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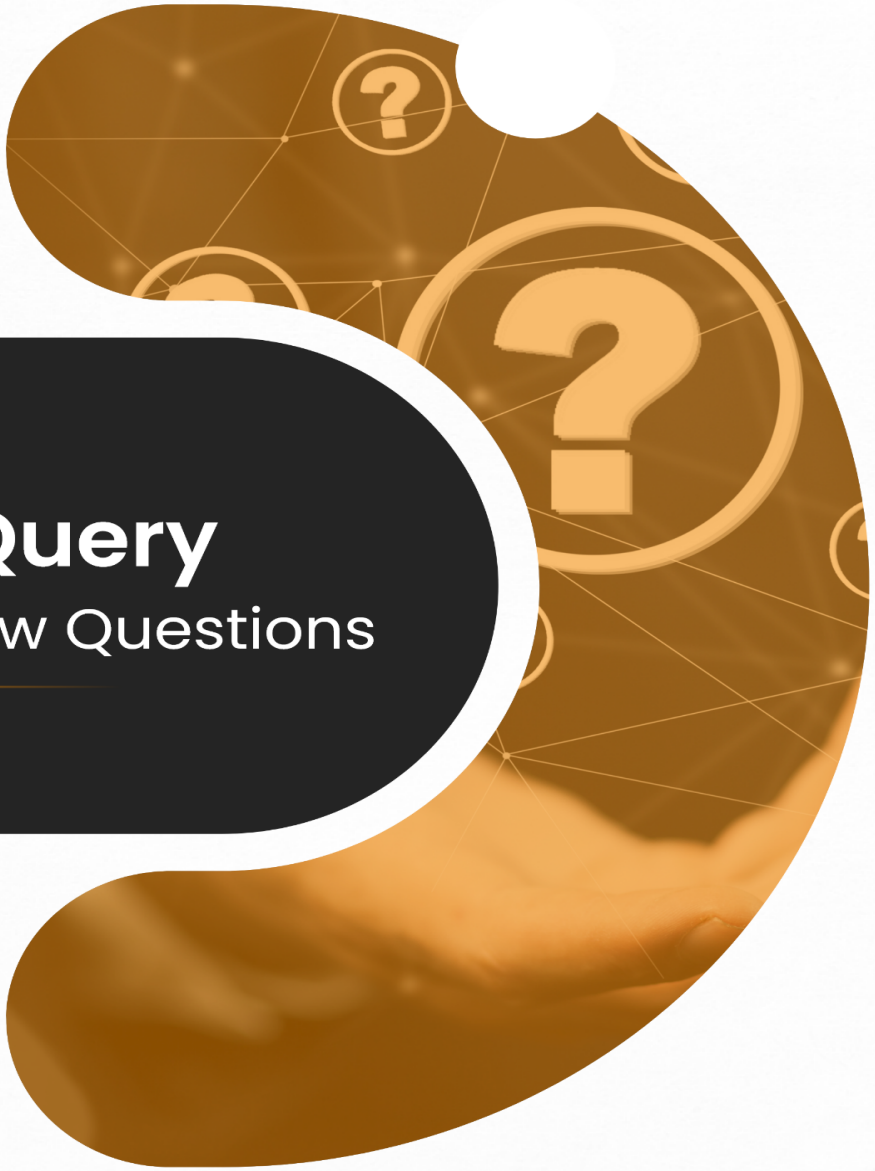

SQL Query
Interview Questions

1. What is the first step you should take when facing a MySQL connection issue?

- A) Restart the MySQL server
- B) Ignore the issue, it will resolve on its own
- C) Reinstall MySQL
- D) Check the network cables

Answer: A) Restart the MySQL server

2. Which command is used to check the MySQL server status?

- A) SHOW STATUS
- B) CHECK SERVER
- C) STATUS SERVER
- D) DISPLAY STATUS

Answer: A) SHOW STATUS

3. What does the term "SQL Injection" refer to in MySQL?

- A) A way to inject data into a table
- B) A method to inject code into SQL statements
- C) A type of error in MySQL syntax
- D) A security feature in MySQL

Answer: B) A method to inject code into SQL statements

4. How can you optimise a slow-performing MySQL query?

- A) Increase the number of records in the table
- B) Use the LIMIT clause
- C) Use appropriate indexes
- D) Delete unnecessary tables

Answer: C) Use appropriate indexes

5. What is the purpose of the EXPLAIN statement in MySQL?

- A) To display the execution plan of a query
- B) To explain complex SQL concepts
- C) To create an explanation for a table
- D) To show the structure of a database

Answer: A) To display the execution plan of a query

6. When would you use the UNION operator in MySQL?

- A) To join two tables
- B) To combine the result sets of two SELECT statements
- C) To create a subquery
- D) To delete duplicate records

Answer: B) To combine the result sets of two SELECT statements

7. Explain the concept of database normalisation and its importance.

- A) Reducing data redundancy and improving data integrity
- B) Increasing data redundancy and improving data integrity
- C) Improving data redundancy and reducing data integrity
- D) Having no impact on data redundancy or integrity

Answer: A) Reducing data redundancy and improving data integrity

8. What is a stored procedure in MySQL, and how does it differ from a regular SQL query?

- A) A stored procedure is a type of table, and it is the same as a regular SQL query.
- B) A stored procedure is a set of SQL statements with a specific name, and it can be reused.
- C) A stored procedure is used only for data retrieval, unlike regular SQL queries.
- D) A stored procedure cannot have parameters, unlike regular SQL queries.

Answer: B) A stored procedure is a set of SQL statements with a specific name, and it can be reused.

9. How can you prevent and handle deadlocks in MySQL?

- A) Increase the transaction isolation level
- B) Ignore deadlocks, as they are unavoidable
- C) Use proper indexing
- D) Use the ROLLBACK statement

Answer: C) Use proper indexing

10. What is the purpose of the MySQL SHOW WARNINGS `command`?

- A) To display warning messages during the current session
- B) To hide warnings from the server log
- C) To show information about database errors
- D) To list all users with warning status

Answer: A) To display warning messages during the current session

11. When facing a MySQL syntax error, what is a common troubleshooting step?

- A) Restarting the MySQL server
- B) Ignoring the error, as it will resolve on its own
- C) Checking the syntax of the SQL statement
- D) Reinstalling MySQL

Answer: C) Checking the syntax of the SQL statement

12. Explain the purpose of MySQL's binary log and how it can aid in issue resolution.

- A) The binary log records SQL statements for backup purposes and can be used for point-in-time recovery.
- B) The binary log is used to store only binary data, not SQL statements.
- C) The binary log is unrelated to issue resolution in MySQL.
- D) The binary log is a log of all failed login attempts.

Answer**:** A) The binary log records SQL statements for backup purposes and can be used for point-in-time recovery.

13. What is a deadlock, and how does it differ from a regular lock in MySQL?

- A) A deadlock is a situation where two or more transactions cannot proceed because each is waiting for the other to release a lock, while a regular lock is a single transaction holding a lock.
- B) A deadlock is a normal part of MySQL transactions, and it is the same as a regular lock.
- C) A deadlock only occurs when there is a hardware failure, whereas a regular lock is a software-based mechanism.
- D) A deadlock is a lock that never gets released, unlike a regular lock.

Answer**:** A) A deadlock is a situation where two or more transactions cannot proceed because each is waiting for the other to release a lock, while a regular lock is a single transaction holding a lock.

14. How can you monitor and optimise MySQL performance over time?

- A) By running the OPTIMISE PERFORMANCE command regularly
- B) By using the Performance Schema and monitoring tools
- C) By increasing the size of the InnoDB buffer pool
- D) By disabling the query cache

Answer: B) By using the Performance Schema and monitoring tools

15. Explain the concept of query caching in MySQL and its potential impact on performance.

- A) Query caching is the process of saving query results so that identical queries can be retrieved faster, potentially improving performance.
- B) Query caching only impacts read operations, not write operations.
- C) Query caching has no impact on MySQL performance.
- D) Query caching is the same as indexing.

Answer: A) Query caching is the process of saving query results so that identical queries can be retrieved faster, potentially improving performance.

16. What does the term "MySQL Replication" refer to?

- A) A method to replicate the entire database on a remote server
- B) Copying and distributing data from one database to another
- C) An error in MySQL syntax
- D) Ignoring MySQL issues for later resolution

Answer: B) Copying and distributing data from one database to another

17. Explain the purpose of the MySQL CHECK TABLE statement.

- A) To perform a syntax check on the table definition
- B) To check and repair table corruption
- C) To create a new table with specific constraints
- D) To check the status of the MySQL server

Answer: B) To check and repair table corruption

18. What is the significance of the InnoDB storage engine in MySQL, and how does it differ from MyISAM?

- A) InnoDB is primarily for read-heavy workloads, while MyISAM is optimised for write-heavy workloads.
- B) InnoDB supports transactions and foreign keys, whereas MyISAM does not.
- C) MyISAM is the default storage engine, and InnoDB is used only for specific cases.
- D) InnoDB and MyISAM have no differences in terms of functionality.

Answer: B) InnoDB supports transactions and foreign keys, whereas MyISAM does not.

19. What command would you use to grant SELECT privileges on a specific table in MySQL?

- A) GRANT SELECT ON table_name TO user_name
- B) ALLOW SELECT ON table_name FOR user_name
- C) SELECT GRANT ON table_name BY user_name
- D) GRANT ALL PRIVILEGES TO user_name

Answer: A) GRANT SELECT ON table_name TO user_name

20. How does MySQL handle transactions, and what is the purpose of the COMMIT statement?

- A) MySQL does not support transactions, and the COMMIT statement is not used.
- B) MySQL uses the COMMIT statement to begin a new transaction.
- C) MySQL automatically commits every SQL statement, and the COMMIT statement is unnecessary.
- D) MySQL uses the COMMIT statement to make changes made during a transaction permanent.

Answer: D) MySQL uses the COMMIT statement to make changes made during a transaction permanent.