```
D-alg()
begin
    if Imply_and_check() = FAILURE then return FAILURE
    if (error not at PO) then
      begin
        if D-frontier = ∅ then return FAILURE
        repeat
          begin
            select an untried gate (G) from D-frontier
            c = controlling value of G
            assign c̄ to every input of G with value x
            if D-alg() = SUCCESS then return SUCCESS
          end
        until all gates from D-frontier have been tried
        return FAILURE
      end
    /* error propagated to a PO */
    if J-frontier = ∅ then return SUCCESS
    select a gate (G) from the J-frontier
    c = controlling value of G
    repeat
      begin
        select an input (j) of G with value x
        assign c to j
        if D-alg() = SUCCESS then return SUCCESS
        assign c̄ to j   /* reverse decision */
      end
    until all inputs of G are specified
    return FAILURE
end
```

Figure 6.23 The *D*-algorithm