Question 1

CP - Write a program to find the age of Harry if the birth year is 2000. Assume the Current Year is 2024

I/P => NONE

O/P => Harry's age in 2024 is ___

Question 2

CP - Sam’s mark in Maths is 94, Physics is 95 and Chemistry is 96 out of 100. Find the average percent mark in PCM

I/P => NONE

O/P => Sam’s average mark in PCM is ___

Question 3

CP - Create a program to convert distance in kilometers to miles.

Hint =>

- Create a variable km and assign type as double as in double km;
- Create Scanner Object to take user input from Standard Input that is the Keyboard as in `Scanner input = new Scanner(System.in);`
- Use Scanner Object to take user input for km as in `km = input.nextInt();`
- Use 1 mile = 1.6 km formulae to calculate miles and show the output

I/P => km

O/P => The total miles is ___ mile for the given ___ km

Question 4

CP - Write a program that takes your height in centimeters and converts it into feet and inches

Hint => 1 foot = 12 inches and 1 inch = 2.54 cm

I/P => height

O/P => Your Height in cm is ___ while in feet is ___ and inches is ___

Question 5

CP - The University is charging the student a fee of INR 125000 for the course. The University is willing to offer a discount of 10%. Write a program to find the discounted amount and discounted price the student will pay for the course.

Hint =>

- Create a variable named fee and assign 125000 to it.
- Create another variable discountPercent and assign 10 to it.
- Compute discount and assign it to the discount variable.
- Compute and print the fee you have to pay by subtracting the discount from the fee.

O/P => The discount amount is INR ___ and final discounted fee is INR ___

Question 6

CP - Create a program to convert the distance of 10.8 kilometers to miles.

Hint => 1 km = 1.6 miles

I/P => NONE

O/P => The distance ___ km in miles is ___

Question 7

CP - Suppose you have to divide 14 pens among 3 students equally. Write a program to find how many pens each student will get if the pens must be divided equally. Also, find the remaining non-distributed pens.

Hint =>

- Use Modulus Operator (%) to find the reminder.
- Use Division Operator to find the Quantity of pens

I/P => NONE

O/P => The Pen Per Student is ___ and the remaining pen not distributed is ___

Question 8

CP - Write a Program to compute the volume of Earth in km^3 and miles^3

Hint => Volume of a Sphere is (4/3) * pi * r^3 and radius of earth is 6378 km

O/P => The volume of earth in cubic kilometers is ____ and cubic miles is ____

Question 9

CP - Create a Program that takes user input for Student Fee and University Discount to compute the discounted amount and discounted price the student will pay for the course.

Hint =>

- Create a variable named fee and take user input for fee.
- Create another variable discountPercent and take user input.
- Compute the discount and assign it to the discount variable.
- Compute and print the fee you have to pay by subtracting the discount from the fee.

I/P => fee, discountPrecent

O/P => The discount amount is INR ___ and final discounted fee is INR ___

Question 10

CP - Create a program to calculate the profit and loss in number and percentage based on the cost price of INR 129 and the selling price of INR 191.

Hint =>

- Use a single print statement to display multiline text and variables.
- Profit = selling price - cost price
- Profit Percentage = profit / cost price * 100

I/P => NONE

O/P =>
The Cost Price is INR ___ and the Selling Price is INR ___

The Profit is INR ___ and the Profit Percentage is ___

Question 11

CP - Write a ***DoubleOperation*** program by taking a, b, and c as input values and print the results of the following operations a + b *c, a * b + c, c + a / b, and a % b + c. Please also understand the Operator Precedence.

Hint =>

1. Create variables a, b, and c of double data type.
2. Take user input for a, b, and c.
3. Compute 3 double operations and assign the result to a variable
4. Finally, print the result and try to understand operator precedence.

I/P => fee, discountPrecent

O/P => The results of Double Operations are ___, ___, and ___

Question 12

CP - Write a program to find the side of the square whose parameter you read from the user

Hint => The Perimeter of the Square is 4 times the side

I/P => perimeter

O/P => The length of the side is ___ whose perimeter is ____

Question 13

CP - Write a program to find the distance in yards and miles for the distance provided by the user in feet

Hint => 1 mile = 1760 yards and 1 yard is 3 feet

I/P => distanceInFeet

O/P => The distance in yards is ___ while the distance in miles is ___

Question 14

CP - Write a program that takes the base and height in cm to find the area of a triangle in square inches and square centimeters

Hint => Area of a Triangle is ½ * base * height and 1 in = 2.54 cm

I/P => base, height

O/P => The Area of the triangle in sq in is ___ and sq cm is ___

Question 15

CP - Write a program to input the unit price of an item and the quantity to be bought. Then, calculate the total purchase price.

Hint => NA

I/P => unitPrice, quantity

O/P => The total purchase price is INR ___ if the quantity ___ and the unit price is INR ___

Question 16

CP - Write a program to create a basic calculator for addition, subtraction, multiplication, and division. The program should ask for two numbers (floating point) and perform all the operations

Hint =>

- Create a variable number1 and number 2 and take user inputs.
- Perform Arithmetic Operations of addition, subtraction, multiplication and division and assign the result to a variable and finally print the result

I/P => number1, number2

O/P => The addition, subtraction, multiplication, and division value of 2 numbers ___ and ___ is ___, ____, ____, and ___

Question 17

CP - Write an ***IntOperation*** program by taking a, b, and c as input values and print the results of the following integer operations a + b *c, a * b + c, c + a / b, and a % b + c. Please also understand the Operator Precedence.

Hint =>

1. Create variables a, b, and c of int data type.
2. Take user input for a, b, and c.
3. Compute 3 integer operations and assign the result to a variable
4. Finally, print the result and try to understand operator precedence.

I/P => fee, discountPrecent

O/P => The results of Int Operations are ___, ___, and ___

Question 18

CP - Write a program to take two numbers and print their quotient and reminder

Hint => Use division operator (/) for quotient and moduli operator (%) for reminder

I/P => number1, number2

O/P => The Quotient is ___ and Reminder is ___ of two number ___ and ___

Question 19

CP - Write a program to input the Principal, Rate, and Time values and calculate Simple Interest.

Hint => Simple Interest = Principal * Rate * Time / 100

I/P => principal, rate, time

O/P => The Simple Interest is ___ for Principal ___, Rate of Interest ___ and Time ___

Question 20

CP - An athlete runs in a triangular park with sides provided as input by the user in meters. If the athlete wants to complete a 5 km run, then how many rounds must the athlete complete

Hint => The perimeter of a triangle is the addition of all sides and the number of rounds is the distance/perimeter

I/P => side1, side2, side3

O/P => The total number of rounds the athlete will run is ___ to complete 5 km

Question 21

CP - Write a TemperaturConversion program, given the temperature in Celsius as input outputs the temperature in Fahrenheit

Hint =>

1. Create a ***Celsius*** variable and take the temperature as user input
2. Use the Formulae Celsius to Fahrenheit: (°C × 9/5) + 32 = °F and assign to ***farenheitResult*** and print the result

I/P => celsius

O/P => The ____ celsius is _____ fahrenheit

Question 22

CP - Create a program to find the total income of a person by taking salary and bonus from the user

Hint =>

1. Create a variable named salary and take user input.
2. Create another variable bonus and take user input.
3. Compute income by adding salary and bonus and print the result

I/P => salary, bonus

O/P => The salary is INR ___ and the bonus is INR ___. Hence Total Income is INR ___

Question 23

CP - Create a program to find the maximum number of handshakes among N number of students.

Hint =>

1. Get integer input for the numberOfStudents variable.
2. Use the combination = (n * (n - 1)) / 2 formula to calculate the maximum number of possible handshakes.
3. Display the number of possible handshakes.

Question 24

CP - Create a program to convert weight from pounds to kilograms.

Hint => 1 pound = 2.2 kg

I/P => weight

O/P => The weight of the person in pounds is ___ and in kg is ___

Question 25

CP - Write a TemperaturConversion program, given the temperature in Fahrenheit as input outputs the temperature in Celsius

Hint =>

1. Create a **fahrenheit** variable and take the user's input
2. User the formulae to convert Fahrenheit to Celsius: (°F - 32) x 5/9 = °C and assign the result to ***celsiusResult*** and print the result

I/P => fahrenheit

O/P => The ____ fahrenheit is _____ celsius

Question 26

CP - Rewrite the Sample Program 2 with user inputs

Hint =>

1. Create variables and take user inputs for name, fromCity, viaCity, toCity
2. Create variables and take user inputs for distances fromToVia and viaToFinalCity in Miles
3. Create Variables and take user input for the time taken: From City to Via City and Via City to Final Destination

4. Finally, print the result and try to understand operator precedence.

I/P => name, fromCity, viaCity, toCity, fromToVia, viaToFinalCity, timeFromToVia, timeViaToFinalCity

O/P => The Total Distance travelled by ___ from ___ to ___ via ___ is ___ km and the Total Time taken is ___ minutes

Question 27

CP - Create a program to swap two numbers

Hint =>

1. Create a variable number1 and take user input.
2. Create a variable number2 and take user input.
3. Swap number1 and number2 and print the swapped output

I/P => number1, number2

O/P => The swapped numbers are ___ and ___

Question 28

CP - Create a program to divide N number of chocolates among M children.

Hint =>

1. Get an integer value from the user for the numberOfchocolates and numberOfChildren.
2. Find the number of chocolates each child gets and the number of remaining chocolates
3. Display the results

I/P => numberOfchocolates, numberOfChildren

O/P => The number of chocolates each child gets is ___ and the number of remaining chocolates is ___