1- A) Show the stack with all activation record instances, including static and dynamic chains, when execution reaches position 1 in the following skeletal program. Assume Bigsub is at level 1.

```
procedure Bigsub is
                procedure A (Flag : Boolean) is
                 procedure B is
                   A(false);
                   end; -- of B
                  begin -- of A
                  if flag
                   then B;
                   else C;
                  end; -- of A
                procedure C is
                 procedure D is
                   ...←
                   end; -- of D
                 D;
                 end; -- of C
                begin -- of Bigsub
                A(true);
                  end; -- of Bigsub
                                                                    ARI
                                                                               Dynamic Link
               The calling sequence for this program for execution to reach p is
                                                                                               -
                                                                               Gatic Link
                                                                               Return to C
               Bigsub calls A
                                                                              by namic Link
                                                                 ARI
                                                                               Static Link
                                                                                              0-
                A calls B
                                                                   Da.C
                                                                               Return to
               B calls A
                                                                               Parameter
                                                                                                 Flag
                                                                   ARI
               A calls C
                                                                             Dynamic Link
                C calls D
                                                                   for
                                                                               Static Link
Static: -> closest parent

pynamic: -> the caller
                                                                               Return to B
                                                                              bynamic Link
                                                                             Static Link
                                                                            Return to A
                                                                               Parameter
                                                                                                 Flag
                                                                              bynamic link
                                                                              Static Link
                                                                            Return (tw Big sub)
                                                                 ARI
                                                                            Activotion Big Sub
                                                               Bigsub
```

1.B) Show the stack with all activation record instances, including the dynamic chain, when execution reaches position 1 in the following skeletal program. This program uses the deep-access method to implement dynamic scoping.

```
void fun1() {
 float a;
void fun2() {
 int b, c;
                                                ARI
                                                                ocal
                                             for fun 3
                                                            Dynamic Link
void fun3() {
                                                             Roturn to tun
 float d;
                                                ARI
                                                                oca
                                            for fun 1
                                                            dynamic Link
                                                             Return to fun
void main() {
                                                   ARI
                                                               Ocal
 chare, f, g;
                                              for fun!
                                                            Dynamic Link
}
                                                              Return to fun 2
The calling sequence for this program for execution to reach fun3 is
                                                                ocal
                                            for fun2
                                                                                  b
                                                                Ocal
main calls fun2
fun2 calls fun1
                                                            pynamic
                                                                      Link
fun1 calls fun1
                                                            Return to main
fun1 calls fun3
                                                                local
                                                  ARI
                                                                ocal
                                               for main
                                                                                 0
                                                                loca
```

1.C) - Assume that the above program (1.B) is implemented using the shallow-access method using a stack for each variable name. Show the stacks for the time of the execution of fun3

