**Assignment Part-1**

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

Ans1. Python is called general purpose because it can used to design and develop a wide variety of applications, across multiple domain. High-level programming language means it's more user-friendly. Coding in Python is like writing a story in English.

Q2. Why is Python called a dynamically typed language?

Ans2. Dynamically typed language means that variables are checked against types only when the program is executing. We don't need to declare the variable type, the interpreter automatically interprets it.

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

Ans3. Pros:

* Easy to use
* Easy to integrate
* Multi-paradigm approach
* High library support

Cons:

* Slow speed of execution compared to C,C++
* Absence from mobile computing and browsers

Q4. In what all domains can we use Python?

Ans4.

* Graphic design, image processing applications, Games, and Scientific/ computational Applications
* Web frameworks and applications
* Database Access
* Language Development
* Prototyping
* Software Development
* Data Science and Machine Learning
* Scripting

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

Ans5. A variable is a symbolic name that is a reference or pointer to an object. Once an object is assigned to a variable, you can refer to the object by that name.

var = 17

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

Ans6. By using input() function.

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

Ans7. string

Q8. What is type casting?

Ans8. Type casting means changing the datatype of the variable. We can only type casting the datatype having higher bit value to the lower bit value.

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

Ans9. Yes.

x, y, z = input("Enter three values: ").split(",")

print("Total number of students: ", x)

print("Number of boys is : ", y)

print("Number of girls is : ", z)

print()

x = [int(x) for x in input("Enter multiple value: ").split(",")]

print("Number of list is: ", x)

Q10. What are keywords?

Ans10. Keywords in Python are reserved words that can not be used as a variable name, function name, or any other identifier.

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

Ans11. Yes we can but we shoudn't as it will override the properties of the keyword.

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

Ans12. Indentation is the whitespace used in Python. Indentation is used to create block of statement.

Q13. How can we throw some output in Python?

Ans13. Using print() function.

Q14. What are operators in Python?

Ans14. Symbols or keywords used to perform certain operations on values or variable are known as operators. There are different types of operators like

* Arithmetic operators
* Comparison Operators
* Logical Operators
* Bitwise Operators
* Assignment Operators

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

Ans15. / is used for float division and // is used of floor (integer) division.

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

iNeuroniNeuroniNeuroniNeuron

Ans16.

"iNeuron"\*3

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

Ans17.

num = float(input("Enter a number: "))

if num%2 == 0:

print(f"{num} is even")

else:

print(f"{num} is odd")

Q18. What are boolean operator?

Ans18. True , False , not , and , or are the only built-in Python Boolean operators.

Q19. What will the output of the following?

1 or 0

0 and 0

True and False and True

1 or 0 or 0

Ans.19 Output of the following code will be

1 or 0 -> 1

0 and 0 -> 0

True and False and True -> False

1 or 0 or 0 -> 1

Q20. What are conditional statements in Python?

Ans20. In large projects we have to control the flow of execution of our program and we want to execute some set of statements only if the given condition is satisfied, and a different set of statements when it’s not satisfied.

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

Ans21. if is the first condition check for the condition.

if "if" is False then elif's condition is checked.

else is checked when all the upper condition fails.

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".

Ans22.

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

if age >= 18:

print("I can vote")

else:

print("I can't vote")

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]

Ans23.

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

add = 0

for num in numbers:

if num%2 == 0:

add = add+num

else:

continue

print(add)

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

Ans24.

x, y, z = input("Enter 3 numbers seprated by comma: ").split(",")

if int(x) > int(y) and int(x) > int(z):

print(f"{x} is greatest")

elif int(y) > int(z):

print(f"{y} is greatest")

else:

print(f"{z} is greatest")

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]

Ans25.

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

lst = []

for num in numbers:

if num > 150:

if num > 500:

break

elif num%5==0:

lst.append(num)

print(lst)