CS 6340 – Fall 2009 – Problem Set 5 **Name**_____

Assigned: September 15, 2009
Due: September 22, 2009

At the beginning of class on the due date, submit your neatly presented solution with this page stapled to the front (70 pts).

Given the following C program,

```
Program M
1.   begin M
2.     read i, j
3.     sum = 0
4.     while i <= 10 do
5.        call B
6.     endwhile
7.     print (i)
8.     call C
9.   end M

Procedure B
10.   begin B
11.     if sum > 10 then
12.        halt
13.     endif
14.     call C
15.     i = i + 1
16.  end B

Procedure C
17.  begin C
18.     if j >= 0 then
19.        sum = sum + j
20.        read j
21.     endif
22.  end C
```

1. Compute partial control dependences for nodes in M, B, and C.
2. Use the partial PDGs to construct the interprocedural dependence graph for M.
3. Compute the control dependences for those nodes whose control dependences were unknown in (1)