

Question 1.

What are the differences between operators and values in the following?

```
*  
'hello'  
-87.8  
-  
/  
+  
6
```

Answer 1:

| Operators | Values |
|---------------------------|---------|
| * Multiplication Operator | -87.8 |
| - Subtraction Operator | 'hello' |
| / Division Operator | 6 |
| + Addition | |

Question2.

What is the difference between string and variable?

```
spam  
'spam'
```

Answer 2:

A string is a literal text string, i.e. 'Hello'.

A variable is something that stores data - it can store a string, int, float, class, etc.

From above: spam is a variable and 'spam' is a string.

Question 3.

Describe three different data forms.

Answer 3.

Three data forms:

- int: Positive or negative whole numbers (without a fractional part) e.g. -10, 10, 456, 4654654.
- bool: Data with one of two built-in values True or False. Notice that 'T' and 'F' are capital.
- float: Any real number with a floating-point representation in which a fractional component is denoted by a decimal symbol or scientific notation e.g. 1.23, 3.4556789e2.

Question 4.

What makes up an expression? What are the functions of all expressions?

Answer 4:

Definition: An expression is any combination of operators, literals and variables.

Function of all expressions is that all helps to evaluate to single value.

Question5.

In this chapter, assignment statements such as `spam = 10` were added. What's the difference between a declaration and an expression?

Answer 5:

Declaration message assign the value to the variable.

Expression is operands followed by operators and evaluates to single value

Question 6

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

```
bacon = 22
```

```
bacon + 1
```

Answer 6: Output for the `bacon` variable – 23

Question 7.

What should the values of the following two terms be?

```
'spam' + 'spamspam'
```

```
'spam' * 3
```

Answer 7:

i. `'spamspamspam'`

ii. `'spamspamspam'`

Question 8.

Why is it that `eggs` is a true variable name but `100` is not?

Answer 8:

Because the variable names does not start with any numerical value, in this case `eggs` is a word starts with alphabets so that is a variable but `100` is a numeric values starts with number so it can't be a variable.

Question 9.

Which of the following three functions may be used to convert a value to an integer, a floating-point number, or a string?

Answer 9:

int ()
float ()
str ()

Question 10.

What is the error caused by this expression? What would you do about it?

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

Answer 10:

99 is an integer value, it cannot concat with string value, for successfully execution we have to convert that integer value to string type i.e '99'

Correct form: 'I have eaten ' + '99' + ' burritos.'

Or 'I have eaten ' + str(99) + ' burritos.'