

NPTEL Online Certification Courses Indian Institute of Technology Kharagpur NOC25-CS57 (JAN-2025 25S)



PROGRAMMING IN JAVA

Assignment 10 TYPE OF QUESTION: MCQ

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

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:

 ${\tt JButton}$ 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.

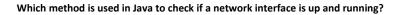
Commented [NP1]: Already given in W11, requesting to change the question

Commented [DM2R1]: Thanks , question changed.





QUESTION 4:



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

Correct Answer:

b. isUp()

Detailed Solution:

In Java, the \mathtt{isUp} () method is used to check whether a network interface is up and running. This method is part of the $\mathtt{NetworkInterface}$ class from the $\mathtt{java.net}$ 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, <code>Socket</code> and <code>ServerSocket</code> are the primary components used for establishing client-server communication. These classes belong to the <code>java.net</code> package and are fundamental to networking in Java. <code>String</code>, <code>Integer</code>, <code>JFrame</code>, <code>JButton</code>, <code>Scanner</code>, and <code>System</code> 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 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)	ı.
a. TCP	
b. UDP	
c. ARP	
d. SMTP	
Correct Answer:	
d. SMTP	
Detailed Solution:	
TCP, UDP are transport layer protocols. ARP is a Network - Il protocol.	P layer protocol. SMTP is Application layer





QUESTION 8:

What does this Java code snippet do?

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

Correct Answer:

d. URL

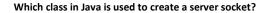
Detailed Solution:

The \mathtt{URL} class provides methods to work with Uniform Resource Locators.





QUESTION 10:



- 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.