Wilfrid W. Csaplar Jr., Ph.D. Economics 488 (350) Exam #3 2003/04/24

Write your name on the cover of the test booklet and nowhere else. Enclose this sheet with the booklet. Failure to follow these directions will cost you 1 point. The test has 100 points and is scheduled to take 50 minutes. Therefore, expect to spend 1 minute for every 2 points. For example, a 16-point question should take 8 minutes. I will give a few extra minutes, but probably no later than about 5 or 10 minutes after the hour.

1) (10 points) For EITHER the equation in part A OR the equation in part B, explain whether it is stochastic, deterministic, behavioral, technological, institutional, or an identity. It may be more than one.
A) $Q_d = 100 - 2P + .02I + u$, where Q_d is quantity demanded, P is price, and I is income.
B) $Q = (K*L)^{½}$ where Q is quantity of output, K is the amount of capital, and L is the labor supply.

2) (16 points) Do EITHER part A OR part B.
A) There are over 100 variables that the Fed uses to forecast the future of the economy. Some are relied upon more heavily than others. Describe at least TWO properties (or aspects) of a variable that would make it a good one for the Fed to use.
B) Why is it hard to estimate a supply curve? Use a diagram to illustrate your explanation.

3) Suppose that the economy is modeled by the following equations: $C_t = 80 + 0.8Y_t$, $G_t = 120$ $I_t = 50 + 0.5(C_t - C_{t-1})$, and $X_t = 210 - 0.7Y_t$.
A) (20 points) Find the reduced form equations for C_t, I_t, X_t, and Y_t. Show all work and write how you know they are in reduced form.
B) (16 points) Assume that in the previous year, all variables were zero. Use the spread sheet to find the values of the variables C, I, X, and Y, for the next 30 years.
C) (4 points) Copy the results of part B onto another sheet and change G_t to 121.
D) (6 points) Given your results in parts A and D, what are your short-run and long-run multipliers? How did you determine them?

4) (12 points) Given the data that I will have provided on the computer spread sheet, run a regression that will estimate the trend for the variable. Write the equation that results.

5) (16 points) Suppose that for the last four years, the sales have been 40, 35, 50, and 44. Do THREE of the following forecasts for the next five years on a spread sheet.
A) Same change
B) Four period moving average
C) Partial adjustment forecast with $\rho = 0.4$.
D) Same percent change