

EPL QUIZ

1. What's wrong in each of the following?

- i)           a: proc;  
              b: begin;  
                  go to l;  
                  end b;  
              dcl m label;  
              l: m = c;  
              c: begin;  
                  if i = 0 then do;  
                      i = 1; go to m; end;  
              end a;
- ii)           a: proc recursive;  
              dcl i static init(0), m label;  
              if i > 3 signal condition(c);  
              m=1; if i=0 on condition(c) go to m;  
              i = i + 1; call a;  
              l: end a;
- iii)          a: proc;  
              i = 0;  
              on overflow return;  
              do while(i >= 0);  
              i = 10.e30\*10.e30; end;  
              end a;
- iv)           rugged: proc;  
              call a(f,0); write list(y);  
              a: proc(f,x);  
                  call f;  
                  if x = 0 then call a(b,1);  
                  b: proc; y = x; end;  
                  end a;  
              f: proc; end;  
              end rugged;

2. What is the result of each of the following?

1) dcl b bit(4), a fixed;

b = 1 + '1'b;

a = 1 + '1'b;

ii) dcl a char(3); ~~xxxxx~~

a = '100';

read (1)(f(2)(), string(a);

write list(1);

iii) /\* same as 1.iv, corrected\*/

3. Under what conditions do these give different answers?

1) if a > 0 then a = f(1);

else if a < 0 then a = f(-1);

ii) a = (a>0)\*f(1) + (a<0)\*f(-1);

4. A tree has been stored using pointers. Each node is represented in the following form, ~~where~~

dcl 1 node ctl(p),

2 content fixed,

2 nbranch fixed, /\* number of branches \*/

2 branch(p -> node.nbranch) ptr, /\* to nodes \*/

Write a routine to print the contents of all terminal nodes, given a pointer to the root node.