Q.1 Create one variable containing following type of data:

(i) string

(ii) list

(iii) float

(iv) tuple

Ans.

string variable = ("abc123" "Hello World" "Hello, what is your name ?")

list = [1,2,3,4,5,10]

floating data = (0.125,10.29)

tuple data

      tuples are used to store multiple items in a single variable.

thistuple = ("apple", "banana", "cherry")

print(thistuple)

Q2. Given are some following variables containing data:

(i) var1 = ' '

(ii) var2 = '[DS , ML , Python]'

(iii) var3 = ['DS' , 'ML' , 'Python']

(iv) var4 = 1.

What will be the data type of the above given variable.

Ans.

var1 = ' ' string data

var2 = '[DS , ML , Python]' this is a list data

var3 = ['DS' , 'ML' , 'Python'] this is list data

var4 = 1. this is integer data

Q3. Explain the use of the following operators using an example:

/ use for   division

Ex.   x = 10

       Y = 2

       print(x / y)

       10/2 = 5

% use for modules

Ex.   x = 5

       Y = 2

       print(x %y) = 1

// floor division
Ex. x = 15

  Y = 2

     X //y = 7

** exponentiation
Ex   X = 2

      Y = 5

      print(x ** y) = 32

      2*2*2*2*2

Q4. Create a list of length 10 of your choice containing multiple types of data. Using for loop print the element and its data type.

```
#l = [1,"school","pw skill",98.5,2,3,4,"java",22,"class"]
  for i in l:
       print(i)
       print (type(i))
```

Q5.Using a while loop, verify if the number A is purely divisible by number B and if so then how many times it can be divisible.

```
# a = int(input())
 b = int(input())
 c = 0
If (a/b ==0:
       while(a/b>=b and type (a/b)==int):
              c+=1
              a/=b
       c
else:
       print("not divisible")
```

Q6. Create a list containing 25 int type data. Using for loop and if-else condition print if the element is divisible by 3 or not .

```
#l = [1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25]
l1=[]
l2=[]
```

```
for  i in l :
        If i%3==0:
              l1.append(i)
        else:
                l2.append(i)
```