```
titlef=input('Title= ','s')    % Input the title
subplot(2,1,1),plot(t,y1)      % Plot two graphs on one axis
ylabel('Displacement y1')
subplot(2,1,2),plot(t,y2)
ylabel('Displacement y2')
xlabel('Time')
title(eval('titlef'))
```

The function `cldesf` defines the equation set of Equation 5.94.

MATLAB Script

```
Example 5.18
function xdot=cldesf(t,x,flag,A)
%  CALL: xdot=cldesf(t,x,flag,A) This function defines the equations
%    xdot(t)=A*x(t) used by MATLAB commands ode23 and ode45.
%    A is passed to function; flag is a dummy variable
xdot=A*x;
```

In fact, the function creates the equation set $\dot{\mathbf{x}} = A\mathbf{x}$ for the MATLAB differential-solver routines such as **ode23**. The matrix A is passed to the function by the calling program. In this way, any other similar system can be solved by changing the definition of A in the calling script.

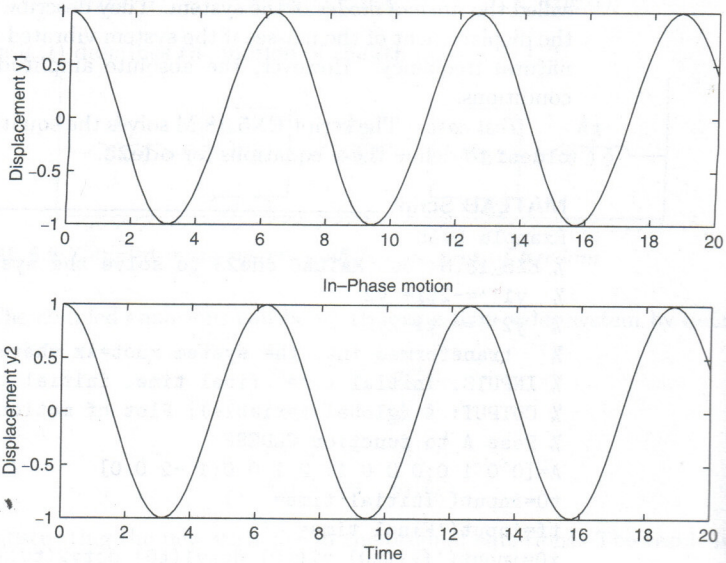

FIGURE 5.10 *In-phase motion in Example 5.18*

The plots in Figure 5.10 show the motion that results from pulling the masses 1 unit from their equilibrium position and releasing them at $t = 0$. The initial conditions are

$$[y_1(0), y_2(0), \dot{y}_1(0), \dot{y}_2(0)] = [1, 1, 0, 0].$$