
* **Answer: A) CREATE VIEW view\_name AS SELECT \* FROM table\_name;**

**15. Which of the following is a subquery that returns multiple values?**

* A) Scalar subquery
* B) Correlated subquery
* C) Multi-row subquery
* D) Inline subquery
* **Answer: C) Multi-row subquery**

**16. What is the difference between JOIN and UNION?**

* A) JOIN combines tables horizontally; UNION combines tables vertically
* B) JOIN adds columns, UNION adds rows
* C) JOIN can be used only with primary keys, while UNION combines different table structures
* D) JOIN and UNION are both used to combine data from tables in the same way
* **Answer: A) JOIN combines tables horizontally; UNION combines tables vertically**

**17. What is a stored procedure in SQL?**

* A) A function that accepts parameters and executes SQL statements
* B) A query that calculates the result of a complex function
* C) A subquery that is reusable across multiple queries
* D) A temporary table that stores results for a query
* **Answer: A) A function that accepts parameters and executes SQL statements**

**18. Which of the following is NOT a valid SQL constraint?**

* A) PRIMARY KEY
* B) UNIQUE
* C) FOREIGN KEY
* D) ORDER KEY
* **Answer: D) ORDER KEY**

**19. What is the purpose of the ROLLUP operator in SQL?**

* A) It groups the result set into categories based on specific fields
* B) It produces a summary row at the end of each group
* C) It computes the total sum for a column
* D) It is used with JOIN to combine tables vertically
* **Answer: B) It produces a summary row at the end of each group**

**20. Which of the following is an example of a correlated subquery?**

sql

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SELECT \* FROM employees e WHERE e.salary > (SELECT AVG(salary) FROM employees e2 WHERE e2.department\_id = e.department\_id);

* A) A query that uses an aggregate function
* B) A query where the inner query depends on the outer query
* C) A query that combines multiple tables
* D) A query that retrieves a set of distinct values
* **Answer: B) A query where the inner query depends on the outer query**

**21. What does the EXCEPT operator do in SQL?**

* A) Returns rows from the first query that do not exist in the second query
* B) Returns rows that exist in both queries
* C) Combines results from both queries and removes duplicates
* D) Returns only non-null rows
* **Answer: A) Returns rows from the first query that do not exist in the second query**

**22. What SQL clause is used to check the condition after grouping the data in a GROUP BY query?**

* A) WHERE
* B) HAVING
* C) SELECT
* D) FILTER
* **Answer: B) HAVING**

**23. How can you retrieve the first and last record of a table in SQL?**

* A) Using LIMIT with ORDER BY
* B) Using RANK()
* C) Using FIRST() and LAST()
* D) Using ROW\_NUMBER() and PARTITION BY
* **Answer: A) Using LIMIT with ORDER BY**

**24. Which of the following SQL statements will create a unique constraint on a column?**

* A) ALTER TABLE table\_name ADD UNIQUE(column\_name);
* B) CREATE UNIQUE column\_name;
* C) CREATE INDEX UNIQUE ON table\_name(column\_name);
* D) ALTER TABLE table\_name CREATE UNIQUE CONSTRAINT ON column\_name;
* **Answer: A) ALTER TABLE table\_name ADD UNIQUE(column\_name);**

**25. Which of the following will give the number of rows in a result set after a JOIN operation?**

* A) COUNT()
* B) NUM()
* C) ROWS()
* D) SUM()
* **Answer: A) COUNT()**