

Advanced SQL MCQs - Topic-wise

1. NULL Handling

Q1. What is the result of NULL + 10 in SQL?

- a) 10
- b) 0
- c) NULL
- d) Error

Answer: c

Q2. Which condition is always unknown in SQL?

- a) column = NULL
- b) column IS NULL
- c) column != NULL
- d) column <> NULL

Answer: a

Q3. What does COUNT(DISTINCT NULL) return?

- a) 0
- b) 1
- c) NULL
- d) Error

Answer: a

2. Joins

Q4. Which of the following is NOT a valid join?

- a) LEFT JOIN
- b) RIGHT JOIN
- c) FULL JOIN
- d) DIAGONAL JOIN

Answer: d

Q5. What is required to simulate FULL OUTER JOIN in MySQL?

- a) UNION of LEFT and RIGHT JOIN
- b) INNER JOIN
- c) INTERSECT
- d) GROUP BY

Answer: a

Q6. Which clause combines rows even if no match is found in one table?

- a) INNER JOIN
- b) LEFT JOIN
- c) CROSS JOIN
- d) RIGHT SEMI JOIN

Answer: b

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3. Subqueries

Q7. What is a correlated subquery?

- a) Subquery using outer query values
- b) Recursive query
- c) Subquery in FROM
- d) A join

Answer: a

Q8. Which clause is problematic if subquery returns NULLs?

- a) IN
- b) NOT IN
- c) EXISTS
- d) =
- e) !=

Answer: b

4. Aggregates and Grouping

Q9. Which clause filters grouped rows?

- a) WHERE
- b) ORDER BY
- c) HAVING
- d) GROUP

Answer: c

Q10. What happens if SELECT has aggregate and non-aggregate without GROUP BY?

- a) Works
- b) Error
- c) NULL output
- d) Returns all rows

Answer: b

5. Set Operations

Q11. What is the difference between UNION and UNION ALL?

- a) UNION removes duplicates
- b) UNION ALL is slower
- c) No difference
- d) UNION only accepts integers

Answer: a

Q12. Which is not a valid set operator?

- a) UNION
- b) INTERSECT

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- c) EXCEPT
- d) CROSS

Answer: d

6. Indexing and Performance

Q13. What does CREATE INDEX do?

- a) Sort table
- b) Remove duplicates
- c) Improve lookup
- d) Add primary key

Answer: c

Q14. Time complexity of indexed B-tree lookup?

- a) $O(n)$
- b) $O(\log n)$
- c) $O(1)$
- d) $O(n \log n)$

Answer: b

7. Miscellaneous

Q15. What does LIMIT 1 OFFSET 1 do?

- a) First row
- b) Second row
- c) All rows
- d) Error

Answer: b

Q16. Which is not DDL?

- a) CREATE
- b) DROP
- c) ALTER
- d) INSERT

Answer: d

Q17. What does CASE WHEN NULL THEN 'Yes' ELSE 'No' END return?

- a) Yes
- b) No
- c) NULL
- d) Error

Answer: b