

CS 177 Fall 2014
Midterm 1 exam - October 9th

There are 25 True/False and multiple choice questions. Each one is worth 4 points.

Answer the questions on the bubble sheet given to you.

Remember to fill in the following bubble card fields:

- student ID: use the 10 digit ID number on your student ID card. **DO NOT USE YOUR SOCIAL SECURITY NUMBER!** If you forget to write your student ID in the bubble card, you may get a 0.
- Last Name and First Name
- Instructor: put your RECITATION INSTRUCTOR'S LAST NAME given in the table below
- Test/Quiz: put 01
- Course: 177
- Section number: find your recitation section in the table below and put in the bubble card the last column of the table below

Recitation section	Time	TA	Section number
R01	Thursday, 7:30 - 8:20	Di Jin	001
R02	Thursday, 12:30-1:20pm	Vignesh Gouthaman	002
R03	Friday, 7:30-8:20am	Vignesh Gouthaman	003
R04	Thursday, 10:30-11:20am	Ajay M S	004
R05	Friday, 4:30-5:20pm	Sait Celebi	005
RM6	Friday, 12:30-1:20pm	Ruby Tahboub	006

- Only the answers on the bubble sheet will be counted.
- The questions will be discarded.

This exam contains 18 pages (including this cover page).

Remember to fill in also the fields in the following page (please use capital letters!).

Recitation Section Number: _____

Student Last Name: _____

Student First Name: _____

Read all questions and answers carefully! Do not make any assumptions about the code other than those that are clearly stated.

1. What is the result of evaluating the following expression $2 + 3 ** 2 / 3$

A. 8.33

B. 5 ●

C. 4

D. 3.66

E. 6

2. `math.sqrt(a, b)` is the same as `a ** b`?

A. True

B. False ●

3. In order to run the following line,

```
math.sqrt(10)
```

Which import statement is needed?

A. `import math` ●

B. `from math import *`

C. `from math import sqrt`

D. any of them

E. none of them

4. What is the output of the following python program?

```
var1 = "Welcome to Python"
if (var1.find("Python") == -1):
    print("True")
else:
    print("False")
```

- A. True
B. **False** ●

5. For what values of x, y, and z does the following statement evaluate to True?

```
not(z != 4 and z == 2) and not(y == 0 or x == 3)
```

- A. x = 1, y = 0, z = 2
B. x = 3, y = 10, z = 12
C. **x = 2, y = 1, z = 3** ●
D. x = 3, y = 1, z = 4
E. x = 0, y = 0, z = 0

6. What is the output of the following python program?

```
def Bonus (grade):  
    grade = grade + 10  
    if(grade > 80):  
        print("Yeah! I got the bonus!")  
    else:  
        print("Oops! I missed the bonus!")  
  
def main ():  
    myGrade = 75  
    Bonus(myGrade)  
    if(myGrade>80):  
        print("Yeah! I got the bonus!")  
    else:  
        print("Oops! I missed the bonus!")
```

main()

- A. **Yeah! I got the bonus!**
Oops! I missed the bonus! ●
- B. Oops! I missed the bonus!
Yeah! I got the bonus!
- C. Yeah! I got the bonus!
Yeah! I got the bonus!
- D. Oops! I missed the bonus!
Oops! I missed the bonus!
- E. Yeah! I got the bonus!

7. What is the output of the following python program?

```
def test ():  
    x = 5  
    if 10 < x :  
        print ( 'First ' )  
    else :  
        print ( 'Second ' )  
        if 2 > x :  
            print ( 'Third ' )  
        print ( 'Fourth ' )  
    print ( 'Fifth ' )  
test ()
```

- A. **Second**
Fourth
Fifth ●
- B. Second
Fifth
- C. First
Fifth
- D. Second
Third
Fourth
Fifth
- E. First

8. Given the contents of the text file "a.txt" as:

```
Jim 25
Alice 78
Tim 90
```

What is the output of the following python program?

```
myFile = open("a.txt", "r")
a = myFile.readlines()
print(a)
```

- A. Jim 25
- B. Alice 78
- C. Tim 90
- D. [**'Jim 25\n', 'Alice 78\n', 'Tim 90\n'**] ●
- E. ['Jim 25', 'Alice 78', 'Tim 90']

9. What is the output of the following python program?

```
myStr =" Boilermakers"  
print(myStr.replace('e', 'E'))
```

- A. **BoilErmakErs** ●
- B. boilermakers
- C. BOILERMAKERS
- D. BoilErmakers
- E. BoilermakErs

10. What is the output of the following python program?

```
myString = 'BoilerMakers'  
print(myString.split("er"))
```

- A. []
- B. ['Boil', 'Mak', 's'] ●
- C. ['Boil', 'Maker', 's']
- D. ['Boiler', 'Maker', 's']
- E. ['BoilerMakers']

11. What is the output of the following python program?

```
from graphics import *

win = GraphWin("My window" , 300, 300)

cir = Circle(Point(50,50), 10)
cir.draw(win)
for i in range(10):
    cir.move(3,5)

print(cir.getCenter().getX(), cir.getCenter().getY())
```

- A. **80.0 100.0** ●
- B. 100.0 80.0
- C. 100.0 90.0
- D. 90.0 100.0
- E. 50.0 50.0

12. What is the output of the following python program?

```
def myfun (x,y):  
    total = x + y  
    sub = x - y  
    mult = x * y  
    return total ,sub ,mult  
  
def middle (a,b):  
    a = a + b  
    value = myfun(a,b)  
    return value  
  
def main ():  
    a, b, c = middle(-5,6)  
    print(a,b,c)
```

main()

- A. 1 -11 -30
- B. 17 5 66
- C. **7 -5 6 ●**
- D. -5 6
- E. -5

13. What is the output of the following python program?

```
def mathprob (x,y):  
    return x + 4 * y  
  
def main ():  
    a = 7  
    b = 9  
    print (mathprob (a,b-3))
```

```
main()
```

- A. 20
- B. 24
- C. **31 •**
- D. 36
- E. 66

14. Assume F is a file object. What is the difference between Statement 1 and Statement 2?

Statement 1:

```
X = F.readline()
```

Statement 2:

```
Y = F.readlines()
```

- A. No difference
- B. The output of Statement 1 is a list while the output of Statement 2 is a string
- C. **The output of Statement 1 is a string while the output of Statement 2 is a list •**
- D. Statement 2 will produce an error
- E. None of the above

15. What is the output of the following python program?

```
def Add (num):  
    num = num + 10  
    return num  
    num = num + 10  
    return num  
  
def main ():  
    value = 15  
    value = Add(value)  
    print(value)
```

```
main()
```

- A. 0
- B. 10
- C. 15
- D. **25•**
- E. 35

16. What is the value of L after executing the following python program?

```
L = [ 'a', 'b', 'c', 'x', 'm', 'c' ]  
L.remove( 'c' )
```

- A. ['a', 'b', 'c', 'x', 'm', 'c']
- B. ['a', 'b', 'x', 'm']
- C. []
- D. ['a', 'b', 'c', 'x', 'm']
- E. ['a', 'b', 'x', 'm', 'c'] ●

17. What is the output of the following python program?

```
def myFun (x):  
    x = x + 1  
    return 10
```

```
def myFun2 (y):  
    return y + 1
```

```
print (myFun(myFun2(myFun(10))) )
```

- A. 10 ●
- B. 11
- C. 12
- D. 13
- E. 14

18. How many times will the body execute in the following for loop?

```
for i in range(50, 1, -10):  
    print (i)
```

- A. 4
- B. **5** ●
- C. 6
- D. 7
- E. 10

19. A function must ALWAYS have a return statement.

- A. True
- B. **False** ●

20. Which of the following lines does not work properly?

- A. `cir = Circle(Point(100,100), 50)`
- B. `rect = Rectangle(Point(50,50), Point(100,100))`
- C. `line = Line(Point(50, 50), Point(450, 450))`
- D. `point = Point(50, 100)`
- E. **`win = GraphWin(500, 500, 'My window')`** ●

21. What is the output of the following python program?

```
def myFun (a ,b, c):  
    if a < c or b > c:  
        return c, b, a  
    if b > c:  
        return a, b, c  
    else:  
        return b, c, a  
  
print (myFun(40,30,10))
```

- A. None
- B. 10, 30, 40●
- C. 40, 10, 30
- D. 10, 40, 30
- E. 30, 10, 40

22. The execution of the following python program gives an error.

```
Mylist = [10,20,30,40]
for index in range(0,5):
    print (Mylist[index])
```

- A. **True** ●
- B. False

23. What is the output of the following statement?

```
list(range(-3, 2))
```

- A. **[-3, -2, -1, 0, 1]** ●
- B. [-3, -2, -1, 0, 1, 2]
- C. [-3, -2, -1, 0]
- D. [-2, -1, 0]
- E. [-1, 0, 1]

24. What is the output of the following python program?

```
myString = "Perfectionist"  
print (myString[3:10])
```

- A. **fection** ●
- B. fectioni
- C. rfection
- D. rfectioni
- E. None of the above

25. Items in a list must all be of the same type.

- A. True
- B. **False** ●