Conceptual Questions

1. **What are the basic data types in Python?**

Ans:-The basic datatypes of python are as follows:-

*   **Int datatype**
*   **Float datatype**
*   **String datatype**
*   **Boolean datatype**
*   **None datatype**

2. **What is the difference between int and float?**

Ans:- The major diffrence between int and float datatypes are

*   **Int datatype can contains all integer value,such as positive, negative and zero.Eg;+6,-4,0**
*   **Whereas float datatype can contains all real values such as decimal values.Eg:3.55,6.44,-4.78**

3. **How do you check the data type of a variable?**

Ans:- By using type() function we can check the datatype of the given variable.

Syntax:- type()

Example:-

> **I/P:- variable="sidhartha"**
>
> **print(type(variable))**

O/P:-< class 'str'>

4. **What is type conversion? Give an example.**

Ans:- There are 3 types of conversation:-

*   **Int to string conversation : eg; str(45)="45"**
*   **String to int conversion: eg; int("56")= 56**
*   **Int to float convertion : eg; float(32)=32.0**
*   **Float to int conversion : eg; int(56.78)=56**

5. **What is the difference between str(10) and int("10")?**

Ans:- str(10) convert the integer 10 to string "10"(int to string conversation) whereas int("10") convert the string "10" to integer 10 (string to int conversion)

6. What is a boolean in Python? Give examples.

Ans:- Boolean is the type of datatypes in the python,in which it gives the truth value for the expression such as true or false , it generally used in if else statement in the python

Example:-

Input :-

x=3

print(x>2)

print(x<1)

Output:-

True

False

7. What is None in Python? When is it used?

Ans:- None is a type of datatypes in python which represents absence of value or null value .

Example:- a=' '

O/p:- none

8. What is the difference between "10" (string) and 10 (integer)?

Ans:- str(10) convert the integer 10 to string "10"(int to string conversation) whereas int("10") convert the string "10" to integer 10 (string to int conversion)

9. How do you convert a float to an integer?

Ans:- float to int conversion:-

x=36.63

y=int(36.63)

print(y)

O/p:- 36

10. **What is the difference between list and tuple?**

   Ans:-

   i. List are mutable where tuple are immutable
   ii. List are used when we may have change the data where tuple are used for fixed data
   iii. List is defined using [ ] (square brackets) and tuple is defined using () (parentheses)

   iv. Example:-
   List=[1,2,4,5]
   Tuple=(3,7,8)

Practical Questions

11. **Assign num = 3.14. Convert it to an integer and print.**

   Ans:-The assign number num=3.14 is the float datatype,to convert float to int datatype,

   I/P:- Int(num)   O/P:-3

12. **What is the output?**

   print(type(True))

   Ans:- <Class 'bool'>

13. **Convert "123" to an integer and add 10 to it.**

   Ans:-a=int("123")

   b= a+10

   print(b)

   O/P:-133

14. **What is the output?**

   print(bool(0), bool("Hello"), bool(None))

   Ans:- False True False

15. **Why does print(10 + "20") give an error? Fix it.**

   Ans:-The error occurs because assignment operator can't operate between a string datatype and int datatype

16. **What will be the output?**

   x = 5.6

```
print(int(x))
```

Ans:- 5

17. Check if var = "Python" is of type str.

Ans:- yes the var is string datatype

```
print(type(var))
```

O/P:- <class 'str'>

18. What is the result of float("3.14") + 1?

Ans:- O/P:- 4.140000000000001

19. Predict the output:

```
print(str(10) + str(20))
```

Ans:- o/p:-1020

20. What is the difference between "5" and 5 in Python?

Ans:-"5" is the string datatype where as 5 is the int datatype