## Assignment Part-1

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

Ans. Python is an object-oriented, high-level programming language.

Object-oriented means this language is based around objects (such as data) rather than functions, and high-level means it's easy for humans to understand.

Q2. Why is Python called a dynamically typed language?

Ans. Python is both a strongly typed and a dynamically typed language.

Strong typing means that variables do have a type and that the type matters when performing operations on a variable.

Due to strong typing, types need to be compatible with respect to the operand when performing operations.

For example Python allows one to add an integer and a floating point number, but adding an integer to a string produces error.

Dynamic typing means that the type of the variable is determined only during runtime.

Due to dynamic typing, in Python the same variable can have a different type at different times during the execution.

Dynamic typing allows for flexibility in programming, but with a price in performance.

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

Ans. pros of Python:

Python is free, open-source, and has a vibrant community

Python is easy to learn and read

Python enhances productivity

Python is a portable programming language

Python is an interpreted language

cons of python:

Python is not so strong with mobile computing

Python can have runtime errors

Python consumes a lot of memory space

Python is not easy to test

Q4. In what all domains can we use Python?

Ans. Data Science

Automation

Application Development

AI & Machine Learning

Audio/Video Applications

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

Ans. A variable declaration always contains two components: the type of the variable and its name.

Also, the location of the variable declaration, that is,

where the declaration appears in relation to other code elements,

determines the scope of the variable.

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

Ans. username = input("Enter username:")

print("Username is: " + username)

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

Ans. string

Q8. What is type casting?

Ans. Type Casting is the method to convert the variable data type into a certain data type in order to the operation required to be performed by users.

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

Ans. yes,he split() method is useful for getting multiple inputs from users

#taking three inputs

a,b,c=input("enter three nos:").split()

print("enter first no:",a)

print("enter second no:",b)

print("enter third no:",c)

print()

Q10. What are keywords?

Ans. and,if,in,break,continue,or,elif,else,finally,def

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

Ans. Keywords are predefined, reserved words used in Python programming that have special meanings to the compiler.

We cannot use a keyword as a variable name, function name, or any other identifier. They are used to define the syntax and structure of the Python language.

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

Ans. 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?

Ans.Arithmetic Operators

Comparison Operators

Logical Operators

Bitwise Operators

Identity Operators

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

Ans. / is a floating point division operator and // is an integer division operator.

Float division: gives a decimal answer.

Integer division: gives the answer in whole numbers (the division result is rounded to the nearest whole number).

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

```

iNeuroniNeuroniNeuroniNeuron

```

Ans. multiply\_numeric\_str = "ineuron"\*4

print(multiply\_numeric\_str)

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

Ans. num = int(input("Enter a number: "))

mod = num % 2

if mod > 0:

print("This is an odd number.")

else:

print("This is an even number.")

Q18. What are boolean operators?

Ans. Boolean is a set of commands that can be used in almost every search engine, database, or online catalogue.

The most popular Boolean commands are AND, OR, and NOT.

Other commands include parentheses, truncation, and phrases.

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. print(1 or 0)

print(0 and 0)

print(True and False and True)

print(1 or 0 or 0)

Q20. What are conditional statements in Python?

Ans. Conditional statements are also called decision-making statements.

We use those statements while we want to execute a block of code when the given condition is true or false.

Type of condition statement in Python?

If statement.

If Else statement.

Elif statement.

Nested if statement.

Nested if else statement.

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

Ans. if…elif…else are conditional statements that provide you with the decision making that is required when you want to execute code based on a particular condition.

The if…elif…else statement used in Python helps automate that decision making process.

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".

Ans. num = int(input("Enter a number: "))

if(num>=18):

print("i can vote")

else:

print("i cant 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]

```

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

print("even nos: ")

for num in numbers:

sum = 0

for num in numbers:

if num%2 == 0:

print(num)

sum = sum + num

print("\nSum of Even Numbers is", sum)

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

Ans.a= int(input("enter first no : "))

b=int(input("enter second no: "))

c=int(input("enter third no: "))

greatest=0

if a>b and a>c:

greatest = a

elif b>c:

greatest = b

else:

greatest = c

print(greatest,"is the greatest of three nos.")

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]

```

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

for i in numbers:

if i > 500:

break

elif i > 150:

continue

elif i % 5 == 0:

print(i)