**Homework #5**

**ChE 391**

**Due 4/10/12**

**(you can work in groups of two)**

1. Solve Example 20.3 in Seborg et al. Tabulate the *u(k)*’s for each value of *J* shown in Figure 20.5.
2. Solve Example 20.4 and compare your results with the plotted curves in Figures 20.6 and 20.7.
3. Solve Example 20.5 – case (b)(SISO MPC setpoint responses) and see if you can get the same results as shown in Figure 20.11. Also simulate the closed-loop response using a PID controller with a Smith predictor to see how it compares with PID alone and with MPC.