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

**Ans-**

1 \*: **expression**

2 'hello’: **value**

3 -87.8: value

4 -: **expression**

5 /: **expression**

* : **expression**

6 6: **value**

**2. What is the difference between string and variable?**

**Ans-**

A string is a value representing text

A variable is a name that can refer to any value

Example:

Variable is my var = 3 or “hello’

String is my var = “my name is terry’

Also, how do you know when to use quotes in your variable such as my var = 3

And my var = ‘hello’

**3. Describe three different data types.**

**Ans-**

1. String: Alphanumeric characters - ex: hello world, Bob 123

2. Integer: Whole numbers- ex: 7,13,999

3. Boolean: Representing logical values – ex: True or False

4. Float: Numbers with a decimal point -ex: 3.15, 9.066, 00.13

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

**Ans-**

A combination of operands and operations is called an expression

The expression in python produces some value or result after being interpreted by in python interpreter.

Ex- x = 3+6 output =9

\*\* Value and Operators & Reduce down to a single value

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

**Ans-**

An expression is a combination of zero or more operators and one or more operands that specifies the computation of a value.

The operands might include constants, variables, or function calls

A statement specifies some action to be performed. Statements are typically executed in sequence, although some statements specify a change in execution order (e.g., conditional statements, looping statements, jumping statements, etc.).

Spam: variable

10: value

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

bacon = 22

bacon + 1

**Ans-**

bacon = 21

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

**'spam' + 'spamspam’**

**'spam' \* 3**

**Ans-**

‘spamspamspam’

‘spamspamspam’

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

**Ans-**

100 is an integer, where eggs can be used as a variable

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

Ans-

Integer-int ()

Floating point – float ()

String – str ()

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

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

Ans-

“99” is an integer and not a string, so the operations are incompatible until “99” is converted into a string

Fix: use str () to convert “99” to a string.