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 are 6, ‘hello’, -87.8 expressions are \*, -, /,+ .**

2. What is the difference between string and variable?

**Ans. Variable: It is a placeholder, it references to memory location where values are placed. It is a value which can be change during the execution of program. Variable is kind of entity where we can store data which we can use in our program.**

**String: It is a collection of characters.**

3. Describe three different data types.

**Ans. Data Types: it tells to compiler that which type of data we are using in programming. Ex. Interger, float, string etc.**

1. **int : It is used when we have to work with whole numbers.(+ve or -ve), It can be Plain Integer, Long Integer, Bool.**
2. **float: It represents floating point values.**
3. **String: It represents a collection of characters enclosed within single or double quotes.**

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

**Ans. Expressions are made up of values, variables and mathematical operators ex. x+y= 5, expressions are used to evaluate the values and generate result.**

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

**Ans. Here spam=10 is a statement which is not evaluating any value but expression evaluates values like 2+3, expressions are having operands and operators.**

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

bacon = 22

bacon + 1

**Ans. bacon =22, b’coz we did not assign bacon to bacon+1.**

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

'spam' + 'spamspam'

'spam' \* 3

**Ans. Above both codes will give same result that is spamspamspam.**

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

**Ans. b’coz 100 is integer constant and eggs is not any reserved word so we can use eggs as a variable name not 100.**

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

**Ans. The int() , float() , and str( ) functions will evaluate to the integer, floating-point number, and string versions of the value passed to them.**

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

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

**Ans. B’coz 99 is integer here and it cannot concatenate with string. To fix it we have to convert integer 99 to string ‘99’.**