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| **Question 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 | |
| Answer:  The below elements are values:   * 'hello' : String * -87.8 : Float * 6 : Intiger | The below elements are expressions:   * \* * - * / * + |
| **Question 2**. What is the difference between string and variable?  Answer:  A string is a data type.  A variable holds data for processing.  Example:  **a = ‘’ineuron”**  In this example , **a** is variable that holds data and **’ineuron”** is string, a data type. | |
| **Question 3**. Describe three different data types.  Answer:  Different data types:  int: Holds numeric values.  float: holds Floating integer values.  list: holds multiples data types in a variable. [ ] used to enclose a list.  tuple: holds multiples data types in a variable () used to enclose a Tuple.  dict: holds a key : value pair. {} used to enclose a Dictionary.  set: holds multiples data types in a variable {} used to enclose a set. | |
| **Question 4**. What is an expression made up of? What do all expressions do?  Answer:   * Expression consists of an Operator, Operand, and mathematical expression to evaluate a value into result. * Expression evaluates value into result.   Example:  **a = b+c** is an expression,  **a** is variable,  **b** and **c** are operands,  **=** is assignment operator, **+** is math operator | |
| **Question 5.** This assignment statements, like spam = 10. What is the difference between an expression and a statement?  Answer:   * Statement represents an action or command. Like in spam = 10 is a statement. * Expression evaluates value into result. | |
| **Question 6**. After running the following code, what does the variable bacon contain?  bacon = 22  bacon + 1  Answer:  After running the code, the variable bacon contains 22 value only. | |
| **Question** **7**. What should the values of the following two terms be?  'spam' + 'spamspam'  'spam' \* 3  Answer:  'spam' + 'spamspam' : *'spamspamspam'* (Sting concatenation)  'spam' \* 3 : ‘*spamspamspam'* (Sting multiplication) | |
| **Question 8**. Why eggs is a valid variable name, while 100 is invalid?  Answer:  Variables are always alphabetical and alphanumerical, but cannot be numerical.  We can assign a value to the variable eggs, but not 100. Hence 100 is an invalid variable. | |
| **Question** **9**. What three functions can be used to get the integer, floating-point number, or string version of a value?  Answer:  Function used to get the integer value is int().  Function used to get the floating-point number value is float().  Function used to get the string value is str(). | |
| **Question** **10**. Why does this expression cause an error? How can you fix it?  'I have eaten ' + 99 + ' burritos.'  Answer:  can only concatenate str (not "int") to str.  It can be fixed by typecasting 99 into string.  'I have eaten ' + ‘99’ + ' burritos.' | |