Assignment Part-1

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

Ans- Because it's easy for humans to understand and can be applied to many different classes of problems.

Q2. Why is Python called a dynamically typed language?

Ans- Because the type of the variable is determined only during runtime

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

Ans-

Pros-

Python is easy to learn and read
Python enhances productivity
Python has a vast collection of libraries
Python is free, open-source, and has a vibrant community
Python is a portable programming language

Cons-

Python has speed limitations
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- Python is a multi purpose language.There are several domains available where python can used.Some of them are like Web Devlopment,Data Science,Artificial intelligence and machine learning.

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. Python has no command for declaring a variable. A variable is created the moment you first assign a value to it.

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

Ans- By using input() function

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 by Using split() method and List Comprehension.

Q10. What are keywords?

Ans- keywords are special reserved words that have specific meanings and
purposes.

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

Ans- No, we cannot use keyword as a variable.

Reason: Because Compiler will get confused (or it'll create ambiguity)
whether to take it as a keyword or a variable.

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.
Python uses indentation to indicate a block of code.

Q13. How can we throw some output in Python?

Ans- By using print() function

Q14. What are operators in Python?

Ans- 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

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

'/' is the division operator. It divide and return floating value

'//' is the floor division operator. It divide and return integer value

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

Ans -

```
x="iNeuron"
print(x*4)
```

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

Ans-

```
x=int(input("Enter the value for x :"))
if x%2==0:
    print(x,"is Even Number" )
else:
    print(x,"is odd Number")
```

Q18. What are boolean operator?

Ans- True and False are boolean operator

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-

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?

Ans- A conditional statement as the name suggests itself, is used to handle conditions in your program. These statements guide the program while making decisions based on the conditions encountered by the program.

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

Ans-

if - is used to determine whether a block of code will be executed or not. Meaning if the program finds the condition defined in the if statement to be true, it will go ahead and execute the code block inside the if statement.

elif - is used to check for multiple conditions and execute the code block within if any of the conditions evaluate to be true.

else - else keyword gets executed when the condition provided in if statement is false.

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-

```
Age=int(input("Enter the 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]
```
Solution :

```
numbers = [12, 75, 150, 180, 145, 525, 50]
x=0
for i in numbers:
    if i%2==0:
        x += i
print("The sum of even numbers is: ",x)
```

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

Solution :

```
FirstNumber = int(input("Enter First Number : "))
SecondNumber = int(input("Enter Second Number : "))
ThirdNumber = int(input("Enter Third Number : "))

if FirstNumber>SecondNumber and FirstNumber>ThirdNumber:
    print("First Number is greatest : ",FirstNumber)
elif SecondNumber>FirstNumber and SecondNumber>ThirdNumber:
    print("Second Number is greatest : ",SecondNumber)
else:
    print("Third Number is greatest : ",ThirdNumber)
```

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

for item in numbers:
    if item > 500:
        break
    elif item > 150:
        continue
    elif item % 5 == 0:
        print(item)
```