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

Ans:- Operators :- - *,-./,+ Expressions:- "Hellow", -87.8, 6

2. What is the difference between string and variable?

Ans:- A variable is used to store values and strings a type of informatiion that you store in variable that we can represent string in python like this in double quotes "", or single quotes ''.

3. Describe three different data types.

Ans:- 1}Integer:- An integer data type represents whole numbers without any fractional or decimal part. In most programming languages, integers can be positive or negative. Examples of integers include -3, 0, 42, and 1000.

2}String:- A string data type represents a sequence of characters. It is used to store textual data such as names, sentences, or any other combination of characters. Strings are typically enclosed within quotation marks. For instance, "Hello World", "Open Excel".

3}Boolean:- A boolean data type represents a binary value that can be either true or false. Booleans are often used in conditional statements and logical operations. They are useful for making decisions and controlling program flow. For example, the expression 5 > 3 evaluates to true, while 2 == 7 evaluates to false.

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

Ans:- Expression is a combination of values,operators, and calls to functions expression need to be evaluated. If we ask python to print an expression the interpreter give the expression and display the result.

5. This assignment statements, like spam = 10. What is the difference between an

expression and a statement?

Ans:- 1.Expression: An expression is a combination of values, variables, operators, and function calls that can be evaluated to produce a single value. Expressions can include mathematical calculations, logical operations, or even function invocations. They are used to compute or determine a value. For example: x = 5 + 3, "5 + 3" the output will be 8.

2 Statement: A statement is a complete instruction or command that performs a specific action. It is a line of

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

bacon = 22 bacon + 1

Ans:- bacon = 23 The variable of bacon contain value of 23

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

'spam'+ 'spamspam' 'spam'*3

Ans:- Both are the strings after running the code 'spamspamspam'

In [2]:

```
print('spam'+'spamspam')
print('spam'*3)
```

```
spamspamspam
spamspamspam
```

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

Ans:- Because, python rules are not allowed the number as variables, only the names can be a variables.

In [3]:

```
egg = "Hen"
100 = "police"
print(egg)
print(100) # Thats why we cannot get the output.
```

```
  Cell In[3], line 2
    100 = "police"
    ^
SyntaxError: cannot assign to literal here. Maybe you meant '==' instead o
f '='?
```

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

In [11]:

```
Int_value = "42"
print(Int_value)
float_value = "20.43"
print(float_value)
str_value = 42
print(str_value)
```

```
42
20.43
42
```

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

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

Ans:- 99 must be typecasted to a string to fix this error.

In [12]:

```
print('I have eaten' + str(99) + 'burritors' )
```

```
I have eaten99burritors
```

In [ ]:

```

```