Program: BSc(Comp05)   **Semester: V**   **SET: A**
Program (Specific):(Computer Science)   **Course Type: DSEC-III**
Class: T.Y.BSc(Computer Science)   **Max.Marks: 35**
Name of the Course: Core Java   **Time: 2Hr**
Course Code:24 CS-355
Paper: I

Instructions to the candidate:

1) *There are 4 sections in the question paper. Write each section on separate page.*
2) *All Sections are compulsory.*
3) *Figures to the right indicate full marks.*
4) *Draw a well labeled diagram wherever necessary.*

SECTION: A

Q1) Multiple Choice Questions.   **[5x1=5 Marks]**

1) Which exception must be handled or declared if we use the BufferedReader class?
   a) IOException   c) NullPointerException
   b) ArithmeticException   d) ArrayIndexOutOfBoundsException
2) To access a class within a package, you must use the keyword:_____
   a) Package   c) class
   b) Import   d) access
3) An object is created using keyword
   a) new   c) import
   b) class   d) object
4) The java.lang.Exception class?
   a) Extends Throwable   c) Extends Error
   b) Implementation Throwable   d) Extends RuntimeException
5) Which is not the type of inheritance in java?
   a) Single   c) Multiple
   b) Multilevel   d) Hierarchical

Q2) Attempt ANY FOUR of the following.   **[4x1=4 Marks]**

1. Explain the use of Javac.
2. List the name of any two Wrapper Classes.
3. Define Exception.
4. List the types of Constructor.
5. Explain the use of "implements" keyword.
6. State the application of Array.

SECTION: B

Q3) Attempt ANY FOUR of the following.   **[4x2=8 Marks]**

1) 'When the constructor of the class will be called?' Comment.
2) Define command line argument. Where are they stored in a program?
3) Define Frame. Give its any two methods.
4) Differentiate between method overloading and method overriding.
5) Explain any two access specifiers.
6) List any four package names in java**.**

SECTION: C

Q4) Attempt ANY FOUR of the following.   **[4x2=8 Marks]**

1) Define an interface shape with abstract method area( ). Inherit interface shape into the class triangle. Write a Java Program to calculate the area of Triangle.
2) Explain runtime polymorphism with example.
3) Describe the user defined exceptions. Illustrate them with an example.
4) Explain Layout Managers used in AWT.
5) Create an array of objects of the Student class. Accept values for each object and display the object having the maximum percentage.
6) Write a program to accept three integers as command line arguments and find the maximum.

SECTION: D

Q5) Attempt ANY TWO of the following.   **[2x5=10 Marks]**

1) Write a Java program to create a Package "SY" which has a class SYMarks (members – ComputerTotal, MathsTotal, and ElectronicsTotal). Create another package TY which has a class TYMarks (members – Theory, Practicals). Create n objects of Student class (having rollNumber, name, SYMarks and TYMarks). Add the marks of SY and TY computer subjects and calculate the Grade ('A' for >= 70, 'B' for >= 60 'C' for >= 50 , Pass Class for > =40 else 'FAIL') and display the result of the student in proper format.
2) Define an abstract class Staff with protected members id and name. Define a parameterized constructor. Define one subclass OfficeStaff with a member department. Create n objects of OfficeStaff and display all details.
3) Explain Different types of access specifiers used in package.
4) Distinguish between abstract class and interface.

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