



PROGRAMMING IN JAVA

Assignment 10

TYPE OF QUESTION: MCQ

Number of questions: 10

Total marks: $10 \times 1 = 10$

QUESTION 1:

Which Swing component is used to create a button?

- a. JLabel
- b. JButton
- c. JTextField
- d. JPanel

Correct Answer:

- b. JButton

Detailed Solution:

`JButton` is used to create a clickable button in a Swing-based GUI.



QUESTION 2:

What does a toggle button in Java do?

- a. It switches between two states, like on/off or enabled/disabled.
- b. It only changes the color of the button when clicked.
- c. It displays text inside the button.
- d. It opens a new window when clicked.

Correct Answer:

- a. It switches between two states, like on/off or enabled/disabled.

Detailed Solution:

A toggle button allows users to switch between two states, such as "on" or "off." It behaves like a checkbox, but it is represented as a button.



QUESTION 3:

What is the primary purpose of SQL(Structured Query Language) in Java application ?

- a. To create and amange user interfaces
- b. To interact with databases for data retrieval and manipulation
- c. To performa systme-level operation like file management
- d. To handle memory allocation in Java programs

Correct Answer:

- b. To interact with databases for data retrieval and manipulation

Detailed Solution:

SQL is used in Java applications primarily to connect to databases, retrieve data, update records, and perform other database operations, making it essential for handling data within applications.

Commented [NP1]: Already given in W11, requesting to change the question

Commented [DM2R1]: Thanks , question changed.



QUESTION 4:

Which method is used in Java to check if a network interface is up and running?

- a. `isActive()`
- b. `isUp()`
- c. `isRunning()`
- d. `isConnected()`

Correct Answer:

- b. `isUp()`

Detailed Solution:

In Java, the `isUp()` method is used to check whether a network interface is up and running. This method is part of the `NetworkInterface` class from the `java.net` package.



QUESTION 5:

Which of the following are considered as basic networking components in Java?

- a. `Socket` and `ServerSocket`
- b. `String` and `Integer`
- c. `JFrame` and `Jbutton`
- d. `Scanner` and `System`

Correct Answer:

- a. `Socket` and `ServerSocket`

Detailed Solution:

In Java, `Socket` and `ServerSocket` are the primary components used for establishing client-server communication. These classes belong to the `java.net` package and are fundamental to networking in Java. `String`, `Integer`, `JFrame`, `JButton`, `Scanner`, and `System` are not used for basic networking functionality.



QUESTION 6:

In context of the following URL, identify the correct option.

<https://nptel.ac.in>

- a. There is no protocol provided in the above link.
- b. The website provides a secure connection.
- c. The given link is incomplete and hence cannot open a website.
- d. The ac.in refers to the domain.

Correct Answer:

- b. The website provides a secure connection.

Detailed Solution:

Resource name is nptel.ac.in. The protocol used is https and hence provides a secure connection to the website. The link is complete in all aspects and hence can open a website (*if hosted*). The [ac.in](https://nptel.ac.in) portion of the website is top-level domain part and not a path.



QUESTION 7:

Which of the following is/are application layer protocol(s)?

- a. TCP
- b. UDP
- c. ARP
- d. SMTP

Correct Answer:

- d. SMTP

Detailed Solution:

TCP, UDP are transport layer protocols. ARP is a Network - IP layer protocol. SMTP is Application layer protocol.



QUESTION 8:

What does this Java code snippet do?

```
import java.sql.*;

public class NPTEL {
    public static void main(String[] args) {
        try {
            Class.forName("com.mysql.jdbc.Driver");
            Connection con = DriverManager.getConnection(
                "jdbc:mysql://localhost:3306/mydatabase",
                "username", "password");
            Statement stmt = con.createStatement();
            ResultSet rs = stmt.executeQuery("SELECT * FROM employees");
            while (rs.next()) {
                System.out.println(rs.getString(1)+" "+rs.getString(2));
            }
            con.close();
        } catch (Exception e) {
            System.out.println(e);
        }
    }
}
```

- a. Connects to a MySQL database, retrieves data from the "employees" table, and prints it
- b. Inserts data into the "employees" table of a MySQL database
- c. Deletes data from the "employees" table of a MySQL database
- d. Updates data in the "employees" table of a MySQL database

Correct Answer:

- a. Connects to a MySQL database, retrieves data from the "employees" table, and prints it

Detailed Solution:

The code snippet establishes a connection to a MySQL database, executes a SELECT query to retrieve data from the "employees" table, and prints the results.



QUESTION 9:

Which class provides methods to work with URLs?

- a. URLConnection
- b. HttpURL
- c. NetURL
- d. URL

Correct Answer:

- d. URL

Detailed Solution:

The `URL` class provides methods to work with Uniform Resource Locators.



QUESTION 10:

Which class in Java is used to create a server socket?

- a. `Socket`
- b. `ServerSocket`
- c. `DatagramSocket`
- d. `HttpURLConnection`

Correct Answer:

- b. `ServerSocket`

Detailed Solution:

`ServerSocket` is used to listen for incoming connections on a specific port, enabling communication with clients in server-client applications.
