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:** The string **‘hello’** the floating point numbers **-87.8** and the integer number **6** are values.

The operators: \* - / + are expressions.

2. What is the difference between string and variable?

**Ans:** A variable is where you store a value.

A string is variable where one can store words.

For example: ‘S’ being a variable S = “Hello World”.

3. Describe three different data types.

**Ans:** Some of the common data types are integer, floating point numbers, characters, strings and arrays.

A **character** is any letter, number, space, punctuation mark, or symbol on the computer.

**Strings** are a collection of characters.

For example: ‘Hello World’

An **array** is a data structure which contains a group of elements usually of the same type which could be strings or integers.

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

**Ans:** An expressionis made up of variables, operators and calls to functions. Expressions represent values.

5. This assignment statements, like spam = 10. What is the difference between an

expression and a statement?

**Ans:** Statements are composed of expressions, statements are for doing some action like assigning or a command.

An expression evaluates values.

For instance the assignment statement here spam=10. 10 is the assigned value to the statement.

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

bacon = 22

bacon + 1

**Ans:** bacon + 1= 23.

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

‘spam’ + ‘spamspam’

‘spam’ \* 3

**Ans:** ‘spam’ + ‘spamspam’ = ‘spamspamspam’

‘spam’ \* 3 = ‘spamspamspam’

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

**Ans:** Variables can’t 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:** The functions int(), float(), str() evaluate interger, floating-point number and string values respectively.

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

‘I have eaten’ + 99 + ‘burritos.’

**Ans:** The symbol ‘+’ is used to concatenate. 99 is an integer instead of a string, which can’t be concatenated to a string. To remove the error 99 must be replaced with str(99).