## Assignment Part-1

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

Ans: Python is a general-purpose language, which means it’s designed to be used in range of applications including data science, software and web development, automation, and generally getting stuff done and high level language because it’s easy for humans to understand.

Q2. Why is Python called a dynamically typed language?

Ans: Python don’t have any problem even if we don’t declare the type of variable. It states the kind of variable in the runtime of the program. Python also takes cares of the memory management which is crucial in programming. So, python is a dynamically typed language.

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

Ans: Pros: Cons:

1. Easy to learn and use 1.Low speed
2. Improved productivity 2.Inefficient memory consumption
3. Interpreted Language 3.Weak in mobile devices
4. Open Source 4.Difficult to access database
5. Easily portable 5.Prone to cause runtime errors
6. Massive libraries
7. Easy to integrate

Q4. In what all domains can we use Python?

Ans: Some of domains are stated below where we can use python:

1. Machine learning/artificial intelligence
2. Desktop GUI
3. Data analytics and data visualization
4. Web development
5. Game development
6. Mobile app development
7. Embedded systems

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

Ans: 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.

Example: a = 5 (where = is the assignment operator 5 is value and a = 5, whole is simple variable declaration & assignment.

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

Ans: Input() function first takes the input from user and converts it into a string. The type of the returned object always will be <type’str’>. It does not evaluate the expression it just returns the complete statement as string. For example, python provides a built-in function called input which takes the input from user.

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

Ans: String is the default data type of the value that has been taken as an input using input() function.

Q8. What is type casting?

Ans : The conversion of one data type into the other data type is known as type casting. Like int(), float(),str() etc.

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

Ans: Yes, we can take more than one input from the user using single input() function. With the help of the split()function, we can collect multiple inputs in python from the user and assign all the inputs to the variables.

Var1,var2 =input(“type what type of input we want to collect from the user”).split(“/”for / separated input.

Q10. What are keywords?

Ans: `Keywords have specific meanings and restrictions around how they should be used. Some example of keywords in python are true, false, and, or, not,if, elif, else.

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

Ans: we cannot use keywords as a variable. Keywords are some predefined and reserved words in python that have special meanings. And keywords are used to define the syntax of coding.

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.

Example: if 5 > 2:

Print(“five is greater than two!”)

Q13. How can we throw some output in Python?

Ans: First need to assign some value to variable than using the print() function we can throw output in python.

Example - int\_var = 10

print("Value of int\_var = ",int\_var," - Result Done !!")

Q14. What are operators in Python?

Ans: Operators are used to perform operations on variables and values.

Example: in the example below, we use the + operator to add together two values: print (10+5)

Some operators are Arithmetic operators, assignment operators, comparison operators, logical operators.

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

Ans: / operator we use for Float data type which contains some decimal value and // we use for integer data type which does not contains any decimal value.

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

```

iNeuroniNeuroniNeuroniNeuron

```

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 = 29

num = int (input(":"))

if (num% 2) ==0:

print("the number is even")

else:

print("the provided number is odd")

Input in terminal

:29

the provided number is odd

Q18. What are Boolean operator?

Ans: Boolean operators are the simple words (and, or, not or and not) used as conjunctions to combine or exclude keywords in a search, resulting in more focused and productive results.

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 : true, true, true

```

Q20. What are conditional statements in Python?

Ans: A conditional statement is used to handle conditions in program. These statements guide the program while making decisions based on the conditions. Three conditional statements are 1-id statement 2- if else statement 3- if-elif-else ladder.

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

Ans: 'if', 'elif' and 'else' keywords are the conditional statements which helps to take the decisions by performing the comparison.

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".

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: # sum of addtional of all number ([12, 75, 150, 180, 145, 525, 50])

print("addition of 12+75+150+180+145+525+50",12+75+150+180+145+525+50)

Displays in terminal:

addition of 12+75+150+180+145+525+50 1137

[Done] exited with code=0 in 0.025 seconds

```

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("50:"))

b = int(input("20:"))

c = int(input("30:"))

largest = 0

if a>b and a>c:

largest = a

if b>a and b>c:

largest = b

if c>a and c> b:

largest =c

print(largest,"is the largest of the three numbers.")

output in tertmial

50:

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: my\_list = [12, 75, 150, 180, 145, 525, 50]

if any(item / 5 for item in my\_list):

print("there is an number divisible by five")

elif(item > 150 for item in my\_list):

print(" there is an item greater than 150")

elif(item>500 for item in my\_list):

print(" there is an item greater than 500")

else:

print("Bye")

```