**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.**

\* -> **operators**

'hello' -> **values**

-87.8 - **values**

- -> **operators**

/ -> **operators**

* -> **operators**

6 -> **values**

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

Ans –

**String** **->** String is a text or numbers enclosed in double quote.

e.g., “hello”, “3454” etc.

**Variable ->** Variable is like a container in which we can store data like text , numbers etc.

e.g., x = 57 ,here x is a variable

var = “I am stored in a variable var” , here `var` is a variable.

3. Describe three different data types.

**a.** Int – An integer is whole number. e.g., 2,4,-2 etc.

**b.** String – String is collection letters or numbers put together. e.g., “Hello world”,”2326546” etc.

**c.** float – Float is number having decimal places. e.g., 3.4, 54.3 etc.

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

**Ans –** An expression is made up of one or more elements ,when evaluated , produce a value. All expressions helps in performing the calculation , manipulating the data , making decisions ,assigning the values etc.

e.g., expression is -> 4+6 = 10

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

**Ans -** An expression is a combination of values, variables, operators that can be evaluated to produce a single value. Expression returns the result. E.g., 4+6 = 10 , here 4+6 is expression after which evaluating got the result as value 10.

Whereas Statement is complete line of code that performs action which gives command to the computer. This includes assignment statements, loops , conditionals and function calls.

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

bacon = 22

bacon + 1

**Ans ->** 23

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

'spam' + 'spamspam' -> 'spamspamspam'

'spam' \* 3 -> 'spamspamspam'

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

**Ans -** Variable names must adhere to certain rules and conventions. These rules ensures that variables are easy to understand and work with.

eggs is a valid variable name because it starts with a letter, contains only letters, and doesn't conflict with reserved words.

100 is invalid because it starts with a number, violating the rule that variable names should start with a letter or underscore.

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

**Ans –** Below are the three functions **:**

1. integer -> x = int(20)
2. float -> y = float(3.14)
3. string -> z = str(40)

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

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

**Ans –** In above expression string and integer can’t be added. Therefor this gives an error. This can be fixed by converting the integer to string like below –

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

-> 'I have eaten 99 burritos.'