DBMS
SQL – MEDIUM LEVEL

1. Which of the following joins returns all rows from both tables, matching rows where possible?
   A) INNER JOIN
   B) LEFT JOIN
   C) RIGHT JOIN
   D) FULL OUTER JOIN
   Answer: D

2. Which keyword is used in a subquery to test if a row exists?
   A) IN
   B) ANY
   C) EXISTS
   D) ALL
   Answer: C

3. What is the difference between UNION and UNION ALL?
   A) UNION ALL removes duplicates, UNION keeps all
   B) UNION removes duplicates, UNION ALL keeps all
   C) Both remove duplicates
   D) Both keep duplicates
   Answer: B

4. Which index type improves performance of queries with non-unique values?
   A) Primary index
   B) Unique index
   C) Non-clustered index
   D) Composite index
   Answer: C

5. Which clause restricts the rows returned by a GROUP BY query?
   A) WHERE
   B) HAVING
   C) ORDER BY
   D) DISTINCT
   Answer: B

6. Which SQL function returns the number of non-NULL values?
   A) COUNT(*)
   B) COUNT(column)
   C) SUM()
   D) AVG()
   Answer: B

7. Which join returns all rows from the left table, even if there are no matches in the right table?
   A) INNER JOIN
   B) LEFT JOIN
   C) FULL OUTER JOIN
   D) RIGHT JOIN
   Answer: B

8. Which SQL statement is correct for updating multiple columns at once?
   A) UPDATE table SET col1=val1 AND col2=val2
   B) UPDATE table SET col1=val1, col2=val2
   C) UPDATE table (col1,col2) VALUES(val1,val2)
   D) UPDATE table ADD col1=val1,col2=val2
   Answer: B

9. Which operator checks if all values in a subquery satisfy a condition?
   A) IN
   B) ANY
   C) EXISTS
   D) ALL
   Answer: D

10. Which SQL keyword is used to fetch only a specific number of rows?
    A) LIMIT
    B) TOP
    C) ROWNUM
    D) All of the above (depends on DBMS)
    Answer: D

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11. Which of the following is true about clustered indexes?
    A) Data is stored in sorted order
    B) A table can have many clustered indexes
    C) They cannot be created on primary keys
    D) They do not affect performance
    Answer: A

12. Which SQL command is used to remove duplicates from a query result?
    A) UNIQUE
    B) DISTINCT
    C) REMOVE DUPLICATE
    D) CLEAN
    Answer: B

13. Which of the following cannot be used in a WHERE clause?
    A) Aggregate functions
    B) Comparison operators
    C) Subqueries
    D) Logical operators
    Answer: A

14. Which constraint ensures a value in one table matches a value in another table?
    A) PRIMARY KEY
    B) FOREIGN KEY
    C) UNIQUE
    D) DEFAULT
    Answer: B

15. Which of these is an example of a correlated subquery?
    A) Subquery executed once for entire query
    B) Subquery executed once per row of outer query
    C) Subquery with no relation to outer query
    D) Subquery with multiple results
    Answer: B

16. Which SQL statement copies rows from one table to another?
    A) COPY INTO
    B) INSERT INTO … SELECT
    C) UPDATE … SELECT
    D) DUPLICATE TABLE
    Answer: B

17. Which join can cause Cartesian product if no condition is applied?
    A) INNER JOIN
    B) CROSS JOIN
    C) OUTER JOIN
    D) SELF JOIN
    Answer: B

18. Which is the correct order of SQL query execution?
    A) SELECT → WHERE → GROUP BY → HAVING → ORDER BY
    B) WHERE → GROUP BY → HAVING → SELECT → ORDER BY
    C) FROM → WHERE → GROUP BY → HAVING → SELECT → ORDER BY
    D) SELECT → FROM → WHERE → GROUP BY → ORDER BY
    Answer: C

19. Which SQL keyword is used to rename a result column?
    A) RENAME
    B) AS
    C) ALIAS
    D) BOTH B and C
    Answer: D

20. Which clause is used to combine rows with the same values into a single row?
    A) GROUP BY
    B) HAVING
    C) DISTINCT
    D) ORDER BY
    Answer: A

21. Which operator allows comparing a single value to a list of values?
    A) IN
    B) ANY
    C) EXISTS
    D) LIKE
    Answer: A

22. Which type of key can contain NULL values?
    A) Primary key
    B) Candidate key
    C) Foreign key
    D) Super key
    Answer: C

23. Which SQL command is used to revoke user access rights?
    A) REMOVE
    B) DELETE
    C) REVOKE
    D) DENY
    Answer: C

24. Which join compares a table with itself?
    A) CROSS JOIN
    B) SELF JOIN
    C) INNER JOIN
    D) FULL JOIN
    Answer: B

25. Which SQL keyword is used with LIKE for multiple characters?
    A) %
    B) _
    C) *
    D) #
    Answer: A

26. Which SQL statement modifies data inside a view?
    A) UPDATE VIEW
    B) UPDATE base table
    C) MODIFY VIEW
    D) ALTER VIEW
    Answer: B

27. Which aggregate function ignores NULL values?
    A) SUM()
    B) AVG()
    C) COUNT(column)
    D) All of the above
    Answer: D

28. Which of the following best describes a composite key?
    A) Key that refers to another table

B) Combination of two or more columns
C) A unique key with NULL values
D) Automatically generated key
Answer: B

29. Which SQL clause is used to check conditions on aggregated data?
A) WHERE
B) HAVING
C) GROUP BY
D) ORDER BY
Answer: B

30. Which operator returns rows if at least one of the conditions is true?
A) AND
B) OR
C) NOT
D) IN
Answer: B

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31. Which SQL constraint assigns a default value to a column if no value is specified?
A) PRIMARY KEY
B) DEFAULT
C) CHECK
D) UNIQUE
Answer: B

32. Which of the following is true for subqueries?
A) They must always return one row
B) They can return multiple rows and columns
C) They cannot be used in WHERE clause
D) They are always faster than joins
Answer: B

33. Which SQL keyword is used to remove only the structure of a database object?
A) DROP
B) DELETE
C) TRUNCATE
D) ERASE
Answer: A

34. Which SQL statement is correct to get the highest salary from "employees"?
A) SELECT salary FROM employees WHERE salary=MAX(salary);
B) SELECT MAX(salary) FROM employees;
C) SELECT salary(MAX) FROM employees;
D) SELECT TOP salary FROM employees;
Answer: B

35. Which operator returns true if a subquery returns at least one row?
A) IN

B) EXISTS
C) ALL
D) ANY
Answer: B

36. Which SQL feature enforces rules at column level?
    A) CHECK constraint
    B) DEFAULT constraint
    C) FOREIGN KEY constraint
    D) PRIMARY KEY constraint
    Answer: A

37. Which SQL command is used to change the definition of a view?
    A) ALTER VIEW
    B) UPDATE VIEW
    C) MODIFY VIEW
    D) CHANGE VIEW
    Answer: A

38. Which is true about indexes?
    A) Always speed up inserts
    B) Can slow down updates
    C) Always reduce storage usage
    D) Are created automatically on all columns
    Answer: B

39. Which SQL command lists all constraints of a table?
    A) SHOW KEYS
    B) DESCRIBE
    C) INFORMATION_SCHEMA queries
    D) All of the above (depending on DBMS)
    Answer: D

40. Which keyword is used for pattern matching in SQL?
    A) BETWEEN
    B) LIKE
    C) IN
    D) EXISTS
    Answer: B

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41. Which SQL function returns the smallest value?
    A) LEAST() / MIN()
    B) LOW()
    C) MINIMUM()
    D) SMALLEST()
    Answer: A

42. Which operator compares a value with every value returned by a subquery?
    A) ALL

B) ANY
C) IN
D) EXISTS
Answer: A

43. Which clause is mandatory in an aggregate query?
    A) GROUP BY
    B) WHERE
    C) FROM
    D) HAVING
    Answer: C

44. Which SQL function returns the current date and time?
    A) GETDATE()
    B) CURRENT_TIMESTAMP
    C) NOW()
    D) All of the above (depends on DBMS)
    Answer: D

45. Which SQL command permanently deletes a database?
    A) DROP DATABASE
    B) REMOVE DATABASE
    C) DELETE DATABASE
    D) ERASE DATABASE
    Answer: A

46. Which SQL clause restricts rows before grouping happens?
    A) WHERE
    B) HAVING
    C) GROUP BY
    D) LIMIT
    Answer: A

47. Which of these is NOT a valid SQL data type?
    A) VARCHAR
    B) NUMBER
    C) BOOLEAN (not in standard SQL)
    D) FLOAT
    Answer: C

48. Which SQL statement is used to create an index?
    A) CREATE INDEX
    B) ADD INDEX
    C) MAKE INDEX
    D) ALTER TABLE INDEX
    Answer: A

49. Which SQL command is used to restore data after accidental deletion (if backup exists)?
    A) ROLLBACK
    B) COMMIT
    C) RESTORE

D) RECOVER
Answer: A

50. Which constraint ensures values in a column fall within a certain range?
    A) CHECK
    B) DEFAULT
    C) UNIQUE
    D) NOT NULL
    Answer: A