**SOLUTIONS**

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.

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'hello'

-87.8

-

/

6

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**ANS: EXPRESSIONS- (\*, -, /, +)**

**VALUES- (‘hello’, -87.8, 6)**

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2. What is the difference between string and variable?

**ANS: String is a collection of letters or words indicated within quotes.**

**Variable is a name which is used as a storage area as memory for the computer.**

**Can store values like numbers, strings etc…**

3. Describe three different data types.

**ANS: Integer- These are numbers that can be stored in variables which range in both +ve and –ve and can also be 0. Ex: 20, 0, -50**

**Boolean- This can be either True or False, or like 0 and 1 which is the language understood by the computer. Ex- 65 is an Integer=True**

**Float- Consists of number with decimal parts. Ex: 56.25**

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

**ANS: Expression can be a combination of simple operators like +, - , / , \* and numbers like integer, float etc… Ex: 22 – 2.5**

**Expressions are used to create new values. To specifically know what a particular person wants to do with those depending on the information they want. Used in many programming languages.**

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

**ANS: Expression gives out a value in return which is desired.**

**But in the case of a statement, it is like a rule, it is done what it is supposed to do but not always returns a value. It is uncertain.**

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

bacon = 22

bacon + 1

**ANS: The variable contains 23.**

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

'spam' + 'spamspam'

'spam' \* 3

**ANS: ‘spamspamspam’**

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

**ANS: eggs has a particular meaning to the name and it is valid to have such a name as a variable.**

**But we cannot have a number like 100 as a variable.**

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

**ANS: int() for integer**

**float() for floating-point number,**

**str() or string**

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

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

**ANS: We get error saying ‘must be str, not int’ as 99 cannot be concatenated with integer.**