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.

ANS: string – ‘hello’,

float -87.8

integer 6

mathematical operators \*,-,/,+

\*

'hello'

-87.8

-

/

6

1. What is the difference between string and variable?

String is a text which cant be changed overtime. Eg: “hi”

variable can be assigned with different values overtime. It is used to store data which can be int, float, text

1. Describe three different data types.

**Integers**– This value is represented by int class. It contains positive or negative whole numbers (without fraction or decimal). In Python there is no limit to how long an integer value can be.

**Float**– This value is represented by float class. It is a real number with floating point representation. It is specified by a decimal point. Optionally, the character e or E followed by a positive or negative integer may be appended to specify scientific notation. 

**Complex Numbers** – Complex number is represented by complex class. It is specified as *(real part) + (imaginary part)j*. For example – 2+3j

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

An expression is a combination of values, variables, operators, and calls to functions.

An expression is an instruction that combines values and operators and always evaluates down to a single value. For example, this is an expression: 2 + 5. The 2s are integer values and the + is the mathematical operator. This expression evaluates down to the single integer value 7

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

Expressions are representations of value. They are different from statement in the fact that statements do something while expressions are representation of value. For example any string is also an expression since it represents the value of the string as well.

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

bacon = 22

bacon + 1

bacon contain 22

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

'spam' + 'spamspam'

'spam' \* 3

=‘spamspamspam'

=‘spamspamspam'

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

Integers cant be used as variable, only string can be used

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

int(), float(), and str()

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

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

ANS: Strings cant be concatenated with integers

'I have eaten ' + ‘99’ + ' burritos.'