Q.1 How do you comment code in Python? What are the different types of comments?

To comment out the code in Python is using the # or writing in between triple quotes """ There are two types of comments in the Python 1)Single line comment : To comment a single line of code the # character is used before any statement or the line of code 2)Multi-line comment : TO comment out multiple statements or line of code is to write to statements or code in between the triple quotes """

Q2. What are variables in Python? How do you declare and assign values to variables?

Variable is a name that is used to refer to memory location. Python variable is also known as an identifier and used to hold value. In Python, variables need not be declared or defined in advance, as is the case in many other programming languages. To create a variable, you just assign it a value and then start using it. Assignment is done using '='sign.

Q3. How do you convert one data type to another in Python?

In python, one data type can be converted into another data type using the type() function, simply put the name of the data type you want to change in. There are several built-in functions to perform conversion from one data type to another like int, float, etc. These functions return a new object representing the converted value.

Q4. How do you write and execute a Python script from the command line?

Open the command line terminal Type python and press Enter to start writing code, to execute the code type python followed by the script name.

Q5. Given a list my_list = [1, 2, 3, 4, 5], write the code to slice the list and obtain the sub-list [2, 3].

```python
In [2]: my_list = [1, 2, 3, 4, 5]
        print(my_list[:])
        print(my_list[1:3])
```

```
[1, 2, 3, 4, 5]
[2, 3]
```

Q6. What is a complex number in mathematics, and how is it represented in Python?

Complex numbers are the numbers that are expressed in the form of a+ib where, a,b are real numbers and i is an imaginary number iota. In python complex numbers are represented as directly assigning the real and imaginary parts with the j notation or using complex() function

Q7. What is the correct way to declare a variable named age and assign the value 25 to it?

age=25

Q8. Declare a variable named price and assign the value 9.99 to it. What data type does this variable belong to?

```python
In [1]: price=9.99
        type(price)
```

```
Out[1]: float
```

Q9. Create a variable named name and assign your full name to it as a string. How would you print the value of this variable?

```python
In [2]: name = "SOHAM DHANANJAY DALAL"
        print(name)
```

```
SOHAM DHANANJAY DALAL
```

Q10. Given the string "Hello, World!", extract the substring "World".

```python
In [8]: s = "Hello, World!"
        print(s[7:12])
```

```
World
```

Q11. Create a variable named "is_student" and assign it a boolean value indicating whether you are currently a student or not.

```
In [13]: is_student= True or False
         print(is_student)

True
```