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 240 points (to be scaled down to 200 points) and is scheduled to take 120 minutes (2 hours.) Therefore, expect to spend 1 minute for every 2 points. For example, a 14-point question should take 7 minutes. I can give some extra time, but I will not give much.

1) (10 points) Answer EITHER Part A OR Part B.
A) Determine if *index of new housing permits* is pro-cyclical, counter-cyclical, or acyclical. Explain your logic. Determine if the same variable is leading, roughly coincident, or lagging. Explain your logic.
B) Table 4 of your supplemental text is entitled **Proportions of Occurrences In Which Trends of Various MAGNITUDES Involved Cyclical Reversals of Business Activity.** Would this be used to tell the probability of entering a recession or entering a boom? Explain your logic. Why is the magnitude of the reversal important?

Decreasing Trends During Cyclical Expansions	*Percentage Increase Larger Than*							
	0.0	0.3	0.5	1.0	3.0	5.0	10.0	20.0
Average Workweek in Manufacturing	0.24	0.38	0.48	0.67	1.00	1.00	1.00	1.00

2) (14 points) Answer EITHER Part A OR Part B.
A) Suppose there is a fixed exchange rate between the Japanese yen (¥) and the US$ with the exchange rate guaranteed by the Japanese government. If they kept the value of the yen artificially low, would the Japanese government have to buy or sell their currency? Explain your logic.
B) How can *tax-based income policies* (TIP) help reduce inflation? Why might they make the problem worse?

3) (16 points) Answer EITHER Part A OR Part B.
A) Ricardian Equivalence assumes a *lump sum tax*. Why is that type of tax a good tax?
B) Explain why a high interest rate causes the debt-GDP ratio to grow. Does the equation for the growth rate of the debt-GDP ratio have the growth rate of real or nominal GDP in it? Why?

4) (18 points) Answer EITHER Part A OR Part B.
A) Explain how *imperfect competition* could yield sticky wages and prices. Explain how *menu costs* could yield sticky wages and prices.
B) Which variable do the Neo-Keynesians predict wrong? How do they reach their conclusion? How do they explain the fact that the data contradicts the theory?

5) (18 points) Answer EITHER Part A OR Part B.
A) Illustrate the effects of the British GDP increasing on the supply and demand for US$ vs. £. Explain why the curve(s) moved as drawn. Does the British Pound (£) appreciate, depreciate, revalue, or devalue? Explain your logic.
B) Draw the augmented LRPC/SRPC diagram for an economy with an unemployment rate of 9% and an expected inflation rate of 4%. Explain how you found the point we start at. What could cause the SRPC to move to the left? Explain why that would have that effect.

6) (18 points) Answer EITHER Part A OR Part B.
A) What is the *Solow Residual*? How does *labor hoarding* affect it? Why does it have that effect?
B) Explain the Neo-Classical School feels that only unexpected changes in fiscal policy affect the GDP.

7) (20 points) Answer EITHER Part A OR Part B.
A) If the banks decide to keep excess reserves on hand in case of emergency, then what will this do to the monetary base, money multiplier, and the money supply? Explain your logic.
B) What is the most commonly proposed rule for monetary policy? Why do economists propose that particular rule for monetary policy?

8) (42 points) Answer EITHER Part A OR Part B.
A) Illustrate an increase in the expected inflation rate on the LRAS/SRAS/AD, IS/LM/FE, and real MS/real MD diagrams. Explain why the curve(s) moved as drawn. What happens to the price level, unemployment rate, interest rates, and GDP?
B) Illustrate an increase in the discount rate, on the LRAS/SRAS/AD, IS/LM/FE, and real MS/real MD diagrams. Explain why the curve(s) moved as drawn. What happens to the price level, unemployment rate interest rates, and GDP?

9) (28 points each) Answer THREE of the following questions. Except for Part A, type your explanations in your Excel file.

A) Suppose consumption is $0.80*[(Y_t + Y_{t-1} + Y_{t-2} + Y_{t-3})/4 - T_t] + 80$, taxes are $0.1*Y_t$, investment is $0.2*(Y_t + Yt_{-1})$, government spending is 300, and net exports is $220 - 0.12*Y_t$. Use these equations to solve for GDP as a function of exogenous and lagged variables. Show all work. Use your results to put equations in the Excel sheet **Equations** and forecast for 30 periods assuming GDP was 1000 for many years. Do **not** worry about the multipliers or graphing.

B) Use the data in the tab **CPI** in the Excel file to find the Laspeyres Price Index, the Paasche Price Index, and the PCE Index using 2007 as the base year. Calculate the inflation for each year. DO NOT give me indices with other base years. The data in the tab **Patriots** in the Excel file shows the their actual margins of victory. Predict their margins of victory through the Superbowl using the same value, same change, same percent change, 6 period moving average, 3 period weighted moving average.

C) Run a regression using the data in the tab **Sales** in the Excel file to predict the sales of small cars as a function of income, price of gas, the price of big cars, and the price of small cars. Do the quick tests for auto-correlation, heteroscedasticity, **and** multi-colinearity. Explain how you did the tests. **If you find none of the problems**, then predict the sales of small cars when the average income is $20,000/year, the price of gasoline is $15/gallon, price of big cars is $30,000/car, and the price of a small car is $35,000/car. **If you find one or more of the problems**, then either describe how you would correct one problem (if you found auto-correlation or multi-colinearity) or describe how you would do the formal test (if you found heteroscedasticity). If you find more than one problem, you can choose which of them you want to address. Do **not** actually correct the problem or do the formal test.

D) Using the data in the tab **Season** in the Excel file to forecast the sales until July 2011. Do **not** worry about seasonally adjusting. Plot actual sales and your forecast on the same graph to see how accurate your predictions were.