**Assignment Part-1**

**Note:- Q - Question**

**Ans - Answer**

**Ex Code:- Example Code**

**Exp:- Explanation**

**In:- Input**

**Out:-Output**

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

**Ans:-** Python is not written in a machine-readable language. It is written in a human-readable

form, a high-level programming language so the program can easily understand. Using

an interpreter the high-level code is converted to machine-readeable code.

**Q2**. Why is Python called a dynamically typed language?

**Ans:-** We don't have to declare the type of a variable or manage the memory while assigning a

value to a variable in Python.

**Ex Code:-**

**a = 5**

**print(type(5))#Out:**- <class 'int'>

**Exp:-** a is the Variable declared with an input value of 5 and the type of Variable is Integer.

Python while declaring the variable identifies the type of datatype passed.

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

**Ans:- Pros**

\* Python is easy to learn and read

\* Python has a vast collection of libraries

\* Python is a free, open-source

\* Python is an interpreted language

**Cons**

\* Python consumes a lot of memory space

\* Python is not easy to test

\* Python can have runtime errors

\* Python is not so strong in mobile computing

**Q4**. In what all domains can we use Python?

**Ans:-** \* Game Development

\* Web Scraping

\* Machine Learning, Deep Learning

\* Data Analytics

**Q5**. What are variables and how can we declare them?

**Ans:-** Varaible is a name given to a specific memory location.

**Ex Code:-**

**a = 5**

**print(a)#Out:**- 5

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

**Ans:-** Input function can be used to get the input from the user.

**Ex Code:-**

**name = input('Please enter the name ')**

**print('Username:-',name)#Out:**- **Username:- Vikraman**

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

**Ans:-** The default datatype of the input function is String.

**Ex Code:-**

**roll\_no = input('Please enter roll\_no ')#Out:**- 102, <class 'str'>

**print(roll\_no)**

**print(type(roll\_no))**

**Exp:-** In the above code, the number value is passed from the user. Due to the default type of input function, the roll\_no data type is a string.

**Q8.** What is type casting?

**Ans:-** Changing from one datatype to another datatype.

**Ex Code:-**

**roll\_no = int(input('Please enter roll\_no'))#Out:**-<class 'int'>

**print(type(roll\_no))**

**Exp:-** Since roll\_no received from the input function the default datatype is a string, we are typecasting the roll\_no to int.

**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 use the split function to split the single provided input.

**Ex Code:-**

**x, y = input("Enter two values: ").split(',')**

**print("Number of boys:-", x)**

**print("Number of girls:-", y)**

**#In:-**

**Enter two values: 10,55**

**#Out:-**

**Number of boys:- 10**

**Number of girls:- 55**

**Exp:-** Using Split Function and comma as separated the values can be split.

**Q10**. What are keywords?

**Ans:-** Python keywords are special reserved words that have specific meanings and purposes

and can't be used for anything but those specific purposes.

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

**Ans:-** We cannot use a keyword as a variable name, function name, or any other identifier.

For example “if” condition cannot be used as a declare variable.

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

**Ans:-** Indentation refers to the spaces at the beginning of a code line. Whereas 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?

**Ans:-** Using the print function we can throw the output.

**Ex Code:-**

**a = 5**

**b = 6**

**c = a + b**

**print('The Value of C',c)**

**#Out:-**

**The Value of C 11**

**Q14.**What are operators in Python?

**Ans:-** Arithmetic operators, Comparison operators, Logical operators.

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

**Ans:-** '/' is the division operator. '//' is the floor division operator.

**Ex Code:-**

**a =(5/2)**

**print('Division operator',a)**

**b =(5//2)**

**print('Floor operator',b)**

**#Out:-**

**Division operator 2.5**

**Floor operator 2**

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

**Ans:-**

**Ex Code:-**

**val = 'iNeuron'**

**val\_4 = val \* 4**

**print(val\_4)**

**#Out:-**

**iNeuroniNeuroniNeuroniNeuron**

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

**Ans:-**

**Ex Code:-**

**val\_inp = int(input('Please enter the input '))**

**if val\_inp%2 == 0:**

**print('Entered Number is Even')**

**else:**

**print('Entered Number is Odd')**

**#In:-**

**Please enter the input 9**

**#Out:-**

**Entered Number is Odd**

**Q18. What are boolean operator?**

**Ans:-** Boolean is a type of value that can be either True or False It's used to represent thethe

truth value of an expression

**Ex Code:-**

**print(15>10)**

**#Out:-**

**True**

**Exp:-**Above the expression output is True since the value of 15 is greater than 10.

**Q19**. What will the output of the following be?

**1 or 0 Ans:- 1**

**0 and 0 Ans:- 0**

**True and False and True Ans:- False**

**1 or 0 or 0 Ans:- 1**

**Q20.** What are conditional statements in Python?

**Ans:-** 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 the condition following the keyword if evaluates as true, the block of code will execute.

\* You can optionally add an else response that will execute if the condition is false.

\* Multiple conditions can be checked by including one or more elif checks after your initial if statement. Just keep in mind that only one condition will execute.

**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:-**

**Ex Code:-**

**age = int(input('Please enter your age: '))**

**if age >=18:**

**print("I can vote")**

**else:**

**print("I can't vote")**

**#In:-**

**Please enter your age: 15**

**#Out:-**

**I can't vote**

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

**Ans:-**

**Ex Code:-**

**num = [12, 75, 150, 180, 145, 525, 50]**

**sum = 0**

**for i in range(len(num)):**

**if num[i]%2 == 0:**

**sum = sum + num[i]**

**print("Sum of Even Numbers is", sum)**

**#Out:-**

**Sum of Even Numbers is 392**

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

**Ans:-**

**Ex Code:-**

**a = int(input('Enter the value of a: '))**

**b = int(input('Enter the value of b: '))**

**c = int(input('Enter the value of c: '))**

**if (a>b and a>c):**

**print('Greatest Number is A: ',a)**

**elif (b>c and b>a):**

**print(Greatest Number is B: ',b)**

**else:**

**print('Greatest Number is C: ',c)**

**#In:-**

**Enter the value of a: 10**

**Enter the value of b: 15**

**Enter the value of c: 20**

**#Out:-**

**The Greatest Number is C: 20**

**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:-**

**Ex Code:-**

**num = [12, 75, 150, 180, 145, 525, 50]**

**list\_sel = []**

**for i in num:**

**if i > 150:**

**if i > 500:**

**break**

**continue**

**if i % 5 == 0:**

**list\_sel.append(i)**

**print('List of numbers',list\_sel)**

**#Out:-**

**List of numbers [75, 150, 145]**