

**SARDAR VALLABHBHAI PATEL INSTITUTE OF
TECHNOLOGY, VASAD
INFORMATION TECHNOLOGY
ACADEMIC YEAR 2018-2019(EVEN)
SEMESTER VI
ADVANCED JAVA (2160707)
QUESTION BANK**

UNIT 1 JAVA Networking

1. Explain TCP/IP suite in detail.
2. Short note on Port Number, IP Address and Socket.
3. Difference between TCP and UDP.
4. What are URI, URL and URN. Explain it with appropriate example.
5. Define following terms:
 - a. Socket
 - b. Port Number
 - c. IP address
 - d. URL
 - e. TCP
 - f. UDP
6. Explain Socket, ServerSocket, InetAddress classes. Write a java program to find an IP address of the machine on which the program runs.
7. Discuss the URL and URLConnection class with their use in network programming.

OR

Discuss URL and URLConnection class. Explain its various methods with an example.

OR

Use of the URL class

8. Write down the steps to create networking application using TCP. Explain each step with code snippet.
9. What is Server Socket? How it works with JAVA?? Explain with an example.
10. What is Datagram Socket?? Explain with the help of an example.
11. Write a concurrent client server program using TCP where client sends two numbers and server responds with sum, multiplication, division, modulo and subtraction of them.
12. Write a Java Client and Server Program to get date time from server on the client request.
13. Write an UDP client and server program to do the following:
Client send any string and server respond with its capital string.
14. Write down the program to transfer PDF/image file from server to client. (First server asks for filename, client will enter the file name, and server will transfer the file if file exists at server).

15. Write a concurrent client-server program using TCP sockets to echo the message send by the client.
16. Write a client-server program using UDP to echo the message send by the client.
17. Write a TCP or UDP client and server program to do the following:
client> java client localhost/IP Port <enter>
Enter text: This is my text to be changed by the SERVER <enter>
Response from server: revres EHT YB DEGNAHC EB OT TXET YM SI SIHt
client> exit
18. Explain the following classes with their use.
 - i. URLConnection class
 - ii. DatagramSocket and DatagramPacket class
19. Write a client program to send any string from its standard input to the server program. The server program reads the string, finds length and also finds number of characters and digits and sends it back to client program. Use connection-oriented or connection-less communication.
20. Write down a Client server chat application either using connection oriented or connection less method.
21. Implement client server program that works like a DNS, where server maintains a table having pairs of hostname-IP address and delivers IP address of the machine from a table whose hostname is sent by client.

UNIT 2 JDBC PROGRAMMING

1. What is JDBC driver? What is its role? List the types of drivers and explain Working of type 3 and type-4 driver.

OR

What is JDBC? What are the various types of JDBC Driver? Write code snippet for each type of JDBC connection.

OR

List out different types of JDBC driver and explain each.

OR

Explain Various JDBC Drivers.

OR

Explain various types of JDBC drivers and comment on selection of driver.

OR

Describe following with proper illustrations:

(1) Type-4 JDBC driver

OR

What is JDBC driver? What is its role? List the types of drivers and explain working of type-4 driver. Give the different ways to create the JDBC connection with example.

OR

Explain JDBC ODBC Bridge? Explain its working with the help of diagram and give its limitations.

2. Explain JDBC driver types. Write a Java Bean to connect to database and insert in the database. Query will be passed as a message to bean.

3. Explain the JDBC URL with appropriate examples
4. Explain following in brief: (1) JDBC Architecture (2) Basic JDBC Steps.
5. Explain Java Database connectivity steps using an example (code snippet).
6. What is the role of DriverManager Class? Explain various methods of the DriverManager Class.
7. Give the use of Statement, PreparedStatement and CallableStatement object. Write code to insert three records into student table using PreparedStatement (assume student table with Name, RollNo, and Branch field).
8. Explain Prepared statements with suitable example

OR

Explain the use of the PreparedStatement object of the JDBC with an appropriate example.

OR

Explain the use of CallableStatement and PreparedStatement with example

9. What is CallableStatement? Show that how to use it to call a stored procedure running at database layer.

OR

What is Callable statement? Write a procedure to insert a row into the table student(roll_no,name,%ge) and call it using callable statement in JDBC application.

10. Explain Stored Procedure with an example and also discuss IN, OUT and INOUT parameters and its significance.
11. What is Cursor in SQL? What is use of Cursor. Write a program using Cursor in Stored Procedure in mysql.
12. Write the difference between Simple Statement and Prepared Statement with the use of proper diagram and working process.

OR

Compare the Execution control of Statement and Prepared Statement.

13. Consider Bank table with attributes AccountNo, CustomerName, Balance, Phone and Address. Write a database application which allows insertion, updation and deletion of records in Bank table. Print values of all customers whose balance is greater than 20,000.

14. Write down a JDBC code to retrieve data from table and display it with the use of methods of ResultSetInterface.

15. Write a JDBC program to insert and retrieve photo in database.

OR

Write down the program to upload and download any binary file.

16. Write a JDBC program to insert and retrieve file in database.

OR

Write down the program to upload and download any character stream file.

17. Explain the use of ResultSetMetadata with an example

OR

Write down a Java program to retrieve information related to ResultSet and database metadata.

18. What is Batch Update? Describe various methods of Batch Update with an example.

19. What is Transaction Management? Types of Transaction Management. Explain ACID property.

20. What is Updatable ResultSet? What is the use of it. Explain with an illustration.
21. Write a program to update and delete two rows from table using Updatable Resultset.
22. Write down a program to demonstrate various transaction functionalities (auto commit, Savepoint, rollback)
23. Make simple crude application (insert, update, delete) with the use of JDBC. (take all inputs from user).
24. Explain SQLException and BatchUpdateException with the use of code snippet.
25. Difference:
 - a. Statement and PreparedStatement
 - b. Stored Procedure and Function
 - c. Type-2 Driver and Type-3 Driver

UNIT-3 SERVLET

1. Explain Servlet Life Cycle with example to demonstrate every state.
2. What is Deployment Descriptor? Show it with example web.xml file.
3. Develop any Servlet application which demonstrates use of session management using HttpSession interface.
4. What is filter? What is its use? List the different filter interfaces with their important methods.
5. What are cookies? Write a Servlet that demonstrate the use of cookies.
6. Explain Life Cycle of a filter. List the application of the filter.
7. Write a Java Servlet to create login form and check if username and password are valid or not using JDBC.
8. Write a web application using Servlet to compute an area of a circle. Get the radius from the client. Write necessary web.xml file.
9. Enlist and explain the need of filters with a program.
10. What is ServletContext and ServletConfig object? Explain with example. Differentiate between the ServletContext and ServletConfig Object.
11. Explain Request Dispatcher interface with example.
12. Explain Servlet by using annotation interface with example.
13. Write a Java application to perform insert and delete query using servlet and JDBC.
14. Write a program to implement authentication filter using filter API.
15. Explain role of web container. Write servlet file with web.xml .
16. What is doFilter() method? What are its parameters? Give its use with proper example.
17. Explain HttpServletRequest object with its important methods.
18. Explain HttpServletResponse object with its important methods.
19. How can you pass the parameters to a servlet? Explain with example.
20. Write a servlet to display the name and age of person received as parameters.
21. Write a servlet which accepts the two numbers using POST method and display the maximum of them.
22. Explain the configuration of filter using deployment descriptor.

UNIT-4 JSP

1. Explain Life Cycle of a JSP page.
2. What is JSP? Give the advantages of JSP over the Servlet.
3. Describe the architecture of JSP page to build the web application.
4. Classify the JSP scripting tags and give example for each.
5. Explain the JSP implicit objects with their use.
6. Compare JSP with Servlet.
7. Draw and explain JSP architecture.

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