

NPTEL Online Certification Courses

Indian Institute of Technology Kharagpur



NOC25-CS57 (JAN-2025 25S)

PROGRAMMING IN JAVA

Assignment 11

TYPE OF QUESTION: MCQ

Number of questions: $10 \times 1 = 10$

QUESTION 1:

What is the full form of JDBC?

- a. Java Database Connectivity
- b. Java Data Code
- c. Java Data Communication
- d. Java Development Connectivity

Correct Answer:

a. Java Database Connectivity

Detailed Solution:

JDBC stands for Java Database Connectivity, a Java API used to connect and interact with relational databases. It provides methods to query and update data in a database.





QUESTION 2:

Fill in the missing code to establish a connection to a MySQL database.

What should replace // INSERT CODE HERE?

- a. DriverManager.connect("mysql:localhost:mydb", "user", "password");
- b. DriverManager.getConnection("jdbc:mysql://localhost:3306/mydb", "user", "password");
- c. Connection.get("jdbc:mysql://localhost:3306/mydb", "user", "password");
- d. Driver.connect("jdbc:mysql://localhost:mydb", "user", "password");

Correct Answer:

b. DriverManager.getConnection("jdbc:mysql://localhost:3306/mydb", "user", "password");

Detailed Solution:

The DriverManager.getConnection method establishes a connection to the specified database URL with the provided username and password.





QUESTION 3:

Identify the error in the following code and select the corrected statement:

```
import java.sql.*;

public class ResultSetExample {
    public static void main(String[] args) throws SQLException {
        Connection connection =
    DriverManager.getConnection("jdbc:mysql://localhost:3306/mydb",
    "user", "password");
        Statement stmt = connection.createStatement();
        ResultSet rs = stmt.execute("SELECT * FROM users"); // Error
        while (rs.next()) {
            System.out.println(rs.getString("username"));
        }
        connection.close();
    }
}
```

What is the correct statement to replace the line with error (stmt.execute("SELECT * FROM users");)?

- a. ResultSet rs = stmt.executeQuery("SELECT * FROM users");
- b. ResultSet rs = stmt.runQuery("SELECT * FROM users");
- c. ResultSet rs = stmt.execute("users SELECT * FROM");
- d. ResultSet rs = stmt.fetch("SELECT * FROM users");

Correct Answer:

a. ResultSet rs = stmt.executeQuery("SELECT * FROM users");

Detailed Solution:

The executeQuery method is used to execute SQL queries that return a ResultSet.



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QUESTION 4:

What will the following Java program output if the database contains a table products with a column name and three rows: Laptop, Phone, and Tablet?

```
import java.sql.*;

public class DisplayProducts {
  public static void main(String[] args) {
    try {
        Connection conn =
        DriverManager.getConnection("jdbc:mysql://localhost:3306/store", "root",
        "pass");
        Statement stmt = conn.createStatement();
        ResultSet rs = stmt.executeQuery("SELECT name FROM products");
        while (rs.next()) {
            System.out.println(rs.getString("name"));
        }
        conn.close();
        } catch (SQLException e) {
            e.printStackTrace();
        }
    }
}
```

- a. Compilation Error
- b. Runtime Error
- c. Laptop Phone Tablet
- d. No Output

Correct Answer:

c. Laptop Phone Tablet

Detailed Solution:

The program fetches and displays all rows from the name column in the products table using a ResultSet.





QUESTION 5:

Complete the following code to insert a new user into a users table.

What should replace // INSERT CODE HERE?

- a. conn.createStatement(query);
- b. conn.prepareStatement(query);
- c. conn.execute(query);
- d. conn.runStatement(query);

Correct Answer:

a. conn.prepareStatement(query);

Detailed Solution:

The prepareStatement method prepares the SQL query for execution, allowing the use of parameterized inputs.





QUESTION 6:

Which of the following SQL operations can be executed using the executeUpdate method in JDBC?

- I. INSERT INTO users (id, name) VALUES (1, 'Alice');
- II. UPDATE users SET name='Bob' WHERE id=1;
- III. DELETE FROM users WHERE id=1;
- IV. SELECT * FROM users;
 - a. I, II, and III
 - b. Only I and II
 - c. Only I
 - d. I, II, III and IV

Correct Answer:

a. I, II, and III

Detailed Solution:

The executeUpdate method is used for SQL operations that modify data (INSERT, UPDATE, DELETE). It cannot be used for SELECT queries, which return a ResultSet.





QUESTION 7:

What is the purpose of the DriverManager class in JDBC?

- a. To manage database connections.
- b. To execute SQL queries.
- c. To fetch data from a database.
- d. To represent a database record.

Correct Answer:

a. To manage database connections.

Detailed Solution:

The DriverManager class loads the JDBC drivers and establishes connections to databases.





QUESTION 8:

How do you establish a connection to a database using JDBC?

- a. By creating an instance of the Connection interface
- b. By using the DriverManager.getConnection() method
- c. By implementing the Connection interface
- d. By extending the Connection class

Correct Answer:

b. By using the DriverManager.getConnection() method

Detailed Solution:

To establish a connection to a database using JDBC, you use the DriverManager.getConnection() method. This method takes a JDBC URL, username, and password as parameters and returns a Connection object, which represents a connection to the database. The JDBC URL specifies the database type, location, and other connection details.





QUESTION 9:

Which method executes a simple query a	and returns a single Result Set object?
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- a. executeQuery()
- b. executeUpdate()
- c. execute()
- d. run()

Correct Answer:

a. executeQuery()

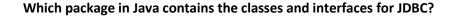
Detailed Solution:

The executeQuery() method is used to execute a simple SQL query that returns a single ResultSet object.





QUESTION 10:



- a. java.sql
- b. java.io
- c. java.db
- d. java.net

Correct Answer:

a. java.sql

Correct Answer:

java.sql package in Java contains the classes and interfaces for JDBC.