|  |  |
| --- | --- |
|  | Chapter 1 Practice Questions – Python Basics |
| **Q1** | **Which of the following are operators, and which are values?**  **\***  **‘hello’**  **-88.8**  **-**  **/**  **+**  **5** |
| A | \* (multiplication), / (division) and + (addition) are operators. The rest are values |
| **Q2** | **Which of the following is a variable, and which is a string?**  **spam**  **‘spam’** |
| A | spam is a variable and ‘spam’ is a string  Strings always start and end with quotes |
| **Q3** | **Name three data types** |
| A | 1. Integer 2. String 3. Floating-point numbers |
| **Q4** | **What is an expression made up of? What do all expressions do?** |
| A | An expression is made up of values and operators which can always evaluate to a single value.  A single value with no operators is also considered an expression, though it evaluates only to itself. |
| **Q5** | **This chapter introduced assignment statements, like spam = 10. What is the difference between an expression and a statement?** |
| A | ~~The difference between an assignment and an expression is that expression is never stored in memory whilst an assignment is stored in memory~~  An expression is a combination of values, variables and operators that evaluates to a single value. A statement does not. A statement is an instruction that the Python interpreter can execute which may or may not evaluate to a value e.g. print() |
| **Q6** | **What does the variable bacon contain after the following code runs?** |
| A | bacon = 20  bacon + 1  The variable bacon evaluates to 21 (only if reassigned i.e., bacon = bacon + 1.) |
| **Q7** | **What should the following two expressions evaluate to?**  **‘spam’ + ‘spamspam’**  **‘spam’ \* 3** |
| A | Both expressions evaluate to ‘spamspamspam’  The first expression being string concatenation and the second expression being string replication |
| **Q8** | **Why is eggs a valid variable name while 100 is invalid?** |
| A | Variables should obey the following rules:   1. Can only be one word 2. Can use only letters, numbers, and the underscore (\_) character. 3. Can’t begin with a number |
| **Q9** | **What three functions can be used to get the integer, floating-point number, or string version of a value?** |
| A | str(), int() and float() |
| **Q10** | **Why does this expression cause an error? How can you fix it?**  **‘I have eaten ‘ + 99 + ‘ burritos.’** |
| A | This causes an error because the expression is trying to concatenate a string with an integer. It can be fixed using the str() function to convert 99 into a string i.e. str(99) |