**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?**

**Ans:** String consists of alphabetic words which is a kind of data, whereas, variable is something which is used to store any value. For example, if we say num1=14, here num1 is a variable which is of integer datatype. If we say “Hello word” in python it is a form of string.

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

**Ans:** In python we have integers, floats and complex data types.

Integers: Integer data type variables used to store integer values. For example, ‘a=10’, ‘num1=567’ or ‘num=int(input(“Enter any integer”))’ and many more.

Floats: Float data type variables used to store decimal values. For example, ‘b=12.5’, ‘num2=456.7’ or’num2=float(input(“Enter any float”))’ and many more.

Complex: Complex data values are stored in complex data type variables. For example, ‘c=1+4j’ where ‘c.real’ is real value of the c variable and c.imag is the imaginary value of the c variable.

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

**Ans:** Expression is made up of operators and operands, where operators can be arithmetic, relational, etc. Operands can be a constant or any variable. For example, sum= num1+num2 or sub=56-num3.

Expressions are used to get a desired result from the different variables or values by using various operators.

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

**Ans:** Expression gives a new value by using previous variables and different operators, whereas, a statement doesn’t give any value but instead assign a value to any variable like in ‘spam=10’ which is assigning 10 to spam variable.

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

**bacon = 22**

**bacon + 1**

**Ans:** The value of bacon is 22.

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

**'spam' + 'spamspam'**

**'spam' \* 3**

**Ans:** First expression will give value as : spamspamspam

Second expression will give value as: spamspamspam

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

**Ans:** A valid variable name is not allowed to start with any number. Therefore, 100 as a variable name is python is considered as invalid and eggs considered a valid variable name. Moreover, 100 is also an integer value. Hence it will create problems.

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

**Ans:** Functions like int(), float(), str() are used to get integer, floating-point number and string version of a value.

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

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

**Ans:** This expression will cause error because 99 is an integer and only string value can concatenate in the statement. Therefore, the correct expression can be: **I have eaten ' + ‘99’ + ' burritos.'** In which 99 is converted into string.