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.

**\* — expression**

**'hello' — value**

**-87.8 — value**

**- — expression**

**/ — expression**

* **— expression**

**6 — value**

2. What is the difference between string and variable?

**Answer - Variable is a store of information where several types of information are stored.**

**String is one of the types of information in which alphabetic characters are involved.**

3. Describe three different data types.

**Answer - Three data types are:**

1. **Integer(int) - In this data type integer numbers can be stored. eg. 0, 2, 106.**
2. **Float(float) - In this type decimal numbers can be stored. eg. 0.56, 1.2**
3. **String(str) - here alphabetic characters are stored. eg. “india”**

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

**Answer - An expression is a combination of Operators and Operands to produce a value.**

**eg. 1+2=3 - 1 and 2 are Operands, + is Operator, 3 is Value.**

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

**Answer - Assignment statement is used to assign any value to a variable.**

**Difference between statement and expression is that a statement is a command or an action like a print statement is used to print a value but expression is used to produce a value after applying some operations.**

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

bacon = 22

bacon + 1

**Answer - bacon will remain 22 because there is no other change stored in bacon afterwards.**

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

'spam' + 'spamspam'

'spam' \* 3

**Answer - 'spam' + 'spamspam' = 'spamspamspam'**

**'spam' \* 3 = 'spamspamspam'**

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

**Answer - A valid variable name must**

1. **start with a letter or the underscore character**
2. **A variable name cannot start with a number**
3. **A variable name can only contain alpha-numeric characters and underscores (A-z, 0-9, and \_ )**

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

**Answer -**

**a) int() function for integer**

**b) float() function for floating-point number**

**c) str() function for string**

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

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

**Answer - Above expression will cause an error because there are different data types being operated. it can be fixed when 99 can be changed into a string by enclosing it in inverted commas. Then it will concatenate all the three strings.**

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