Ch - Python

Q1 What is a program?

Ans 1 A program is a sequence of instruction that specifies how to perform computation.

Q2 What is python? Write its two features.

Ans 2 Phython is a high level programing language to make a program

Features of Python

① It is case sensitive language

② It can be used in any operating System means it is a platform independent

③ It has simple Syntax

④ It is open source software

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⑤ It comes with IDLE (Interactive Development Environment) This is interpreter which executes one line at a time

Q3. Write some application of Python

Ans 3 Few application of Phy python

① Game Development

② Software Development

③ Web Development

④ Artifical Intelligence and Machine learning

⑤ Language Development

⑥ Education Programs and Training Courses

Q4. Write different programming modes of Python

Ans 4. ① Interactive mode - In this, instruction is executed line by line

② Script Mode - It is used to write complete program at once

Q5 What are Variables? Write rules for naming variables in Python

Ans 5 A python variables is a named storage location to store values.

① A variable must start with a letter or underscore

② A variable name cannot start with a number

③ It can contain alphanumeric characters and underscore

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④ Variable names are case sensitive

⑤ A Python keyword cannot be used as a variable

Q6 Write few basic data types in Python.

Ans6 ① int (integer) → Represent integer value.

Three types of integers are

- int (integer)
- longint (long integer)
- bool (boolean) → stores logical values as true or false

② float (floating point) → It represents floating point value such as 3.14, 48.6, 18.0 etc.

③ Str (string) It represent string of characters and close within single or double quotation marks

Eg - 'Hello World', "Name", 'Peace 2022'

Q7. Explain print and input function.

Ans7 Print() function is used to display the output of any command or messages on screen

eg = Print ("20+40", 20+40)

input function is used to accept the string value for a variable from the user. To input integers and float() along with input()

eg → N1 = input ("enter your name") This statement will take string value in n1

N1 = int (input ("enter your name")) This statement will accept integer value in this statement take string value in N1

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~~N1 = input ("enter a number")~~

~~This statement will accept integer value in N1~~

Q8 Write different types of operator in Python

Ans8 Arithmatic Operators

① + (Addition)

② - (Substraction)

③ X (Multiplication)

④ / (Division)

⑤ ** (Exponent)

⑥ % (Reminder)

⑦ // (Floor division) Divede members and give result integers form

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② String Operaters

1) + (Concatenation) : Join two or more string

2) * (Replication) : to replicate given string spec times

③ Assignment operater:

(=) → Assign a value to a variable.

④ Relation Operater

Used to compare values of two variable

(1) < (less than)

(2) <= (less than equal to)

(3) > (greater than ~~equal to~~)

(4) >= (greater than equal to)

(5) == (equal to

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⑥ != (not equal to

eg = A=5 B=6

a > b = False

a != B = True

a = b = False

⑤ Logical / boat loon opar operators → ~~Three used two or more condition~~ Condition These are used to combine two or more relations. Three logical operators are: and, or, not.

① and → will give result true only if both conditions are true.

② or → will give result false only if both conditions are false

③ not → will negate the result of given condition

eg → if a=10, b=30

① a == 10 and b >= 10 → True

② a < 5 or b != 10 → True

③ not (a != 10) → True

Q9. What do you mean by operator Precedence? What rule is used to find operator precedence in Python.

Ans 9 Operator precedence is used to determine the order of evaluation of an expression involving more than one operator. In Python BODMAS rule is used to decide the precedence of Arithmetic Operators. Higher precedence operators are operated before the lower precedence operators. If both have same precedence whichever comes first will be evaluated first.

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Q10 Write the escape sequences associated with print() function.

Ans ① Using (,) comma operator → Using comma (,) operator between value, will display values with space between them

② Using tab space ('\t') → Using '\t' as a separator among values will display values with tab space between them

③ Using newline character ('\n') → newline character ('\n') is used to end a line and start a newline, means it will print next value in next line

Example program

```
name = input("Enter name")
class = input("Enter class")
```

rn = input ("Enter roll no")

Print (name, class, rn)

Print (name, "f", class, "f", rn)

Print (name, "in", class "in", rn)

Output - Enter name Riya

Enter class 6D

Enter Roll no 21

Riya 6D 21

Riya 6D 21

Riya

6D

21

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Program 1

```
N1= input ("Enter first number")
N2= input ("Enter second number")
Sum = N1 + N2
Print ("Sum of number = ", Sum)
```

Output

Enter first ~~name~~ number 21

Enter second number 35

Sum of number = 2135

Program 2

```
N1 = int (input ("Enter first number"))
N2 = int (input ("Enter second number"))
Sum = N1 + N2
```

Print ("Sum of the numbers =", Sum)

Output

Enter first number 21

Enter second number 35

Sum of the numbers = 56

Program 3 -

To print area of ~~squre~~ square

Side = int (input ("side of square is "))

Area = Side * Side

Print ("Area of square is", Area)

Output

Side of square is 6

Area of square is 36

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Program 4

To print perimeter of Square.

side = int (input ("Side of Square is "))

perimetre = 4 * side

Print ("perimetre of square is", perimeter)

Output

Side of square is 6

Perimetre of square is 24

Program 5

Concatinate two string

X = input ("Enter second string")

Y = input ("Enter second string")

Print ("Concatenated string is", X + Y)

Output

Enter first string Riya

Enter second string Gupta

Concatenated string is Riya Gupta

Program 6

Replicate a string

X = input ("Enter a string")

Y = int (input ("No of replications")

Print ("Replicated string" x * y)

Output

Enter a string hello

No of replication 3

Replicated string hello hello hello

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Program 7.

```
Print ("Arithmetic operation")
X = int (input ("Enter x: "))
Y = int (input ("enter y: "))
Print (X, "+", Y, "=", x + y)
Print (X, "-", y, "=", x - y)
Print (X, "*", y, "=", x * y)
Print (X, "/", y, "=", X / Y)
Print (X, "//", y, "=", X // Y)
Print (X, "%", y, "=", X % Y)
Print (X, "**", y, "=", X ** Y)
```

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