**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.**

Answers:

1. str
2. str
3. list
4. float

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

1. **/**

It is an arithmetic operator used for division. Eg: 15/2 = 7.5

1. **%**

It is an arithmetic operator used for obtaining the modulus value. Eg: 15%2 = 1

1. **//**

It is a floor division operator that rounds the result to the nearest whole no. Eg: 15//2 = 7

1. **\*\***

It is used to calculate the exponential power. Eg 2\*\*3 = 8

**Q7. What do you understand about mutable and immutable data types? Give examples for both showing this property.**

Ans: Mutable data types are the data which can be mutated or updated.

Eg: Lists are mutable data types. Let list i = [ 2, 4, 6, 8, 9, “hello”, 8.22] Now, we can update (mutate/change) the value of any list item.

* i[4] = 10

Hence, the new list i becomes i = [ 2, 4, 6, 8, 10, “hello”, 8.22]

In Immutable data types like strings, data cannot be updated at a particular index.

Eg: Let string b = “apple” Now if we try to update the b like lists, b[1] = “z”, it given an error.