Wilfrid W. Csaplar Jr., Ph.D. Economics 350 Exam #3 2017/11/8

Write your name on the cover of the test booklet and nowhere else. Enclose this sheet with the booklet. The Excel file will be handed in via Moodle. Your name will only appear on a page of the file that has nothing else on it. Failure to follow these directions will cost you 1 point. The test has 100 points (to be scaled up to 170 points) and is scheduled to take 50 minutes 4. Therefore, expect to spend 1 minute for every 2 points. For example, a 10-point question should take 5 minutes.

1) (20 points) Use the Excel® sheet "Question #1" on the file. Run the regression to predict the quantity of dogs sold as a function of the prices and income. Are the overall results good? Explain your logic. Which variables are significant? Explain your logic. Run the test for multi-colinearity. Is there a problem? Explain your logic. **If there is a problem**, solve the problem and tell me why you solved it in the manner you did. **If there is no problem**, calculate how many dogs would be sold if the price of the dog was \$120/dog, price of a cat was \$40/cat, and the income was \$2000.

2) (22 points) Use the Excel® sheet "Question #2" on the file. Run the regression to predict the quantity as a function of price. Do the quick tests for heteroscedasticity and autocorrelation. Did you find them? State how you got your results for both tests. **If you found only autocorrelation**, run a regression to correct the problem. Briefly explain what you did. **If you found just heteroscedasticity or if you found both**, do the formal test for heteroscedasticity. Explain what you did and tell me the results. **If you find neither**, calculate how much would be sold if the price was \$107/unit.

3) (16 points) Draw the supply and demand for the US\$ with the yen (¥) as the other currency. Illustrate the effects of EITHER the event in Part A OR the event in Part B. Explain why the curve(s) moved as drawn. Which currency appreciated? How can you tell?
A) Interest rates in the USA go down.
B) The GDP in Japan goes down.

4) (20 points) Answer EITHER Part A OR Part B.
A) Suppose a government was trying to reduce the natural rate of unemployment. What action would you recommend? Explain how that would reduce the rate. Make sure you refer to the appropriate model of the natural rate of unemployment. What would that do to the LRPC? Explain your logic.
B) Suppose the exchange rate started with \$1.25/£. The price level in the USA is $\$20/Q_{US}$ while the price level in Great Britain is $£15/Q_{GB}$. What is the value of the real exchange rate? Show all work. Which country's currency is overvalued? Explain your logic. If the exchange rate changed to £0.75/\$, then which currency appreciated? Show all work and briefly explain your logic.

5) (22 points) Answer EITHER Part A OR Part B.
A) Draw the real MS/MD diagram for an economy in a Keynesian Liquidity Trap. Explain why your diagram looks as drawn. What does the diagram mean about the effectiveness of monetary policy? Explain your logic.
B) Draw the SPRC/LRPC diagram for an economy which has an unemployment rate of 8% and an expected inflation of 3%. State how you found the initial point. Illustrate the effects of an increase in the money supply of 5% when people changed their expectations to expect a 4% increase in the money supply. Explain why the curve(s) moved as drawn. State how you found the new point we are at.