**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**

**ANSWER-**

**\* Expressions**

**'hello' value(string)**

**-87.8 value(integer)**

**- Expressions**

**/ Expressions**

**+ Expressions**

**6 value(integer)**

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

**ANSWER- A Variable is used to store of information, and a String is a type of information you would store in a Variable. Main difference between string and variable is that to represent string we need to enclosed it in single quotes (' ') or Double quotes (" ").**

**Example:- x = “22” in this case 22 is string and x is variable**

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

**ANSWER-**

1. **String: A sequence of characters, used to represent text. For example, "Hello, World!" is a string.**
2. **Integer: A whole number, negative or positive, without a decimal point. For example, 42 and -7 are integers.**
3. **Float: A number with a decimal point, used to represent real numbers. For example, 3.14 and -0.01 are floats.**

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

**ANSWER- An expression is a combination of values, variables, operators, and calls to functions. Expressions need to be evaluated. If we ask Python to print an expression, the interpreter evaluates the expression and displays the result.**

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

**ANSWER- An expression is a combination of values, variables, and operators.When we type an expression at the prompt, the interpreter evaluates it, which means that it finds the value of the expression.**

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

**bacon = 22**

**bacon + 1**

**ANSWER- The variable bacon will still contain the value of 22 because second line of the code bacon + 1 is an expression that evaluates to the value 23, but it is not assigned to the variable bacon. It means that the value of bacon is not updated after the execution of this line.**

**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- As per one of the python rules are that Variable names cannot begin with a number.**

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

**ANSWER- int() for integer, float() for floats, str() for strings.**

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

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

**ANSWER- In the above statement 99 is integer but 'I have eaten' and 'burritos.' Are string. So this is concatenate type error.**

**To fix this we have to simply enclosed 99(which is integer) in single quotes (' ') or Double quotes (" ").i.e - 'I have eaten ' + ‘99’ + ' burritos.'**