QP CODE: S501FN01 **Time: 3 Hours**

Max Marks: **80** (Q1: 25 marks, Q2: 35 marks, Record: 10 marks, Viva: 10 Marks)

FIFTH SEMESTER BCA PROGRAMME (CBCS)

PRACTICAL EXAMINATION NOVEMBER 2024

Software Lab V

1. Write a program using Swing to accept values, say base and exponent in two textboxes and display the power (i.e. base raised to the exponent) in the third text box.
2. Create a class called **Matrix** which contains a two-dimensional integer array, m, n (order of the matrix) as data members. Include the following member functions
    - To read the matrix
    - To display the matrix
    - To find the transpose of the matrix.

QP CODE: S501FN02 **Time: 3 Hours**

Max Marks: **80** (Q1: 25 marks, Q2: 35 marks, Record: 10 marks, Viva: 10 Marks)

FIFTH SEMESTER BCA PROGRAMME (CBCS)

PRACTICAL EXAMINATION NOVEMBER 2024

Software Lab V

1. Write an applet program to display the national flag of India.

2. Create a class **Student** with attributes roll no, name, age, and course. If the age of the student is not between 21 and 29 then generate the user-defined exception "AgeNotWithinRangeException". If the name contains numbers or special symbols raise exception **"**NameNotValidException**".** Define the two exception classes.

QP CODE: S501FN03 **Time: 3 Hours**

Max Marks: **80** (Q1: 25 marks, Q2: 35 marks, Record: 10 marks, Viva: 10 Marks)

FIFTH SEMESTER BCA PROGRAMME (CBCS)

PRACTICAL EXAMINATION NOVEMBER 2024

Software Lab V

1. Write a Java program to accept a number then check whether a given number is even or odd and display the result in the second textbox.
2. Program to create a package named shapes and define abstract class Shape inside it. The Shape class should have an abstract method getArea(). Define two subclasses Rectangle and Circle that extend the Shape class and implement the getArea() method. Create a class FindArea in a different package and use the Rectangle and Circle classes to find the areas of a rectangle and a circle.

QP CODE: S501FN204 **Time: 3 Hours**

Max Marks: **80** (Q1: 25 marks, Q2: 35 marks, Record: 10 marks, Viva: 10 Marks)

FIFTH SEMESTER BCA PROGRAMME (CBCS)

PRACTICAL EXAMINATION NOVEMBER 2024

Software Lab V

1. Write an applet program to draw different shapes.
2. A bank maintains two kinds of accounts - Savings Account and Current Account. The savings account provides compound interest, deposit, and withdrawal facilities. The current account only provides deposit and withdrawal facilities. Current account holders should also maintain a minimum balance. If the balance falls below this level, a service charge is imposed. Create a class **Account** that stores customer name, account number, and type of account. From this, derive the classes Curr-acct and Sav-acct. Include the necessary methods in order to achieve the following tasks.
    a. Accept deposit from a customer and update the balance
    b. Display the balance.
    c. Compute interest and add to the balance.
    d. Permit withdrawal and update the balance (Check for the minimum balance, impose a penalty if necessary).

QP CODE: S501FN05 **Time: 3 Hours**

Max Marks: **80** (Q1: 25 marks, Q2: 35 marks, Record: 10 marks, Viva: 10 Marks)

FIFTH SEMESTER BCA PROGRAMME (CBCS)

PRACTICAL EXAMINATION NOVEMBER 2024

Software Lab V

1. Write a swing program to accept a value in a textbox then reverse that number and display the result in the second textbox.

2. Create an interface **Department** containing attributes deptName and deptHead. It has an abstract method **showData()** for printing the attribute. Create a class **Hostel** containing hostelname, hostellocation and noofrooms and also have methods **readData()** and **printData()** for reading and printing the details. Then you need to write another class named **Student** extending the **Hostel** class and implementing the **Department** interface. This class contains the attributes studname, regno, electivesub and avgmark and use **readData()** and **showData()** for reading and printing the details.