

CS 0008: Introduction to Computer Programming with Python (Spring 2019)

Department of Computer Science, University of Pittsburgh

Dr. Constantinos Costa (costa.c@cs.pitt.edu)

Quiz 02 – Monday, March 4, 2019

Your name: ANSWER

Email:

Instructions

- Please write your name and your email on this booklet **now**
- This is a closed-book test. No books, notes or other external material or electronic devices are allowed. The standard academic honesty policies apply.
- There are 12 questions (12 multiple-choice, which 2 are bonus questions) on the test for a total of 100 points + 20 bonus.
- Considering the multiple-choice questions, please read the question and **all** the suggested answers carefully before deciding your answer. All questions have a **single** correct answer.
- Feel free to use the white space in this booklet for your notes.
- You must use a pen to write your answers in this booklet.
- You **must** return this booklet in order for your exam to be graded and you to pass the class.
- You have exactly **25 minutes** to complete the test. Good luck!

Questions	Points Achieved	Max Points
1–12		120
Total		120
Exam Total		100

1 [10 points] What is the output of the following program?

```
def f(x):  
    x = 2 * x  
    return x  
  
# Main starts here  
x = 15  
print('f(' + str(x) + ')', f(x))
```

- A. f(15) 0
- B. f(30) 30
- C. f(15) 30
- D. None of the above

ANSWER: C

2 [10 points] What is the output of the following program?

```
def f(n):  
    if n == 1:  
        return 1  
    else:  
        return n * f(n - 1)  
  
# Main starts here  
print('f(5)', f(5))
```

- A. f(5) 120
- B. f(5) 60
- C. f(5) 58
- D. f(5) 7

ANSWER: A

3 [10 points] What is **NOT** a benefit of using functions?

- A. Simpler code
- B. Code reuse
- C. The program is running faster
- D. Faster development

ANSWER: C

4 [10 points] What is the output of the following program?

```
# Main starts here
f = open("test.txt", "w")
print(f.read())
f.close()
```

- A. The first character of the *test.txt* file
- B. The first line of the *test.txt* file
- C. The contents of the *test.txt* file
- D. An exception is raised (`io.UnsupportedOperation`)

ANSWER: D

5 [10 points] What is the correct mode to open the file for the following program?

```
# Main starts here
f = open("test.txt", mode=?)
f.write("I love CS0008\n :)")
f.seek(0)
print(f.read())
f.close()
```

- A. "wr"
- B. "rw"
- C. "r+"
- D. None of the above

ANSWER: C

6 [10 points] What is the output of the following program? Assume that the file contains the following:

I love CS0008.
Python is the best.
I am a programmer.

```
# Main starts here
f = open("test.txt")
print(f.read(6))
f.close()
```

- A. I love
- B. Python
- C. Nothing
- D. None of the above

ANSWER: A

7 [10 points] What is the output of the following program?

```
def f(x):  
    return 4 / x  
  
# Main starts here  
try:  
    n = f(0)  
    if n <= 0:  
        raise ValueError  
except ValueError:  
    print("Invalid input")
```

- A. Nothing
- B. Invalid input
- C. An exception is raised (ZeroDivisionError)
- D. None of the above

ANSWER: C

8 [10 points] What is the output of the following program?

```
def f():  
    try:  
        return 1  
    finally:  
        return 2
```

```
# Main starts here  
k = f()  
print(k)
```

- A. 1
- B. 2
- C. 1 2
- D. None of the above

ANSWER: B

9 [10 points] Which of the following commands will create a list?

- A. `list1 = list()`
- B. `list1 = []`
- C. `list1 = list([1, 2, 3])`
- D. All of the above

ANSWER: D

10 [10 points] Assume that `mylist` is `['h','e','l','l','o']`, what is `len(mylist)`?

- A. 5
- B. 6
- C. None
- D. None of the above

ANSWER: A

11 [10 points] Suppose `mylist` is `[2, 33, 222, 14, 25]`, what is `mylist[-2]`?

- A. Error
- B. None
- C. 14
- D. 2

ANSWER: C

12 [10 points] Suppose `t = (1, 2, 4, 3)`, which of the following is **NOT** correct?

- A. `print(t[3])`
- B. `t[3] = 45`
- C. `print(max(t))`
- D. `print(len(t))`

ANSWER: B

Congratulations - you finished the test!
Enjoy your Spring break!!