# Sample of Quiz 1 (theory)

**topics**

name, scope, binding, control flow, types

1) name scope

This language has static scope. What this program prints?

def fun1()

 x = 10

 def fun2(y)

 x = 5

 print(x+y)

 print(x)

 fun2(3)

fun1()

2) Convert the following program into pseudo assembly language.

a = 0

do

 a += 1

while a < 10

3) stack frame and static link

draw stack frame and static link of the execution of this program.

def p1():

 x = 10

def p2(a):

 print(x)

def p3(b):

 p2(b)

 p3(2)

 p1()

4) assume the following language is "dynamic" scoping. When run this program, what does it print? ( of course, this program looks like C, and C has static scope. However, assume this program is "dynamic scope").

int x = 10;

int f() {

 return x;

}

int g() {

 int x = 20;

 return f();

}

main() {

 printf(g());

}