

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) (12 points) Answer EITHER Part A OR Part B.

- A) During a presentation in *Senior Seminar* a student said, “the unemployment rate in Nicaragua went down to 5.06%, approximately full employment.” This statement may be true or false. Assuming the 5.06% is correct, explain why this statement may be false. In other words, what determines their natural rate of unemployment?  
 B) What are the advantages of using a cold-turkey approach to solving the inflation problem?

2) (14 points) Answer EITHER Part A OR Part B.

- A) The following table comes from the supplementary text. Suppose the economy has been growing, but the money supply has decreased for six straight months. What does that tell you? Explain your logic.

	Decreasing Trends During Cyclical Expansions								Increasing Trends During Cyclical Contractions							
	Months of Duration								Months of Duration							
	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
M1 Money Supply	0.20	0.32	0.43	0.47	0.60	0.64	0.69	0.69	0.25	0.36	0.43	0.56	0.60	0.75	0.75	0.75

- B) What is meant by *smoothness*? Why is that an important property for a variable to have if you are going to use that to forecast?

3) (16 points) Answer EITHER Part A OR Part B.

- A) Which is the most important budget deficit/surplus to examine when deciding whether the fiscal policy is a good policy? Is it the actual deficit/surplus, the primary deficit/surplus, or the full employment deficit/surplus? Explain the advantage that one has.  
 B) What are the automatic stabilizers? How do they work?

4) (20 points) Answer EITHER Part A OR Part B.

- A) In the Neo-classical (Rational Expectations) School, should the government do counter-cyclical fiscal policy? Explain your logic using the LRAS/SRAS/AD diagram.  
 B) Draw the efficiency wage diagram. Use it to explain the Neo-Keynesian view of whether wages are sticky or flexible.

5) (20 points) Answer EITHER Part A OR Part B.

- A) The long-term unemployed has reached the highest it has ever been in the post-World War II economy. Draw the current SRPC/LRPC diagram which corresponds to the 3% current inflation and 8.6% unemployment rate. Illustrate what happens to the diagram as a result of the long-term unemployed. Explain why the curve(s) moved as drawn.  
 B) Draw the supply and demand for the US\$ versus the € (euro). Interest rates in Europe are going up. Illustrate the effects of this on the diagram. Explain why the curve(s) moved. Which currency appreciated? How can you tell?

6) (24 points) Answer EITHER Part A OR Part B.

- A) Draw the IS/LM/FE diagram which shows the current state of the economy of the USA. (Inflation over the past year was 3%, nominal interest rates on 30 year government bonds is 3.04%, and the unemployment rate is 8.6%). Explain how you know you drew the graph correctly. Some people think the Federal Reserve should do more to stimulate the economy. Use your diagram to determine if this would work or not. Explain your logic

referring to your graph.

B) Draw the IS/LM/FE starting at equilibrium in all markets. Illustrate the effects of an increase in the marginal propensity to consume. Explain why the curve(s) moved as drawn. What happens to the interest rates and the level of GDP?

7) (24 points) Answer EITHER Part OR Part B.

A) Use the balance sheet to the right to determine how much excess reserves the bank has. Show all work and briefly explain what you did. In your test booklet, illustrate the effects of the bank's loaning out its excess reserves on the balance sheet. Briefly explain what you did. If nobody keeps cash on hand and the banks keep no excess reserves, then what will be the ultimate change in the money supply? Explain your logic and show all work.

Assets		Liabilities & Net Worth	
Cash	20	Checking accts	160
Deposits @ Fed	10	Savings accts	100
Loans	270	Miscellaneous	40

B) Monetary policy has been described as controlling a string. In other words, you can pull it back easily but you cannot push it out. Explain why contractionary policy is easy to do, but attempts to increase the money supply may not work.

8) (26 points) For EITHER the Neo-classical (Rational Expectations) School OR the Neo-Keynesian School, tell me which variable they predict wrong. Use an appropriate graph to explain how they conclude the cyclical nature of the variable. Also explain why they feel the "conventional wisdom" about the variable is wrong.

9) (28 points each) Answer THREE of the following questions.

A) Use the data in the tab **CPI** in the [Excel file](#) to find the Laspeyres Price Index using 2007 as the base year. Calculate the inflation for each year. Calculate the Paasche Price Index also 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 **Grades** in the [Excel file](#) shows the grades of a student. Predict their score on the final using the same value, same change, same percent change, 4 period moving average, 3 period weighted moving average.

B) Run a regression using the data in the tab **Sales** in the [Excel file](#) to predict the sales balloons as a function of income, price of balloons, and the price of cake. 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 balloons when the average income is \$20,000/year, the price of a balloon is \$5/balloon, and the price of a cake is \$10/cake. **If you find one or more of the problems**, then either describe how you would correct the 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.

C) Using the data in the tab **Season** in the [Excel file](#) to seasonally adjust the sales for all periods. Do **not** worry about forecasting.

D) Suppose consumption is  $0.75 \cdot [(Y_t + Y_{t-1} + Y_{t-2})/3 - T_t]$ , taxes are  $0.4 \cdot Y_t$ , investment is  $0.6 \cdot Y_t$ , government spending is 400, and net exports is  $100 - 0.05 \cdot Y_t - 0.05 \cdot Y_{t-1}$ . 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 last year and 1000 two years ago. Do **not** worry about the multipliers or graphing.