Practical Duration: 3 Hours   **Max. Marks: 35**

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1. Write a Java program using Multithreading to display all the alphabets between 'A' to 'Z' after every 2 seconds.   [15 M]

2. Write a Java program to accept the details of Employee (Eno, EName, Designation, Salary) from a user and store it into the database. (Use Swing)   [15 M]

3. Viva   [05M]

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----

1. Write a java program to read 'N' names of your friends, store it into HashSet and display them in ascending order.   [15 M]

2. Design a servlet that provides information about a HTTP request from a client, such as IP-Address and browser type. The servlet also provides information about the server on which the servlet is running, such as the operating system type, and the names of currently loaded servlets.   [15 M]

3. Viva   [05M]

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----

1. Write a JSP program to display the details of Patient (PNo, PName, Address, age, disease) in tabular form on browser.   [15 M]

2. Write a Java program to create LinkedList of String objects and perform the following:
   - i.   Add element at the end of the list
   - ii.   Delete first element of the list
   - iii. Display the contents of list in reverse order   [15 M]

3. Viva   [05 M]

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1. Write a Java program using Runnable interface to blink Text on the JFrame (Use Swing)   [15 M]

2. Write a Java program to store city names and their STD codes using an appropriate collection and perform following operations:
   - i.   Add a new city and its code (No duplicates)
   - ii.   Remove a city from the collection
   - iii.   Search for a city name and display the code   [15 M]

3. Viva   [05 M]

Practical Duration: 3 Hours   **Max. Marks: 35**

----

1. Write a Java Program to create the hash table that will maintain the mobile number and student name. Display the details of student using Enumeration interface.   [15 M]

2. Create a JSP page for an online multiple choice test. The questions are randomly selected from a database and displayed on the screen. The choices are displayed using radio buttons. When the user clicks on next, the next question will be displayed. When the user clicks on submit, display the total score on the screen.   [15 M]

3. Viva   [05 M]

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1. Write a Java program to accept 'n' integers from the user and store them in a Collection. Display them in the sorted order. The collection should not accept duplicate elements. (Use a suitable collection). Search for a particular element using predefined search method in the Collection framework.   [15 M]

2. Write a java program using multithreading to simulate traffic signal (Use Swing).

[15 M]

3. Viva   [05 M]

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----

1. Write a java program that implements a multi-thread application that has three threads. First thread generates random integer number after every one second, if the number is even; second thread computes the square of that number and prints it. If the number is odd, the third thread computes the cube of that number and prints it.   [15 M]

2. Write a java program for the following:
   i.   To create a Product (Pid, Pname, Price) table.
   ii. Insert at least five records into the Product table.
   iii. Display all the records from a Product table.
   Assume Database is already created.   [15 M]

3. Viva   [05 M]

Practical Duration: 3 Hours   **Max. Marks: 35**

----

1. Write a java program to define a thread for printing text on output screen for 'n' number of times. Create 3 threads and run them. Pass the text 'n' parameters to the thread constructor.
    Example:

    i.   First thread prints "COVID19" 10 times.
    ii.   Second thread prints "LOCKDOWN2020" 20 times
    iii.   Third thread prints "VACCINATED2021" 30 times   [15 M]

2. Write a JSP program to check whether a given number is prime or not. Display the result in red color.   [15 M]

3. Viva   [05 M]

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----

1. Write a Java program to create a thread for moving a ball inside a panel vertically. The ball should be created when the user clicks on the start button (Use Swing).

    [15 M]

2. Write a Java program using Spring to display the message "If you can't explain it simply, you don't understand it well enough".   [15 M]

3. Viva   [05 M]

Practical Duration: 3 Hours   **Max. Marks: 35**

----

1. Write a Java program using Spring to display the Current Date.   [15 M]

2. Write a Java program to display first record from student table (RNo, SName, Per) onto the TextFields by clicking on button. (Assume Student table is already created).
                                                                              [15 M]

3. Viva   [05 M]

Practical Duration: 3 Hours   **Max. Marks: 35**

----

1. Design an HTML page which passes customer number to a search servlet. The servlet searches for the customer number in a database (customer table) and returns customer details if found the number otherwise display error message.   [15 M]

2. Write a Java program to display information about all columns in the DONAR table using ResultSetMetaData.   [15 M]

3. Viva   [05 M]

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----

1. Write a JSP program to check whether given number is Perfect or not. (Use Include directive).   [15 M]

2. Write a Java Program to create a PROJECT table with field's project_id, Project_name, Project_description, Project_Status. Insert values in the table. Display all the details of the PROJECT table in a tabular format on the screen.(using swing).   [15 M]

3. Viva   [05 M]

Practical Duration: 3 Hours   **Max. Marks: 35**

----

1. Write a Java program to display information about the database and list all the tables in the database. (Use DatabaseMetaData).   [15 M]

2. Write a Java program to show lifecycle (creation, sleep, and dead) of a thread. Program should print randomly the name of thread and value of sleep time. The name of the thread should be hard coded through constructor. The sleep time of a thread will be a random integer in the range 0 to 4999.   [15 M]

3. Viva.   [05 M]

Practical Duration: 3 Hours   **Max. Marks: 35**

----

1. Write a Java program using Multithreading for a simple search engine. Accept a string to be searched. Search the string in all text files in the current folder. Use a separate thread for each file. The result should display the filename and line number where the string is found.

   [15 M]

2. Write a JSP program to calculate sum of first and last digit of a given number. Display sum in Red Color with font size 18.   [15 M]

3. Viva   [05 M]

Practical Duration: 3 Hours   **Max. Marks: 35**
----

1. Write a java program to display name and priority of a Thread.   [15 M]

2. Write a SERVLET program which counts how many times a user has visited a web page. If user is visiting the page for the first time, display a welcome message. If the user is revisiting the page, display the number of times visited. (Use Cookie)

                                                                            [15 M]

3. Viva   [05 M]

Practical Duration: 3 Hours   **Max. Marks: 35**

----

1. Write a java program to create a TreeSet, add some colors (String) and print out the content of TreeSet in ascending order.   [15 M]

2. Write a Java program to accept the details of Teacher (TNo, TName, Subject). Insert at least 5 Records into Teacher Table and display the details of Teacher who is teaching "JAVA" Subject. (Use PreparedStatement Interface)   [15 M]

3. Viva   [05 M]

Practical Duration: 3 Hours   **Max. Marks: 35**

----

1. Write a java program to accept 'N' integers from a user. Store and display integers in sorted order having proper collection class. The collection should not accept duplicate elements.

                                                                                [15 M]

2. Write a java program using Multithreading to display the number's between 1 to 100 continuously in a JTextField by clicking on JButton. (Use Runnable Interface & Swing).

                                                                                [15 M]

3. Viva   [05 M]

Practical Duration: 3 Hours   **Max. Marks: 35**

----

1. Write a java program using Multithreading to display all the vowels from a given String. Each vowel should be displayed after every 3 seconds.   [15 M]

2. Write a SERVLET program in java to accept details of student (SeatNo, Stud_Name, Class, Total_Marks). Calculate percentage and grade obtained and display details on page.   [15 M]

3. Viva   [05 M]

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----

1. Write a java program to accept 'N' Integers from a user store them into LinkedList Collection and display only negative integers.   [15 M]

2. Write a java program using SERVLET to accept username and password, search them into database, if found then display appropriate message on the browser otherwise display error message.   [15 M]

3. Viva   [05 M]

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----

1. Create a JSP page to accept a number from a user and display it in words: Example: 123 – One Two Three. The output should be in red color. [15 M]

2. Write a java program using Multithreading to demonstrate drawing temple (Use Swing). [15 M]

3. Viva [05 M]

Practical Duration: 3 Hours   **Max. Marks: 35**

----

1. Write a java program to accept 'N' Subject Names from a user store them into LinkedList Collection and Display them by using Iterator interface.   [15 M]

2. Write a java program using Multithreading to solve producer consumer problem in which a producer produces a value and consumer consume the value before producer generate the next value. (Hint: use thread synchronization)   [15 M]

3. Viva   [05 M]

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----

1. Write a Menu Driven program in Java for the following: Assume Employee table with attributes (ENo, EName, Salary) is already created. 1. Insert 2. Update 3. Display 4. Exit.   [15 M]

2. Write a JSP program which accepts UserName in a TextField and greets the user according to the time on server machine.   [15 M]

3. Exit   [05 M]

Practical Duration: 3 Hours   **Max. Marks: 35**

----

1. Write a java program using Multithreading to accept a String from a user and display each vowel from a   String after every 3 seconds.
        [15 M]

2. Write a java program to accept 'N' student names through command line, store them into the appropriate Collection and display them by using Iterator and ListIterator interface.   [15 M]

3. Viva   [05 M]

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----

1. Write a java program using Multithreading to scroll the text from left to right continuously (Use Swing).   [15 M]

2. Write a JSP script to accept username and password from user, if they are same then display "Login Successfully" message in Login.html file, otherwise display "Login Failed" Message in Error.html file.   [15 M]

3. Viva   [05 M]

Practical Duration: 3 Hours   **Max. Marks: 35**

----

1. Write a JSP program to accept Name and Age of Voter and check whether he is eligible for voting or not.   [15 M]

2. Write a Java Program for the following: Assume database is already created.

```
Type Your DDL Query        [                    ]
Here

[ Create Table ]   [ Alter Table ]   [ Drop Table ]
```

                                                                          [15 M]

3. Viva   [05 M]

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----

1. Write a Java program to delete the details of given employee (ENo EName Salary). Accept employee ID through command line. (Use PreparedStatement Interface)

                                                                                    [15 M]

2. Write a JSP program to calculate sum of first and last digit of a given number. Display sum in Red Color with font size 18.   [15 M]

3. Viva   [05 M]

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----

1. Write a Java Program to display the details of College (CID, CName, address, Year) database table on JTable.   [15 M]

2. Write a SERVLET program to change inactive time interval of session. [15 M]

3. Viva   [05 M]

Practical Duration: 3 Hours   **Max. Marks: 35**

----

1. Write a JSP script to accept a String from a user and display it in reverse order.

    [15 M]

2. Write a java program to display name of currently executing Thread in multithreading.

    [15 M]

3. Viva   [05 M]

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----

1. Write a Java program to display information about all columns in the DONAR table using ResultSetMetaData.   [15 M]

2. Write a Java program to create LinkedList of integer objects and perform the following:
     i. Add element at first position
    ii. Delete last element
   iii. Display the size of link list   [15 M]

3. Viva   [05 M]

Practical Duration: 3 Hours   **Max. Marks: 35**

----

1. Write a java program using Multithreading to demonstrate drawing Indian flag (Use Swing)   .   [15 M]

2. Write a Java Program for the implementation of scrollable ResultSet. Assume Teacher table with attributes (TID, TName, Salary) is already created.   [15 M]

3. Viva   [05 M]