Write your name on the cover of the test booklet and on an otherwise blank page of the Excel file and nowhere else. Enclose this sheet with the booklet. The Excel file will be handed in via Moodle. 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. Therefore, expect to spend 1 minute for every 2 points. For example, a 14-point question should take 7 minutes. I can give you extra time, but not much.

1) (10 points) Answer EITHER Part A OR Part B.
A) Using the table on the back of this sheet, if you saw a decrease of the money supply of 1.5% while the economy is growing, what would you predict from this? Explain your logic.
B) Currently, there are some leading indicators going up and others are going down. What does that tell you? Explain your logic.

2) (16 points) Answer EITHER Part A OR Part B.
A) What is the *cultural* explanation of the natural rate of unemployment? Explain it.
B) The US$ has been depreciating lately. Who in the US likes this fact and who dislikes it? Explain your logic.

3) (18 points) Answer EITHER Part A OR Part B.
A) Is the *ratio of consumer debt to personal income* a pro-cyclical, counter-cyclical, or acyclical variable? Is it a leading, roughly coincident, or lagging variable? Explain your logic.
B) What is meant by *smoothness*? Why should a variable have it?

4) (20 points) Answer EITHER Part A OR Part B.
A) Which variable does the Neo-classical (Real Business Cycle) model inaccurately predict during business cycles? What do they predict? What actually occurs? How do they reconcile the differences?
B) Some Keynesians believe in the *efficiency wage*. What is it? What would the economic impact of that wage be if the theory is accurate?

5) (24 points) Answer EITHER Part A OR Part B.
A) Some people say the debt is not a burden to future generations. Give two reasons why they are correct. What is the real problem with the debt?
B) Illustrate on the IS/LM/FE diagram an increase in government spending with Ricardian Equivalence. Explain why the curve(s) moved as drawn.

6) (26 points) Answer EITHER Part A OR Part B.
A) Draw a Short-Run Phillips Curve/Long-Run Phillips Curve diagram for a country which expects 5% inflation. Suppose that the central bank decides to only increase the money supply by 2%, but people expect it to increase by 6%. What will happen on the diagram? Explain your logic.
B) Draw the supply and demand for the US$ versus the British Pound, £. Show an increase in the interest rates in the USA. Explain why the curve(s) moved as drawn. Which currency appreciated? Explain your logic.

7) (26 points) Give EITHER the Keynesian explanation OR the Neo-classical School's explanation of the business cycle. Use the LRAS/SRAS/AD diagram in your explanation.

Answer THREE of the questions below on the spreadsheets (and in the blue-books when appropriate). They are worth 30 points each.

8) (30 points) Use the data on page 8 of the Excel ® spreadsheet to do calculate all of the following forecasts for the next 20 years. Plot the actual sales and all five forecasts on the same graph.
A) Same value
B) Same ratio
C) Same difference
D) 6-year moving average
E) 4-year weighted moving average

9) (30 points) Use the data on page 9 of the Excel ® spreadsheet to answer this question. On it is the original data, the CMA, PSI, ASI, and RSF. Use this information to calculate the TSF, seasonally adjust the original data, **and** forecast until May 2006. If this year's sales are $1000, how much would you expect to sell in March?

10) (30 points) Use the data on page 10 of the Excel ® spreadsheet to run a regression to determine how sales are a function of time. Do the **quick** tests for autocorrelation **and** heteroscedasticity. If done correctly, you should find exactly one problem. If you found autocorrelation, then solve the problem and re-run the regression. Explain how you know the problem existed and why your method solved it. If you find heteroscedasticity, then do the formal test. Explain how you did the formal test. (Use 1.5 for the cutoff value.)

11) (30 points) Suppose the economy is described by $C_t = 0.8(Y_t + Y_{t-1})/2$, $I_t = 0.25(C_{t-1})$, $G_t = 400$, and $NX_t = 600 - 0.2Y_t$. Use this information to calculate the short-run multiplier. Suppose that for the past two years, GDP was 2000. Use the spreadsheet to use these equations to predict GDP for the next 20 years. If the government spending permanently changed to $500, then what is the long-run multiplier? Does that time-path show monotonic convergence, monotonic explosion, oscillating convergence, or oscillating explosion? Explain your logic.

Table 4
Proportions of Occurrences In Which Trends of Various MAGNITUDES Involved Cyclical Reversals of Business Activity

	Decreasing Trends During Cyclical Expansions — Percentage Decrease Larger Than —								Increasing Trends During Cyclical Contractions — Percentage Increase Larger Than —							
Primary Leading	*0.0*	*0.3*	*0.5*	*1.0*	*3.0*	*5.0*	*10.0*	*20.0*	*0.0*	*0.3*	*0.5*	*1.0*	*3.0*	*5.0*	*10.0*	*20.0*
M1 Money Supply	0.20	0.33	0.47	0.75	1.00	1.00	1.00	1.00	0.25	0.43	0.47	0.69	1.00	1.00	1.00	1.00
Yield Curve Index	0.67	0.86	1.00	1.00	1.00	1.00	1.00	1.00	0.86	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Index of Manufacturers' Supply Prices	0.27	0.28	0.29	0.31	0.37	0.40	0.53	0.71	0.42	0.42	0.42	0.50	0.53	0.56	0.59	0.67
New Orders, Consumer Goods	0.19	0.25	0.27	0.36	0.60	0.90	1.00	1.00	0.35	0.39	0.43	0.50	0.75	0.90	0.90	1.00
New orders, Core Capital Goods	0.13	0.15	0.16	0.17	0.31	0.53	0.80	1.00	0.30	0.31	0.35	0.35	0.47	0.67	0.80	1.00
Housing Permits	0.29	0.33	0.33	0.37	0.48	0.59	0.77	1.00	0.30	0.36	0.37	0.42	0.50	0.67	0.77	1.00
Mfg. & Trade Sales/Inventories	0.17	0.50	0.78	1.00	1.00	1.00	1.00	1.00	0.50	0.70	1.00	1.00	1.00	1.00	1.00	1.00
Vendor Performance	0.24	0.26	0.26	0.26	0.35	0.43	0.47	0.75	0.41	0.41	0.41	0.43	0.53	0.69	0.69	0.69
Stock Prices	0.20	0.20	0.22	0.24	0.45	0.53	0.71	1.00	0.31	0.33	0.33	0.36	0.50	0.71	0.91	1.00
Average Workweek, Mfg.	0.24	0.38	0.48	0.67	1.00	1.00	1.00	1.00	0.40	0.63	0.67	0.91	1.00	1.00	1.00	1.00
Initial Claims, Unemployment Ins.*	0.21	0.21	0.23	0.25	0.36	0.45	0.64	0.82	0.39	0.43	0.43	0.47	0.56	0.75	0.90	1.00
Change in Consumer Debt	0.34	0.50	0.63	0.91	1.00	1.00	1.00	1.00	0.30	0.67	0.71	0.83	1.00	1.00	1.00	1.00
Primary Roughly Coincident																
Nonagricultural Employment	0.18	0.59	0.63	0.77	1.00	1.00	1.00	1.00	0.50	0.91	0.91	1.00	1.00	1.00	1.00	1.00
Industrial Production	0.13	0.20	0.29	0.45	0.67	0.91	1.00	1.00	0.45	0.53	0.59	0.77	1.00	1.00	1.00	1.00
Personal Income, Less Transfer Pmts.	0.14	0.28	0.44	0.70	1.00	1.00	1.00	1.00	0.64	0.88	0.88	1.00	1.00	1.00	1.00	1.00
Manufacturing and Trade Sales	0.11	0.20	0.27	0.54	1.00	1.00	1.00	1.00	0.47	0.70	0.78	0.88	1.00	1.00	1.00	1.00
Civilian Employment/Population	0.16	0.41	0.47	0.90	1.00	1.00	1.00	1.00	0.33	0.60	0.90	1.00	1.00	1.00	1.00	1.00
Gross Domestic Product†	0.54	0.70	0.88	1.00	1.00	1.00	1.00	1.00	0.78	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Primary Lagging																
Average Duration of Unemployment*	0.16	0.16	0.16	0.20	0.30	0.37	0.83	0.91	0.38	0.38	0.38	0.59	0.83	1.00	1.00	1.00
Manufacturing and Trade Inventories	0.17	0.50	0.78	1.00	1.00	1.00	1.00	1.00	0.50	0.70	1.00	1.00	1.00	1.00	1.00	1.00
Commercial & Industrial Loans	0.18	0.24	0.31	0.45	0.83	1.00	1.00	1.00	0.36	0.45	0.59	0.71	0.91	1.00	1.00	1.00
Consumer Debt/Personal Income	0.20	0.33	0.43	0.50	1.00	1.00	1.00	1.00	0.30	0.48	0.56	0.77	1.00	1.00	1.00	1.00
Chg. In Labor Cost/Unit of Output	0.26	0.30	0.32	0.41	0.60	0.75	1.00	1.00	0.36	0.53	0.60	0.90	1.00	1.00	1.00	1.00
Composite of S-T Interest Rates	0.20	0.21	0.22	0.26	0.42	0.48	0.67	0.71	0.32	0.32	0.32	0.33	0.43	0.53	0.67	0.67

Note: All dollar-denominated series are in constant dollars. * Inverted. † Quarterly; magnitude shown in quarters.