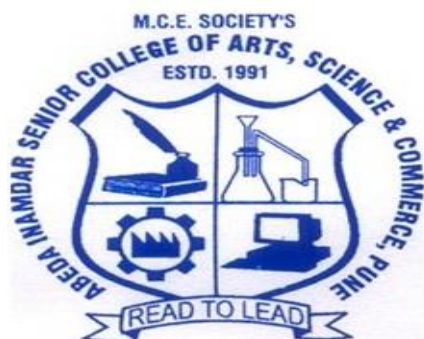# Abeda Inamdar Senior College

(Autonomous)

Booklet of Practical Skeleton Papers for

B.C.A (Science) 2021 Pattern
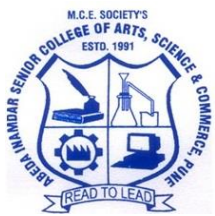
Credit System Syllabus

(FromJune-2021)

S.Y.B.C.A (Science)
SEMESTER–IV

PAPER- 21SBCA241-LAB-I: CoreJAVA

M.C.E. Society's

ABEDA INAMDAR SENIOR COLLEGE

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S.Y.B.C.A. (SCIENCE) PRACTICAL EXAMINATION OCT / APRIL20__
PAPER- 21SBCA241-LAB-I- Core JAVA
(Semester-IV, 2021 pattern)Credits: 1.5

Duration: 3hrs   **Max Marks: 30**

A. Write Java Program find maximum element of an array.(Take Input as Command line argument) **[10]**

B. Define a class MyNumber having one private integer data member. Write a default constructor initialize it to 0 and another constructor to initialize it to a value. Write methods isNegative, isPositive, isOdd, iseven. Use command line argument to pass a value to the object and perform the above operations. **[15]**

C. External Viva **[5]**

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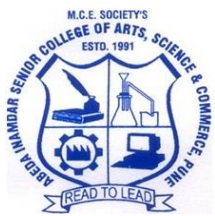**S.Y.B.C.A. (SCIENCE) PRACTICAL EXAMINATION OCT / APRIL20___**
PAPER- 21SBCA241-LAB-I- Core JAVA
(Semester-IV, 2021 pattern)Credits: 1.5

Duration: 3hrs   **Max Marks: 30**

A. Write Java Program to calculate addition of all elements in an array.   **[10]**

B. Write a program which defines class Product with data member as id, name and price. Store the information of 5 products and Display the name of product having minimum price (Use array of object).   **[15]**

C. External Viva   **[5]**

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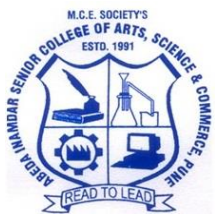**S.Y.B.C.A. (SCIENCE) PRACTICAL EXAMINATION OCT / APRIL20__**
PAPER- 21SBCA241-LAB-I- Core JAVA
(Semester-IV, 2021 pattern)Credits: 1.5

Duration: 3hrs   **Max Marks: 30**

A. Write Java program to accept a number from user and calculate sum of digits.   **[10]**

B. Write a program to accept a number from the user, if number is zero then throw user defined exception ―Number is 0, otherwise display factorial of a number.   **[15]**

C. External Viva   **[5]**

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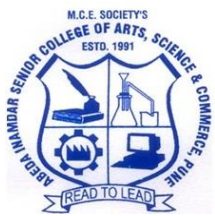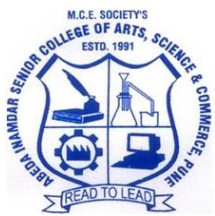**S.Y.B.C.A. (SCIENCE) PRACTICAL EXAMINATION OCT / APRIL20__**
PAPER- 21SBCA241-LAB-I- Core JAVA
(Semester-IV, 2021 pattern)Credits: 1.5

Duration: 3hrs   **Max Marks: 30**

A. Write Java program to calculate reverse of a number (Accept a number from user).

[10]

B. Write a program which define class Employee with data member as id, name and salary Store the information of 'n' employees and Display the name of employee having maximum salary (Use array of object).   **[15]**

C. External Viva   **[5]**

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PAPER- 21SBCA241-LAB-I- Core JAVA

(Semester-IV, 2021 pattern)Credits: 1.5

Duration: 3hrs   **Max Marks: 30**

A. Write Java program to accept a number from the command prompt and generate multiplication table of a number.   **[10]**

B. Define a class MyDate (day, month, year) with methods to accept and display MyDate object. Accept date as dd, mm, yyyy. Throw user defined exception "InvalidDateException" if the date is invalid. Examples of invalid dates : 12 15 2015, 31 6 1990, 29 2 2001.   **[15]**

C. External Viva   **[5]**

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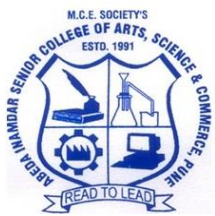**S.Y.B.C.A. (SCIENCE) PRACTICAL EXAMINATION OCT / APRIL20__**
PAPER- 21SBCA241-LAB-I- Core JAVA
(Semester-IV, 2021 pattern)Credits: 1.5

Duration: 3hrs   **Max Marks: 30**

A. Write Java program to Find Factorial of a Given Number.   **[10]**

B. Write a class Student with attributes roll no, name, age and course. Initialize values through parameterized constructor. If age of student is not in between 15 and 21 then generate user- defined exception ―Age not within the Range.   **[15]**

C. External Viva   **[5]**

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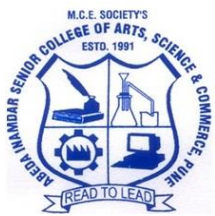**S.Y.B.C.A. (SCIENCE) PRACTICAL EXAMINATION OCT / APRIL20__**

PAPER- 21SBCA241-LAB-I- Core JAVA

(Semester-IV, 2021 pattern)Credits: 1.5

Duration: 3hrs   **Max Marks: 30**

A. Write Java Program to print sum of first n numbers. **[10]**

B. Define a class Student having data members as rollnumber, name and percentage. Define Default and parameterized constructors. Display details of each student. Use array of objects. **[15]**

C. External Viva **[5]**

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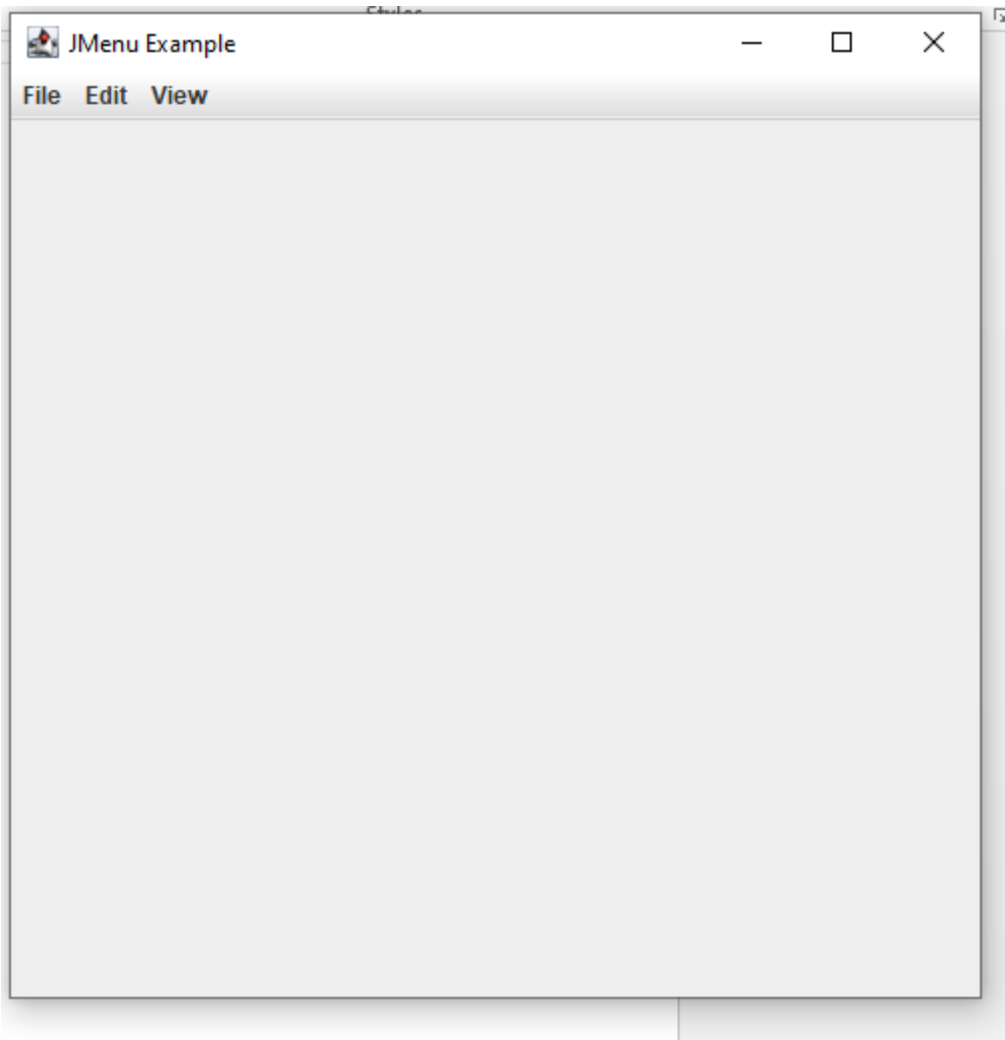**S.Y.B.C.A. (SCIENCE) PRACTICAL EXAMINATION OCT / APRIL20__**

PAPER- 21SBCA241-LAB-I- Core JAVA

(Semester-IV, 2021 pattern)Credits: 1.5

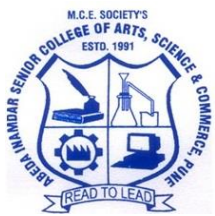**Duration: 3hrs**   **Max Marks: 30**

A. Write Java Program to display characters from A to Z using loop. **[10]**

B. Write a program to design the following GUI using Swing components. Also add appropriate menu items for each menu shown on screen.

[15]

C. External Viva **[5]**

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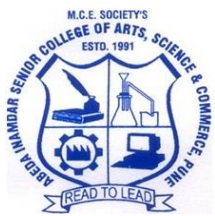**S.Y.B.C.A. (SCIENCE) PRACTICAL EXAMINATION OCT / APRIL20__**
PAPER- 21SBCA241-LAB-I- Core JAVA
(Semester-IV, 2021 pattern)Credits: 1.5

Duration: 3hrs   **Max Marks: 30**

A. Write a Java Program to read the ages of all members of family, store them in one-dimensional array and display the age of the eldest person.   **[10]**

B. Define a class Person (pid, pname, age,gender). Create n objects of person class. Initialize using parameterized constructor and display using toString() method. **[15]**

C. External Viva   **[5]**

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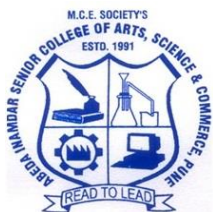**S.Y.B.C.A. (SCIENCE) PRACTICAL EXAMINATION OCT / APRIL20__**

PAPER- 21SBCA241-LAB-I- Core JAVA

(Semester-IV, 2021 pattern)Credits: 1.5

Duration: 3hrs   **Max Marks: 30**

A. Write a Java Program to display command line arguments in reverse order.   **[10]**

B. Write a class Student with attributes roll no, name, age and course. Initialize values through parameterized constructor. If student's roll no of is not in between 13001 to 13080 then generate user- defined exception ―Rollno is Not Within The Range.

[15]

C. External Viva   **[5]**

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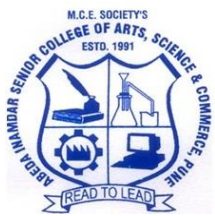**S.Y.B.C.A. (SCIENCE) PRACTICAL EXAMINATION OCT / APRIL20__**
PAPER- 21SBCA241-LAB-I- Core JAVA
(Semester-IV, 2021 pattern)Credits: 1.5

Duration: 3hrs   **Max Marks: 30**

A. Write a java program to find second smallest element in an array. **[10]**

B. Create an abstract class Shape with methods area and volume. Derive a class Sphere (radius).Calculate and display area and volume. **[15]**

C. External Viva **[5]**

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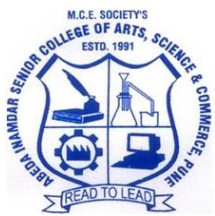**S.Y.B.C.A. (SCIENCE) PRACTICAL EXAMINATION OCT / APRIL20__**

PAPER- 21SBCA241-LAB-I- Core JAVA

(Semester-IV, 2021 pattern)Credits: 1.5

Duration: 3hrs   **Max Marks: 30**

A. Write Java Program to accept a number from user and check if the number is perfect or not. **[10]**

B. Define an interface "Operation" which has methods area(),volume(). Define a constant PI having value 3.142. Create a class circle (member – radius) which implements this interface. Calculate and display the area and volume. **[15]**

C. External Viva **[5]**

Duration: 3hrs   **Max Marks: 30**

A. Write a program to accept 3 numbers using command line argument. Sort and display the numbers.   **[10]**

B. Write a program to create a super class Employee (members – name, salary). Derive a sub- classas Developer (member – projectname). Create object of Developer and display the detail accordingly. (Use Concept of runtime polymorphism).   **[15]**

A.   External Viva   **[5]**

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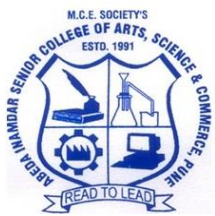**S.Y.B.C.A. (SCIENCE) PRACTICAL EXAMINATION OCT / APRIL20__**

PAPER- 21SBCA241-LAB-I- Core JAVA
(Semester-IV, 2021 pattern)Credits: 1.5

Duration: 3hrs   **Max Marks: 30**

A. Write a program which keeps track of number of objects created using static variable and static method.   **[10]**

B. Create an abstract class "order" having members id, description. Create a subclass "Purchase Order" having member as customer name. Define methods accept and display. Create 3 objects each of Purchase Order. Accept and display the details.

[15]

C. External Viva   **[5]**

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PAPER- 21SBCA241-LAB-I- Core JAVA

(Semester-IV, 2021 pattern)Credits: 1.5

Duration: 3hrs   **Max Marks: 30**

A. Write Java program to Check Character Is Vowel or Consonant.   **[10]**

B. Write a program to implement stack push and Pop operations using interface.   **[15]**

C. External Viva   **[5]**

Duration: 3hrs   **Max Marks: 30**

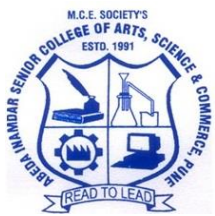A. Write Java Program to calculate addition of all elements in an array.   **[10]**

B.   **[15]**

Write a java program to create the following GUI.

Font   Style
Arial ▼   ☐ Bold
Size   ☐ Italic
10 ▼   ☐ Underline

C. External Viva   **[5]**

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PAPER- 21SBCA241-LAB-I- Core JAVA

(Semester-IV, 2021 pattern)Credits: 1.5

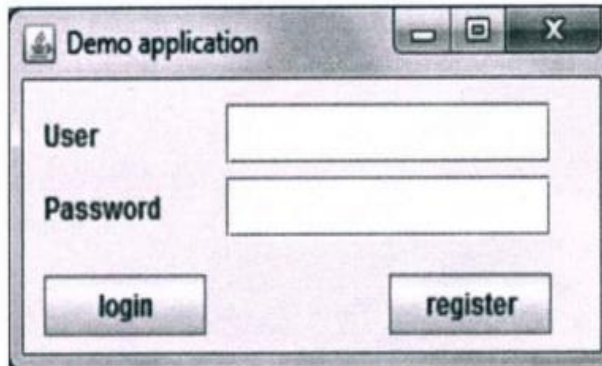**Duration: 3hrs**   **Max Marks: 30**

A. Write Java program to Find Factorial of a Given Number. **[10]**

B. **[15]**
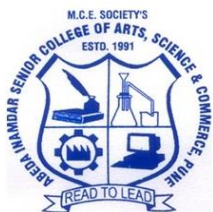
Write a program to create following GUI using Swing

C. External Viva **[5]**

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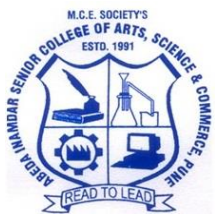
A. Write Java Program to display characters from A to Z using loop.   **[5]**

B. Write a program to design the following GUI using Swing components.   **[15]**

Customer account Details

Name of Customer: _____

Name of Bank: _____

Account No. : _____

Pan Number: _____

[Submit]

C. External Viva   **[5]**

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(Semester-IV, 2021 pattern)Credits: 1.5

Duration: 3hrs   **Max Marks: 30**

A. Write a Java program to set the background color of frame chosen by user.   **[5]**

B. Write a Java Program to read the ages of all members of family, store them in one-dimensional array and display the age of the eldest and the youngest persons

[15]

C. External Viva   **[5]**

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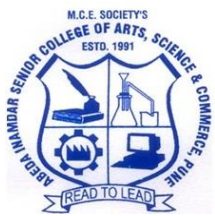**S.Y.B.C.A. (SCIENCE) PRACTICAL EXAMINATION OCT / APRIL20__**
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(Semester-IV, 2021 pattern)Credits: 1.5

Duration: 3hrs   **Max Marks: 30**

A. Write a java program to add horizontal and vertical scrollbar on frame and display message "Hi, Welcome to Java Practical".   **[10]**

B. Write a program to accept the user name and greets the user by name. Before displaying the user's name, convert it to upper case letters. For example, if the user's name is Raj, then display greet message as "Hello, RAJ, nice to meet you!".   **[15]**

C. External Viva   **[5]**

Duration: 3hrs   **Max Marks: 30**

A. Write a program to accept 'n' integers from the user & store them in an Array List collection. Display the elements of Array List.   **[10]**

B. Write a program to design following GUI using swing. On click of Show button display the selected Programming language on screen using label.   **[15]**

C. ExternalViva   **[5]**

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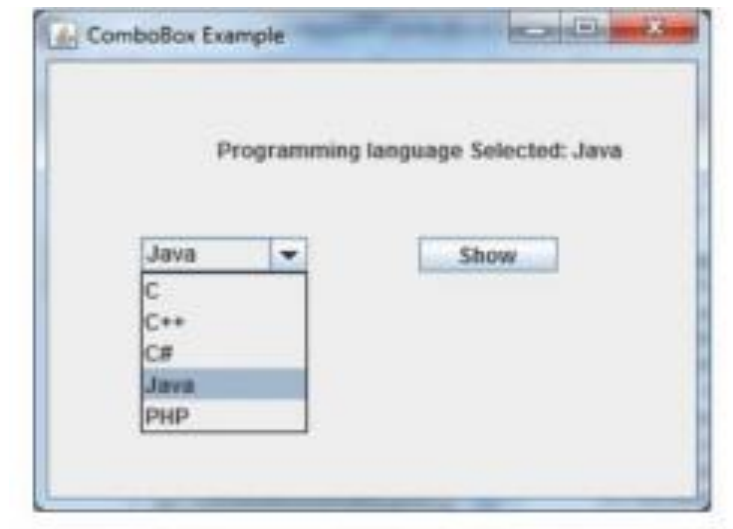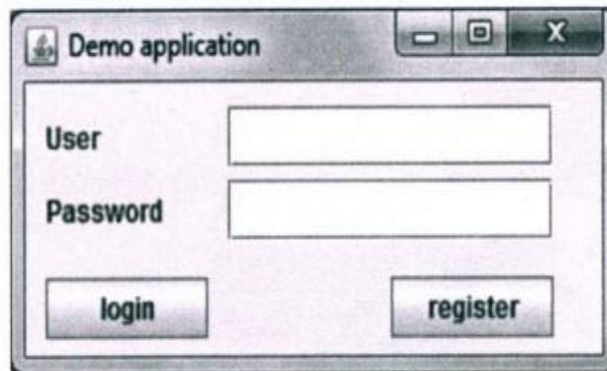**S.Y.B.C.A. (SCIENCE) PRACTICAL EXAMINATION OCT / APRIL20__**

PAPER- 21SBCA241-LAB-I- Core JAVA
(Semester-IV, 2021 pattern)Credits: 1.5

Duration: 3hrs   **Max Marks: 30**

A. Create a Hash table containing Employee name and Salary. Display the details of the hash table.   **[10]**

B. Write a program to design a following GUI. Use appropriate Layout and Components. On click of login check whether Username and Password is "admin" or not.   **[15]**

C. ExternalViva   **[5]**