1. In the below elements which of them are values or an expression? eg:- values can be integer or string and expressions will be mathematical operators.

\*

'hello'

-87.8

-

/

6

**Ans. Values- ‘hello’, -87.8, and 6**

**Expression- \*, -, /,+**

2. What is the difference between string and variable?

**Ans. Variable: They are names given to data items and different types of data values can be stored in a variable.**

**String: It is a datatype where the variable is assigned to it.**

**For Eg, name = “Mary Antony”, Here name is the variable, and “Mary Antony” is the string.**

3. Describe three different data types.

**1. Integer Data type:**

* **This data type stores whole numbers(Positive and negative integers).**

**Eg: a= 95, b= -5, etc**

* **Int data type is not iterable.**

**2. List data type:**

* **It is used to store multiple values in a single variable.**
* **It is initialized using [].**
* **List items are mutable, ordered, indexed, and allow duplicates.**
* **List is iterable.**

**3. String:**

* **Strings in python are surrounded by either single quotation marks, or double quotation marks.**
* **String can be accessed by using the method of Indexing.**

4. What is an expression made up of? What do all expressions do?

**1. An expression in Python is a combination of operators and operands.**

**2. For eg:**

**a=7, b=3, c=a+b**

**In the above example a, b, and c are variables, 7 and 3 are values, and + and = are operators**

**here a=7, b = 3 and c = a + b are three different expressions.**

5. This assignment statements, like spam = 10. What is the difference between an expression and a statement?

* **Ans. A statement is an instruction that an interpreter can execute it. Statements are used to create variables and display the values.**
* **Statements are a whole structure where expression is the building block.**
* **For Example:**

**a= 9: it is a statement where value 9 is assigned to variable a.**

**print(a): it is a print statement that displays the value of variable a.**

6. After running the following code, what does the variable bacon contain?

bacon = 22

bacon + 1

**Ans. Bacon=22**

7. What should the values of the following two terms be?

'spam' + 'spamspam'

'spam' \* 3

**a**

8. Why is eggs a valid variable name while 100 is invalid?

**Ans. Because 100 is a value and it cannot be used to assign another value. Hence it is invalid variable.**

9. What three functions can be used to get the integer, floating-point number, or string version of a value?

**Ans. To get the Integer: Int() function.**

**To get the floating-point number: the float() function**

**To get the String: string() function**

10. Why does this expression cause an error? How can you fix it?

'I have eaten ' + 99 + ' burritos.'

**Ans. This statement contains two datatypes string and integer.**

**I have eaten, burritos: string data type.**

**99: integer**

**Hence it gets an error.**

**The correct code is: 'I have eaten ' +’ 99’ + ' burritos.'**