

Multiple Choice Questions on Python Variables, Data Types, and Operators

1. Which of the following is a valid Python variable name?
 - (a) `1st_value`
 - (b) `first-value`
 - (c) `_first_value`
 - (d) `first value`
2. What is the output (and its type) of the expression `2 + 3 * 4`?
 - (a) 20 (int)
 - (b) 14 (int)
 - (c) 5.0 (float)
 - (d) 14.0 (float)
3. What is the data type of the result of `'3' + '4'`?
 - (a) `int`
 - (b) `str`
 - (c) `float`
 - (d) `list`
4. What does the Boolean expression `not (True and False)` evaluate to?
 - (a) `True`
 - (b) `False`
 - (c) `None`
 - (d) Raises a `SyntaxError`
5. What are the results of the expressions `7 // 3` and `7 % 3`, respectively?
 - (a) 2 and 1
 - (b) 2.33 and 1.0
 - (c) 2 and 0
 - (d) 3 and 1

6. What is the result of the operation `5 < 1`?
- (a) `True`
 - (b) `False`
7. Given `x = 10`, what will be the value of `x` after evaluating `x *= 3`?
- (a) `3`
 - (b) `10`
 - (c) `30`
 - (d) `100`
8. Which of the following data types in Python is mutable?
- (a) `tuple`
 - (b) `str`
 - (c) `list`
 - (d) `int`