1. What are the differences between operators and values in the following?

**ANS🡪** **\***  is known as Arithmetic (multiplication) operator. It is use to multiply the values

**Ex** 🡪 X\*Y.

'**hello**' 🡪 This is in the form of string because in python we can denote the string using single quote,double quote and triple quote also.

**-87.8** 🡪 This is a float value with -ve sign.

**- 🡪** This is a Arithmetic ( subtraction) operator which is used to subtract the values

**Ex**🡪 X-Y

**/ 🡪** This is a Arithmetic (Division) operator which is used to Divide the values

**Ex**🡪 8/3=2.666666

**+ 🡪** This is a Arithmetic ( Addition) operator which is used to add the values

**Ex**🡪 X+Y

**6 🡪** This is integer value which value can’t be changed.

2. What is the difference between string and variable?

spam 🡪 it is known as variable

'spam' 🡪 It is known as String

**ANS 🡪** A Variable is a store of information, and a String is a type of information you would store in a Variable. A String is usually words, enclosed with "" Eg String spam ="spam" spam is the Variable, and we declared it as a String, use the single = to assign the text to it.

3. Describe three different data forms.

**ANS 🡪** The Three different data forms are

Numeric.

Sequence Type.

Boolean.

4. What makes up an expression? What are the functions of all expressions?

**ANS 🡪** An expression is an instruction that combines values and operators and always evaluates down to a single value. There are three kinds of expression: An arithmetic expression evaluates to a single arithmetic value. A character expression evaluates to a single value of type character. A logical or relational expression evaluates to a single logical value.

5. In this chapter, assignment statements such as spam = 10 were added. What's the difference between a declaration and an expression?

**ANS 🡪** declaration means binding it to a data type so here spam = 10 is a declaration and we can say it is of integer type.

Expression is a combination of variables, operations and values that yields a result value. Ex 🡪 10\*10

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'

'spam' \* 3

**ANS 🡪** The result will be both the above statements:'spamspamspam'

8. Why is it that eggs is a true variable name but 100 is not?

ANS 🡪 A variable name must start with a letter or the underscore character.

But a variable name  can’t start with a number. That’s why eggs is a variable but 100 not a variable.

9. Which of the following three functions may be used to convert a value to an integer, a floating-point number, or a string?

**ANS** 🡪 int ( a , base ) 🡪 this function converts any data type to integer. Base specifies the base in which string is if the data type is a string.

Float() 🡪 this function is used to convert any data type to floating point number.

Str() 🡪 this function is used to convert any value to string.

10. What is the error caused by this expression? What would you do about it?

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

ANS 🡪 Since we know that we can’t concatenate integer with string that why the error comes that only concatenate str(not “int”) to str.