Programming in Python (CSE 3142)
MINOR ASSIGNMENT-5: SCOPE

1. Study the program segments given below. Give the output produced, if any.

   i.
```python
globalVar = 10
def test():
    localVar = 20
    print('Inside function test: globalVar =', globalVar)
    print('Inside function test: localVar =', localVar)
test()
print('Outside function test: globalVar =', globalVar)
print('Outside function test: localVar =', localVar)
```

   ii.
```python
globalVar = 10
def test():
    localVar = 20
    globalVar = 30
    print('Inside function test: globalVar =', globalVar)
    print('Inside function test: localVar =', localVar)
test()
print('Outside function test: globalVar =', globalVar)
```

   iii.
```python
globalVar = 10
def test():
    global globalVar
    localVar = 20
    globalVar = 30
    print('Inside function test: globalVar =', globalVar)
    print('Inside function test: localVar =', localVar)
test()
print('Outside function test: globalVar =', globalVar)
```

   iv.
```python
def test1():
    test1.a = 10
    def test2():
        test1.a = 8
        print('Inside function test2 ', test1.a)
    test2()
    print('Outside function test2 ', test1.a)
test1()
```

   v.
```python
a = 4
def f():
    a = 5
    def g():
        nonlocal a
        a = 10
        print('Inside function g, ', 'a=', a)
        def h():
            nonlocal a
            a = 20
            print('Inside function h, ', 'a=', a)
        h()
```

```
        g()
        print('Inside function f, ', 'a=', a)
    f()
vi. x = 2
    def test():
        x = x+1
        print(x)
    print(x)
vii. x = 2
    def test():
        global x
        x = x+1
        print(x)
    print(x)
```