1. In most Fortran IV implementation, all parameters were passed by reference, using access path transmission only. State both the advantages and disadvantages of this design choice.

2. Consider the following program written in C syntax:

```
void swap (int a, int b) {
        int temp;
        temp = a;
        a = b;
        b = temp;
}
void main () {
        int value = 2, list[5] = {1, 3, 5, 7, 9};
        swap (value, list[0]);
        swap (list[0], list[1]);'
        swap (value, list[value]);
}
```

   For each of the following parameter-passing methods, what are all of the values of the variables value and list after each of the three calls to swap?

   a. Passed by value
   b. Passed by reference
   c. Passed by value-result

3. 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.

```
function bigsub () {
        function a () {
                function b () {
                        . . .        < ---------------------------------------------- 1
                } //end of b
                Function c () {
                        . . .
                        b ();
                        . . .
                } //end of c
                 . . .
                 c();
                 . . .
        } //end of a
        . . .
        a();
        . . .
} //end of bigsub
```