**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**

Ans.: Values: 'hello' , -87.8, 6

Expressions: \*, -, / , +

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

Ans.: A variable is a memory location to store values.

Eg.: a=100, a is a variable

A string is a value that is surrounded by single quote or double quotes.

Eg.: ‘hello’

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

Ans.:

1) Numeric data type:

a) Integer:  This value is represented by int class. (Positive and Negative whole No.s.) eg.: int a;

b) Float: Represented by float class. Specified by decimal point. Eg: 2.987

c) Complex no.s.: Represented by complex class. It is specified as (real part) + (imaginary part)j. For example – 5+2j

2) Boolean: Represented with true or false(‘T’ or ‘F’)

3) Dictionary: It is an unordered collection of data values. It holds key:value pair. Each key-value pair is separated by a colon :, whereas each key is separated by a ‘comma’.

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

Ans. An expression is a combination of operators and operands that in turn produce another value. According to the precedence of operators the evaluation of expressions take place.

Eg.:

b=x\*y;

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

Ans: Assignment statements change the value of a variable on the left side of the assignment operator =.

Expression is on the right side of the assignment statement and contains operators and operators within it.

Eg.: q = p + 5 \* 9

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

**bacon = 22**

**bacon + 1**

Ans.: Bacon contains the value 23

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

'spam' + 'spamspam'

Ans.: spamspamspam

'spam' \* 3

Ans.: spamspamspam

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

Ans. : Because variable names by rule always start with an alphabet and not an integer

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

Ans.: int(), float(), str()

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

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

Ans.: 99 is an integer which cannot be concatenated.

The answer must be 'I have eaten ' + ‘99’ + ' burritos.'