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

\*

'hello' **– String Value**

-87.8 **- Floating Values**

-

/

+

6 - **Integer**

**Ans** : **Values** are inputs which is to be stored in a Variable.

**Operators**: Operators are used to perform mathematical operations. Operators are the type of variables.

**Eg :** 'hello' – String values stored in “ ” or ‘ ‘. To check the type of variable in python is , type(‘hello’)

2. What is the difference between string and variable?

spam

'spam'

Spam is a variable which helps us to store a variable. ‘ spam ‘ is a value in the form of string. The string ‘spam’ can be stored in variable called **spam.**

**Eg : Spam =’spam’**

3. Describe three different data forms.

The python data forms are

1. Numeric – Numeric forms are any integers and floating values.
2. String – String forms are used to store any character and string values in “ “ or ‘ ’.
3. Boolean – Boolean data forms are either True or False in python.

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

If the line contains any arithmetic, relational logical expressions, this will be treated as a expression in python.

Apart from that if the line performs any comprehensive functions, it will be treated as expression.

**Arithmetic Operator: (+,-,\*,/)**

**Relational Operator : ( >,>=, <,<=,==, !=)**

**Logical Operator – AND, OR**

**AND –** AND operator helps to define two or more conditions in an expression that must satisfy all the conditions to execute the code.

**OR –** OR operator helps to define two or more conditions in an expression, If any one condition satisfies the expression will be executed.

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

**Declaration –** Declaration is to defining a variable or values into an particular Variable name.

Eg : i=1

**Expression :** If the line contains more than one operator and performs operations within the scope it is called as Expression and the expression contains any arithmetic, relational and logical operators.

Eg : i=1

n=10

for i in range(n):

print(i)

i+=1

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

bacon = 22

bacon + 1

**Ans :** Bacon contains integer 22 and with bacon , integer 1 is added but it is not stored in a variable. So, the bacon still contains the integer 22.

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

Ans:

**'spam' + 'spamspam'** 🡪 Adding **‘spam’** with **‘spamspam’** again and again . It will result as **‘spamspamspam’**

**'spam' \* 3** 🡪 Multiplying ‘spam’ 3 times, it will result as **‘spamspamspam’**

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

\* Variable definition should follow some conditions like.

\* Variable name starts with any char.

\* Variable should not start with any integer and special characters.

\* in the above case **“ eggs “** starts with alphabetic character so it is valid. But **100** is an integer, so we cannot define the integer as variable name.

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 🡪

1. Converting Float into Integer: A=10.10, B= int(A) , **B= 10 ,**Now A is converted into an integer.
2. Converting integer into an string 🡪 A=10, B=str(A) 🡪 **B= ‘10’.**
3. Converting integer to an float value 🡪A=10, B=float(A)🡪 **B=10.0**

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

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

Ans : We will get **type error” can only concatenate str (not "int") to str”**, by following the above expression.   
 The Correct expression would be **'I have eaten'+ str( 99 ) + 'burritos'**