

CS303E Week 3 Worksheet: More Simple Python

Name: _____ EID: _____

Read the questions carefully, and answer each question in the space provided. Use scratch paper to do your work and then copy your answers neatly and legibly onto the test paper. Only answers recorded on the test paper will be graded.

1. (10 points: 1 point each) The following are true/false questions. **Write either T or F in the boxes at the bottom of the page.** If there's any counterexample, it's false.
 - (a) In Python, strings and characters are different types.
 - (b) The `input()` function always returns what the user typed in as a string.
 - (c) Escape sequences in Python are used to represent special characters, and they always start with the backslash.
 - (d) The `ord()` function returns the ASCII code (number) of a character.
 - (e) The `+` and `*` operators can be used on strings.
 - (f) The `format()` function always generates an integer representation of whatever you give it.
 - (g) `x ** y` is different from `pow(x, y)`.
 - (h) The `chr()` function returns the character corresponding to a given ASCII code.
 - (i) To use functions like `max()` and `min()`, you do not need to import the `math` module.
 - (j) You could convert a letter from upper case to lower case by adding 32 to its ASCII value.

a	b	c	d	e	f	g	h	i	j

Questions 2-10 are multiple choice. Each counts 2 points. **Write the letter of the BEST answer in the box on 3. Please write your answer in UPPERCASE. Each problem has a single answer.**

2. What is a possible result from `random()`?
A. 0.5 B. 0 C. 1 D. any of A, B, C
3. Which of the following correctly match the escape sequences for tab, newline, and backslash?
A. `\tt`, `\new`, `\\`
B. `\t`, `\n`, `\\`
C. `\tab`, `\nl`, `\\`
D. `\tab`, `\n`, `\\`
4. Which of the following describes the role of the `end` and `sep` parameters, respectively, in the `print()` function?
A. the separator between successive arguments; the string added at the end of the printed output.
B. the separator between successive arguments; the string added before each argument.
C. the string added at the end of the printed output; the separator between successive arguments.
D. the string added at the beginning of the printed output; the separator between successive arguments.
E. the string added at the end of the printed output; the string added before each argument.
5. If we execute the code `value = input()` and the user enters 25, can we then perform the operation `value2 = value + 5` without an error?
A. Yes, and `value2` will be 30.
B. No, it will result in a runtime error.
C. Yes, and `value2` will be "255".
D. No, it will result in a syntax error.
E. No, it will result in a logic error.

6. Expression `random.randint(1,5) * 10` yields:
- A. one of 10, 20, 30, 40, 50
 - B. one of 10, 20, 30, 40
 - C. a float between 1.0 and 50.0
 - D. a float between 1.0 and 40.0
 - E. it's an error
7. Which of the following is NOT true of the `print` statement?
- A. `print` coerces its arguments to strings for printing.
 - B. By default, items printed are separated by a single tab.
 - C. By default, print ends by printing a newline.
 - D. `print` is not a reserved word, but it's a bad idea to use it as a variable name.
8. What is the result of the following code?
- ```
s1 = "abc"
s2 = "def"
result = s1 * 3 + s2
print(result)
```
- A. "abcbcabcbdef"
  - B. "s1s1s1s2"
  - C. "abc333def"
  - D. Error
9. In which of the following scenarios should you opt to use `format()` over `round()`?
- A. Converting a string into a numeric value.
  - B. Improving precision when rounding a numeric value.
  - C. Creating a string representation of a numeric value with custom formatting options.
  - D. Both `format()` and `round()` can be used interchangeably.
10. A program won't even begin executing if there is one of these errors:
- A. sampling
  - B. runtime
  - C. logic
  - D. syntax
  - E. any error

|   |   |   |   |   |   |   |   |    |
|---|---|---|---|---|---|---|---|----|
| 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|   |   |   |   |   |   |   |   |    |

The following questions (2 points each) ask you to trace the behavior of some Python code and identify the output of that code. For each question, write the output for the code segment in the provided box.

11. `print(format (421.698, "0.1f"))`

12. `print(max(-30, 10, 27, -3) + min(-30, 10, 27, -3))`

13. `letter = 'z'`  
`print(chr(ord(letter) - 5), chr(ord(letter) - 32))`

14. `x = 5`  
`y = 10`  
`z = 15`  
`print(y, x, z, sep="-", end="!")`

15. # For the problem, use underscores to indicate leading spaces.  
`print(format(20.2, ">5.0f") + "\\ \\ \\")`