

Savitribai Phule Pune University

T.Y. B.C.A. (Science) (Semester-V) Practical Examination

BCA 356: DSE I Lab (Programming in Java)

Duration: 3Hrs.

Max Marks: 35+15=50

Q1. Write a program to accept a number from user and generate multiplication table of a number. [10 Marks]

Q2. Construct a linked List containing names of colours: red, blue, yellow and orange. Then extend the program to do the following:

- i. Display the contents of the List using an Iterator
- ii. Display the contents of the List in reverse order using a ListIterator
- iii. Create another list containing pink and green. Insert the elements of this list between blue and yellow. [20 Marks]

OR

Q2. Write a JDBC program to display all the details of the Person table in proper format on the screen. Create and insert values in Person table with fields as PID, name, gender, birth_year in PostgreSQL database. [20 Marks]

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

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T.Y. B.C.A. (Science) (Semester-V) Practical Examination

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Q1. Write a program to accept 'n' integers from the user & store them in an Array List collection. Display the elements of Array List. [10 Marks]

Q2. 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. [20 Marks]

OR

Q2. Write a program to accept Doctor Name from the user and check whether it is valid or not. (It should not contain digits and special symbol) If it is not valid then throw user defined Exception - Name is Invalid -- otherwise display the name. [20 Marks]

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

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Q1. Write a program to accept the 'n' different numbers from user and store it in array. Also print the sum of elements of the array. [10 Marks]

Q2. Write a program to create class Account (accno, accname, balance). Create an array of 'n' Account objects. Define static method “sortAccount” which sorts the array on the basis of balance. Display account details in sorted order. [20 Marks]

OR

Q2. Write a program to copy the contents from one file into another file in upper case. [20 Marks]

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

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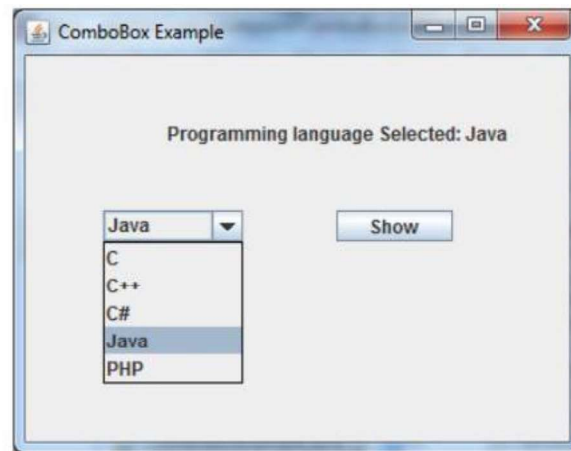
Max Marks: 35+15=50

Q1. 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!". [10 Marks]

Q2. Write a program which define 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). [20 Marks]

OR

Q2. Write a program to design following GUI using swing. On click of Show button display the selected Programming language on screen using label. [20 Marks]



Q3. Viva

[5 Marks]

Q4. Internal Assessment

[15 Marks]

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Q1. 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. [10 Marks]

Q2. Define a “Point” class having members – x,y (coordinates). Define default constructor and parameterized constructors. Define subclass “ColorPoint” with member as color. Write display method to display the details of Point. [20 Marks]

OR

Q2. Write a JDBC program to insert the records into the table Employee (ID, name, salary) using PreparedStatement interface. Accept details of Employees from user. [20 Marks]

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

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Q1. 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. [10 Marks]

Q2. 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). [20 Marks]

OR

Q2. Write a program to create the following GUI using Swing components. [20 Marks]



Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

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Q1. Create a Hash table containing Employee name and Salary. Display the details of the hash table. [10 Marks]

Q2. Define a class student having rollno, name and percentage. Define Default and parameterized constructor. Accept the 5 student details and display it. (Use this keyword). [20 Marks]

OR

Q2. Write a program to design the following GUI using Swing components. On click of submit button check whether user has entered all the details or not. If any details are missing then display appropriate message on screen using label. [20 Marks]

Customer account Details

Name of Customer:

Name of Bank .

Account No. :

Pan Number:

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

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Q1. Write a program to reverse a number. Accept number using command line argument.

[10 Marks]

Q2. 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

[20 Marks]

OR

Q2. Create and insert values to Person table (PID, name, gender, birth_year) in postgresSQL database. Write a JDBC program to display information about the ResultSet like number of columns available in the ResultSet and SQL type of each column using ResultSetMetaData.

[20 Marks]

Q3. Viva

[5 Marks]

Q4. Internal Assessment

[15 Marks]

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Q1. Write a program to accept a number from user. Check whether number is perfect or not.
Use BufferedReader class for accepting input from user. [10 Marks]

Q2. Define a “Point” class having members – x,y(coordinates). Define default constructor and parameterized constructors. Define subclass “Point3D” with member as z (coordinate). Write display method to show the details of Point. [20 Marks]

OR

Q2. Write a program that displays the number of characters, lines and words of a file. [20 Marks]

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

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Q1. Write a program to accept a number from user. Check whether number is prime or not.

[10 Marks]

Q2. Create a package “utility”. Define a class CapitalString under “utility” package which will contain a method to return String with first letter capital. Create a Person class (members – name, city) outside the package. Display the person name with first letter as capital by making use of CapitalString.

[20 Marks]

OR

Q2. Define a class SavingAccount (acno, name, balance). Define appropriate operations as, withdraw(), deposit(), and viewbalance(). The minimum balance must be 500. Create an object and perform operation. Raise user defined —InsufficientFundException when balance is not sufficient for withdraw operation.

[20 Marks]

Q3. Viva

[5 Marks]

Q4. Internal Assessment

[15 Marks]

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Q1. Write a program create class as MyDate with dd,mm,yy as data members. Write parameterized constructor. Display the date in dd-mm-yy format. (Use this keyword)
[10 Marks]

Q2. Create an abstract class Shape with methods area & volume. Derive a class Sphere (radius). Calculate and display area and volume.
[20 Marks]

OR

Q2. Write a program to accept details of 'n' customers (c_id, cname, address, mobile_no) from user and store it in a file using DataOutputStream class.
[20 Marks]

Q3. Viva
[5 Marks]

Q4. Internal Assessment
[15 Marks]

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Q1. Create a package named “Series” having a class to print series of Square of numbers. Write a program to generate “n” terms series. [10 Marks]

Q2. Create an abstract class Shape with methods area & volume. Derive a class Cylinder (radius, height). Calculate area and volume. [20 Marks]

OR

Q2. 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. [20 Marks]



Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

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Q1. Construct a Linked List having names of Fruits: Apple, Banana, Guava and Orange. Display the contents of the List using an Iterator. [10 Marks]

Q2. 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. [20 Marks]

OR

Q2. 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. [20 Marks]

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

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Q1. Write a program to create JDBC connection. On successful connection with database display appropriate message to user. [10 Marks]

Q2. Define an interface “Operation” which has methods area(),volume(). Define a constant PI having a value 3.142. Create a class cylinder (members – radius, height) which implements this interface. Calculate and display the area and volume. [20 Marks]

OR

Q2. 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. [20 Marks]

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

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Q1. Construct a Linked List having names of Fruits: Apple, Banana, Guava and Orange. Display the contents of the List in reverse order using an appropriate interface. [10 Marks]

Q2. Write a program to create a super class Employee (members – name, salary). Derive a sub- class as Developer (member – projectname). Create object of Developer and display the detailsof it. [20 Marks]

OR

Q2. Design a servlet to display message as “Welcome IP address of client” to visitor. [20 Marks]

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

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Q1. Define a class MyNumber having one private integer data member. Write a parameterized constructor to initialize to a value. Write isEven() to check given number is even or not. Use command line argument to pass a value to the object. [10 Marks]

Q2. Write a program to create a super class Employee (members – name, salary). Derive a sub- class Programmer (member – proglanguage). Create object of Programmer and display the details of it. [20 Marks]

OR

Q2. Write a JDBC program to update number_of_students of “BCA Science” to 1000. Create a table Course (Code,name, department,number_of_students) in PostgreSQL database. Insert values in the table. [20 Marks]

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

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Q1. Define a class MyNumber having one private integer data member. Write a parameterized constructor to initialize to a value. Write isOdd() to check given number is odd or not. Use command line argument to pass a value to the object. [10 Marks]

Q2. Define a class Student with attributes rollno and name. Define default and parameterized constructor. Keep the count of Objects created. Create objects using parameterized constructor and Display the object count after each object is created. [20 Marks]

OR

Q2. Write a JSP program to perform Arithmetic operations such as Addition and Subtraction. Design a HTML to accept two numbers in text box and radio buttons to display operations. On submit display result as per the selected operation on next page using JSP. [20 Marks]

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

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Q1. Write a program to print the factors of a number. Accept a number using command line argument. [10 Marks]

Q2. Write a program to read the contents of "abc.txt" file. Display the contents of file in uppercase as output. [20 Marks]

OR

Q2. Write a program to design following screen using swing components [20 Marks]



Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

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Q1. Write a program to accept the 'n' different numbers from user and store it in array. Display maximum number from an array. [10 Marks]

Q2. 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. [20 Marks]

OR

Q2. Write a servlet program to display current date and time of server. [20 Marks]

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]

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Q1. Write a program to accept 3 numbers using command line argument. Sort and display the numbers. [10 Marks]

Q2. Create an employee class (id,name,deptname,salary). Define a default and parameterized constructor. Use 'this' keyword to initialize instance variables. Keep a count of objects created. Create objects using parameterized constructor and display the object count after each object is created. Also display the contents of each object. [20 Marks]

OR

Q2. Write a JSP program to perform Arithmetic operations such as Multiplication and Division. Design a HTML to accept two numbers in text box and radio buttons to display operations. On submit display result as per the selected operation on next page using JSP. [20 Marks]

Q3. Viva [5 Marks]

Q4. Internal Assessment [15 Marks]