

# Exam on JDBC (1hr 30min)

**Submission Procedure:** Please create a new repository name 'Zorba\_Exam\_Submission' with README file. Next clone the repo to your local. Next create a new Project inside the cloned folder. In that project complete the coding. Inside the same project resource folder keep the answer of the MCQL questions. Going forward all the exam should be created inside the same folder name 'Zorba\_Exam\_Submission'. Please add me (abhi.gayen89@gmail.com) as collaborator there

**Part – A:**

1. Which of the following is advantage of using JDBC connection pool?
  - A) Slow performance
  - B) Using more memory
  - C) Using less memory
  - D) Better performance
  
2. Which of the following is advantage of using PreparedStatement in Java?
  - A) Slow performance
  - B) Encourages SQL injection
  - C) Prevents SQL injection
  - D) More memory usage
  
3. What does setAutoCommit(false) do?
  - A) commits transaction after each query
  - B) explicitly commits transaction
  - C) does not commit transaction automatically after each query
  - D) never commits transaction
  
4. Which of the following is used to rollback a JDBC transaction?
  - A) rollback()

- B) rollforward()
- C) deleteTransaction()
- D) RemoveTransaction()

**5. Select the packages in which JDBC classes are defined?**

- A) jdbc and javax.jdbc
- B) rdb and javax.rdb
- C) jdbc and java.jdbc.sql
- D) sql and javax.sql

**6. What is the correct sequence to create a database connection?**

**i. Import JDBC packages.**

**ii. Open a connection to the database.**

**iii. Load and register the JDBC driver.**

**iv. Execute the statement object and return a query resultset.**

**v. Create a statement object to perform a query.**

**vi. Close the resultset and statement objects.**

**vii. Process the resultset.**

A) i, ii, iii, v, iv, vii, viii, vi

B) i, iii, ii, v, iv, vii, vi, viii

C) ii, i, iii, iv, viii, vii, v, vi

D) i, iii, ii, iv, v, vi, vii, viii

**7. Which of the following method is used to perform DML statements in JDBC?**

- A) executeResult()
- B) executeQuery()
- C) executeUpdate()
- D) execute()

**8. Which methods are required to load a database driver in JDBC?**

- A) `getConnection()`
- B) `registerDriver()`
- C) `forName()`
- D) Both b and c

**9. Parameterized queries can be executed by?**

- A) `ParameterizedStatement`
- B) `PreparedStatement`
- C) `CallableStatement` and `ParameterizedStatement`
- D) All kinds of Statements

**10. What should be the correct order to close the database resource? What should be the correct order to close the database resource?**

- A) Connection, Statements, and then `ResultSet`
- B) `ResultSet`, Connection, and then Statements
- C) Statements, `ResultSet`, and then Connection
- D) `ResultSet`, Statements, and then Connection

## Part-B

Write a program on **Railway ticket reservation systems**,

Read database url, username, password from properties file.

[Hints: consider a class RailwayReservation, take attributes as 'passengerName', 'passengerAge', 'chosenSeat', 'typeOfReservation' (AC / Non-AC), 'amountPaid', 'isSeniorCitizen'.

Take input of passengerName, age, seat, and type, while taking input do proper validation like age provided as integer not any other format like float or String and if age > 60 then

Consider passenger as senior citizen and populate 'isSeniorCitizen' as true assign the lower berth/seat. And after taking all the input need to calculate the amount to be paid for booking,

if 'AC' is the type of reservation then rate will be \$100 and if non-AC the rate will be \$60.

1. Create one table using jdbc named: 'railway\_reservation' with column name as 'passenger\_name', 'passenger\_age', 'chosen\_seat', 'reservation\_type', 'is\_senior\_citizen', 'amount\_paid'.
2. Once take input of passengerName, passengerAge, chosenSeat and typeOfReservation, then please insert those records to database.
3. Once calculated whether the passenger is senior citizen or not then update the same under column name 'is\_senior\_citizen' in the already inserted row (in point 2) with 0 / 1 value (while true value to be saved 1 and 0 while value will be false)
4. Once amount been calculated then same would be updated under 'amount\_paid' column for the inserted row (in point 2).

**\*\*** Make sure you follow the steps mentioned above while inserting and updating the row.