Name: _____ Roll Number:_____
Section: _____ Group: _____

CSE-101, Introduction to Programming
Midterm Re-Exam, 2018
Marks: 25 Time: 60 minutes

Instructions
1. For writing Python code in this exam, we recommend that you draw vertical lines to make your indentation clear. 2. Assume the use of Python3 in all of the questions below.

Q1. Fill in the blanks. The following program checks whether a point (x,y) is strictly inside a square or not. One of the vertices is at the origin and the length of each side is 5 units. [3 marks]

```
x=int(input(" Enter a x coordinate of point"))
y=int(input(" Enter a y coordinate of point"))
# x0,y0 are bottom-left coordinates, i.e., origin and x1,y1 are top-right coordinates of the square.
x1= _____

y1=_____

x0=0

y0=0

if(_____ or _____) :

        print("Outside")
else:
        print("Inside")
```

Q2. Indicate the output if the following script is run: [4 marks]

def F(x,y):
  u = x+2*y
  print (x,y,u)
  return x
x = 1
y = 10
u = 0
print (x,y,u)
y = F(y,x)+F(2*x,y)
print (x,y,u)	

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Q3: The function 'not_bad(s)' given a string is assumed to find the first appearance of the substring 'not' and 'bad'. If the 'bad' follows the 'not', it replaces the whole substring starting from 'not' and ending with 'bad', i.e., 'not .....bad', with good. The given function definition is incorrect, correct the line(s) with error. [2 marks]

```
def not_bad(s):
        badindex = s.find('bad')
        notindex = s.find('not')
        if badindex > notindex:
                s= s[ : notindex] + 'good' + s[badindex+3:]
        return s
```

Q4: If following is executed what is the output? [2 marks]

```
x = [10,20,30,40]
y = x
for k in range(4):
        x[k] = y[3-k]
print (x)
```

Q5. What is the output? [4 marks]

```
def foo(a):
        b= True
        for k in range(len(a)):
                b=b and decr(a,k)
        return b

def decr(a,k):
        a[k] = a[k-1]
        return a[k] >= 0
a = [1,2,3,4]
print(foo(a))
print(a)
print(foo(a))
print(a)
```

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Q6. Write a python function printPrimes() that takes as parameter an integer n, for n>=2 and prints all the prime numbers starting from 2 to n. [5 marks]

Q7. For the code you have written above show an execution trace for n=6. [5 marks]