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,

Expression🡪\*,-,/

2. What is the difference between string and variable?

Ans.

String is a type of data which store in a Variable. A string is a collection of one or more characters put in single quote, double-quote or triple quote.

Variable is a store of data.

3. Describe three different data types.

Ans.

INTEGERS :- This is numeric data type use to store positive or negative whole numbers. In python there is no limit to how long a value can be. This value is represented by int class.

STRING:- A string is a collection of one or more characters put in single quote, double-quote or triple quote. It is represented by str class.

Boolean: Data type with one of the built in values, True or False. It is denotes by the class bool.

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

Ans. An expression is a combination of operators and operands that is interpreted to produce some other value.

1.Contant Expressions: These are the expressions that have constant values only.

2.Arithmetic Expressions: An arithmetic expression is a combination of numeric values, operators, and sometimes parenthesis. The result this type of expression is also a numeric value. The operators used in these are arithmetic operators like addition, subtraction.

3.Integral Expressions: These are the kind of expressions that produce only integer results after all computations and type conversions.

4.Floating Expressions: These are the kind of expressions which produce floating point numbers as result after all computations and type conversions.

5.Relational Expressions: Arithmetic expressions are written on both side of relational operators(<,>,>=,<=) .Those arithmetic expression are evaluated first, and then compared as per relational operator and produce a Boolean output in the end.

6.Logical Expressions: These are kinds of expressions that result in either True or False.

7.Bitwise Expressions : These are the kinds of expression in which computations are performed at bit level.

8.Combinational Expressions: We can also use different type of expression in a single expression, and that will be termed ad combinational expressions.

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

Ans: A statement is a complete line of code that performs some actions, while an expression is any section of code that evaluates to a value.

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

bacon = 22

bacon + 1

Ans. Variable bacon contain 22 because the next line will not update the value in bacon as its simply adding 1 without assigning it to bacon again.

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

'spam' + 'spamspam'

'spam' \* 3

Ans. Both the terms will result into 'spamspamspam'

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

Ans. A variable name must start with a letter or the underscore character. Variable names cannot begin with a number.

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

Ans. For integer-🡪 int()

Floating-point 🡪 float()

String🡪 str()

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

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

Ans. This expression will cause an error because we can only concatenate str to str not “int”

FIX: 'I have eaten ' + ’ 99 ‘ + ' burritos.'

For fix we have to quote 99 in single or double quote.