Q1. Why do we call Python as a general purpose and high-level programming language?

Ans – One powerful element of Python is its simplicity. It is easy to write and easy to read. Its syntax and vocabulary were designed to be English-like. Because it is a general-purpose language, you can write virtually any kind of program with it.

Python is easy to use It is simple with an easily readable syntax and that makes it well-loved by both seasoned developers and experimental students .Python runs on any platform. Extensive support libraries. Python is accessible. And AI and ML support

Q2. Why is Python called a dynamically typed language?

Yes, it is. Python is a dynamically typed language. What is dynamic? We don't have to declare the type of variable while assigning a value to a variable in Python. Other languages like C, C++, Java. there is a strict declaration of variables before assigning values to them

Q3. List some pros and cons of Python programming language?

pros-Beginner-friendly,Large Community,Flexible and Extensible,Extensive Libraries,Embeddable,Highly Scalable,IoT Opportunities,Portable it's all pros

cons -Issues with design, Slower than compiled languages,Security,Work Environment,High memory consumption, Dynamically-typed language,Complex multithreading,

Q4 . In what all domains can we use Python?

DATA Science, Automation, Application Devlopment, AI & Machine Learning, console Applications, Desktop GUI

Q5 .What are variable and how can we declare them?

Python has no command for declaring a variable. A variable is created the moment you first assign a value to it. Variables do not need to be declared with any particular type, and can even change type after they have been set.

Q6. How can we take an input from the user in Python?

ANS - The input() method, when executed, takes an option string argument which is shown as a prompt to the user. After taking input, the input() method returns the value entered by the user as a string. Even if the user enters a number or a punctuation mark, the input() method will always read the input as a string

Q7. What is the default datatype of the value that has been taken as an input using input() function?

Q8. What is type casting?

The conversion of one data type into the other data type is known as type casting in python or type conversion in python.

Python supports a wide variety of functions or methods like: int(), float(), stro, ord(), hex(), oct(), tuple(), set0), listO, dict(), etc. for the type casting in python.

Q9. Can we take more than one input from the user using single input() function? If yes, how? If no, why?

YES ; Python gives us freedom to take the input from the user. The input we take from the user is read as string by default. After giving input we have to press “Enter”. Then only the input() function reads the value entered by the user.

Q10. What are keywords?

Python has a set of keywords that are reserved words that cannot be used as variable names, function names, or any other identifiers:

Q11. Can we use keywords as a variable? Support your answer with reason.

false Explanation: We cannot use a keyword as a variable name, function name or any other identifier.

Q12. What is indentation? What's the use of indentaion in Python

Indentation refers to the spaces at the beginning of a code line.

Where in other programming languages the indentation in code is for readability only, the indentation in Python is very important.

Python uses indentation to indicate a block of code.

Q13. How can we throw some output in Python?

Q14. What are operators in Python?

Python Operators in general are used to perform operations on values and variables. These are standard symbols used for the purpose of logical and arithmetic operations. In this article, we will look into different types of Python operators.

OPERATORS: Are the special symbols. Eg + , \* , /,-

Q15. What is difference between / and // operators?

Use floor division operator // or the floor () function of the math module to get the floor division of two integers.

AND use / this only for division .

Q16. Write a code that gives following as an output.

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a = input()

print(a)

OUTput -

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Q17. Write a code to take a number as an input from the user and check if the number is odd or even.

print ("Enter an integer number to check:\n")

x = int (input ())

if (x % 2 == 0):

print ("The input number is even.\n")

else:

print ("The input number is odd.\n")

Q18. What are boolean operator?

The three basic boolean operators are: AND, OR, and NOT.Boolean operators form the basis of mathematical sets and database logic.

Q19. What will the output of the following?

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1 or 0- --this statement is given true because or if and only if one or more of its operands is true.

0 and 0 --this statement given false because The Boolean AND operator is used to confirm that two or more Boolean expressions are all true

True and False and True ---- this statement given false because The Boolean AND operator is used to confirm that two or more Boolean expressions are all true

1 or 0 or 0----- this statement is given true because or if and only if one or more of its operands is true.

Q20 - What are conditional statements in Python?

A conditional statement in python, also called a condition constructs, is a statement that accommodates a condition inside itself. This condition is constructed using the bitwise, boolean, and comparison operators in Python

Q21. What is use of 'if', 'elif' and 'else' keywords?

The simplest and most used conditional statement in Python is the "if " statement.it executes the conditional block only when the statement is true. You can remember the statement as:

if (something is True);

whenever the "if " statement returns False and conditional block from "if " skips, the conditional block from "else " executes.

age = 35

if(age == 40):

print("The age is 40")

else:

print("Age is not 40")

Elif is a rather unique term as other programming languages don’t use it. Other programming languages use "else if " to put up one more condition

age = 35

if(age == 40):

print("The age is 40")

elif(age == 35):

print("Age is 35")

Q22. Write a code to take the age of person as an input and if age >= 18 display "I can vote". If age is < 18 display "I can't vote".

age = int(input("Enter Age:"))

if age=>18:

print ("Your age is greater than 18")

else:

print ("Your age isn't greater than 18")

Q23. Write a code that displays the sum of all the even numbers from the given list.

```

numbers = [12, 75, 150, 180, 145, 525, 50]

import numpy as np

evenOddSumArr = np.array([12, 75, 150, 180, 145, 525, 50])

evenArrSum = 0

for i in range(len(evenOddSumArr)):

if (evenOddSumArr[i] % 2 == 0):

evenArrSum = evenArrSum + evenOddSumArr[i]

print("The Sum of Even Numbers in evenOddSumArr Array = ", evenArrSum)

Q24. Write a code to take 3 numbers as an input from the user and display the greatest no as output.

num1=int(input("Enter First Number"))

num2=int(input("Enter Second Number"))

num3=int(input("Enter Third Number"))

if (num1> num2 and num1> num3):

print("The Largest number is", num1)

elif (num2 > num1 and num2> num3):

print ("The Largest number is", num2)

else:

print ("The Largest number is", num3)

Q25. Write a program to display only those numbers from a list that satisfy the following conditions

- The number must be divisible by five

- If the number is greater than 150, then skip it and move to the next number

- If the number is greater than 500, then stop the loop

```

numbers = [12, 75, 150, 180, 145, 525, 50]

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for i in range (len(numbers)):

if numbers[i]%5==0 and numbers[i]<=150;

print(numbers[i])

if numbers[i]>500;

break;