**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(operator)

**'hello'**  =value (string)

**-87.8** =value (float)

- =expression (operator)

/ = expression (operator)

* = expression (operator)

**6**  = value (integer)

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

**String** :- is a type of data that represents sequence of characters

**Variable** :- A variable is container(storage location) that can store different types of data

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

Ans. **String**:- A string is a sequence of characters. It is used to represent text or any sequence of characters enclosed within single quotes(‘ ‘) or double quotes(“ ”).E.g. “Hello”

**Float:-** It is a datatype used to represent decimal numbers or real numbers .E.g-1,2,3,3.4,6.7 **Integer:-** It is a data type used to represent whole numbers without fractional part. Integers can be positive, negative or zero

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

Ans. An expression is made up of one or more operands and operators. It represents a computation or a value in programming.Expressions can take many forms, including arithmetic expressions, logical expressions, string expresiions, and many more. Here are some examples:

(i) Arithmetic expression: 2+3+5

(ii) Logical Expression: x>5, y<7

(iii) String Expression: “Hello” +”Name”

**5. This assignment statements, like spam = 10. What is the difference between an expression and a statement?** Ans5. **Expression** :- An expression is a combination of values, variables, and operators that evaluates to a single value. It can be as simple as a single literal or variable, or it can be a complex combination of multiple operands and operators. Expressions are typically used to compute or derive a value. For example :- 2+3 is an expression that evaluates to the value 5 and X\*3 is n expression that computes the product of the variables x and y

**Statement**:- A statement, on the other hand is a complete instruction or action the performs a specific task. It can consist of one or more expressions and often has side effects such as modifying variables, controlling program flow, or interacting with the environment. Statements are typically used to control the execution of code and perform actions. For Example:

Spam=10 is an assignment statement that assigns the value 10 to the variable spam,

x>5 is a conditional statement that controls the flow of execution expressions are used to compute values, while statements are used to perform actions and control the flow of a program. Expressions can be part of a statement, such as in an assignment statement, where the expression computes a value that is then assigned to a variable.

**Top of Form**

**Bottom of Form**

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

**bacon = 22**

**bacon + 1**

Ans6. 23

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

**'spam' + 'spamspam'**

**'spam' \* 3**

Ans. Both will have output as ‘spamspamspam’

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

Ans. According to variable rules a variable cannot starts with a digit, Because in python 100 is automatically considered as integer data.

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

Ans. int(), float() and str()10.

**10.Why does this expression cause an error? How can you fix it?'I have eaten ' + 99 + ' burritos.'**

Ans. Because they are different datatypes and concatenation is not allowed automatically in python. Yes it can be fix by typing with, 'I have eaten ' + str(99) + ' burritos'