

Class: 10

Subject: Computer Applications

Assignment :

Short questions:

- What is meant by precedence of operators?
- What is a literal?
- What are the types of casting shown by the following code:
 - `double x=15.2;`
`int y=(int)x;`
 - ii) `int x=12;`
`long y=x;`
- Rewrite the following program segment using if...else statement
`Comm.=(sale>15000)?sale*5/100:10;`
- What will be the output for the following program segment?
`int a=0, b=30, c=40;`
`a--b +c ++ +b;`
`System.out.println("a==+a);`
- What is a package? Give an example.
- Name the following:
 - A package that is invoked by default.
 - A keyword, to use the classes defined in a package.
- State the difference between token and identifier.
- Give the output of the following expressions:
 - If `x=-9.99`, calculate `Math.abs(x);`
 - If `x=9.0`, calculate `Math.sqrt(x);`
- Write a java statement to input the following from the user using the keyboard
 - Character
 - String
- Define the term Byte code.
- Name two jump statements and their use.
- State the difference between entry controlled loop and exit controlled loop.
- Give one point of difference between unary and binary operators.
- Complete the code below to create an object of Scanner class.
`Scanner sc=_____Scanner(_____);`
- Define encapsulation.
- What are library classes? Give an example.
- What do you understand by the term data abstraction? Explain with an example.
- What is the use of the keyword import?

- Why is a class called a factory of objects?
- What is meant by an indefinite loop? Give an example.
- What is the purpose of the new operator?
- Explain the term object using an example.

PROGRAMS

- WAP to input the values of three coefficients of a quadratic equation $ax^2+bx+c=0$. Find the roots of the equation and display them, stating whether they are real, imaginary or equal.
- WAP to calculate and print the sum of odd numbers and the sum of even numbers for the first n natural numbers
- WAP that outputs the results of the following evaluations based on the number entered by the user.
 - Natural logarithm of the number
 - Absolute value of the number
 - Cube root of the number
 - Random number between 10 and 100
- Using a switch statement, write a menu driven program to convert a given temperature from Fahrenheit to Celsius and vice versa. For an incorrect choice, an appropriate error message should be displayed.
- WAP to calculate and print the sum of the series: $2-4+6-8+10-12+\dots-20$
- Write a menu driven program to accept a number from the user and check whether it is a 'BUZZ' number or to accept two numbers and print the 'GCD' of them.
 - A BUZZ number is the number which either ends with 7 or divisible by 7.
 - GCD of two integers is calculated by continued division method. Divide the larger number by the smaller, the remainder then divides the previous divisor. The process is repeated till the remainder is zero. The divisor then results the GCD.