

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 (but you can take the full 2 hours.) Therefore, expect to spend 1 minute for every 2 points. For example, a 14-point question should take 7 minutes.

**Remember to fill out course evaluations.**

1) (14 points) For EITHER the event in Part A OR the event in Part B, determine what happens to the monetary base, the money multiplier, and the money supply. Explain your logic.

- A) The Fed increases the discount rate. (You can answer the way it was originally intended or the way the system has started to act in the past decade.)
- B) The required reserve ratio is increased.

2) (16 points) Answer EITHER Part A OR Part B.

- A) Macroeconomists often argue that *rules* are better than *discretion*. What is the most commonly cited rule? What are two advantages of that rule? Explain your logic.
- B) What are the *lags* in monetary policy? Why might they mean you do not want to do counter-cyclical monetary policy?

3) (18 points) Answer EITHER Part A OR Part B.

- A) Suppose the government spends \$500 per year, makes transfers of \$400 per year, and pays \$110 of interest per year. The tax revenue is 20% of GDP. If GDP is \$4500, then how much is the government deficit or surplus. Suppose the full-employment level GDP is \$5500. How much is the full-employment deficit or surplus? What is the primary deficit or surplus? Show all calculations. Is the government doing good fiscal policy? Explain your logic.
- B) Given distortions created by taxes, rank these taxes from best to worst: excise tax on gasoline, excise tax on meat, a head tax. (The latter is a tax where everybody pays the same amount for their head.) Assume that gasoline and meat do not have any externalities positive or negative. Also, ignore any other criteria which might be used for evaluating taxes like fairness, cost of collecting, and amount of revenue received.

4) (18 points) Answer EITHER Part A OR Part B.

- A) Russia had fixed exchange rate for the ruble vs. the US\$. Draw the supply/demand for the **ruble** with the peg at the correct level. Many countries have placed sanctions on Russia so that citizens and companies from those countries cannot import many things from Russia. Illustrate the effects of that on the diagram. Explain why the curve(s) moved as drawn. What problem did this cause for the Russian central bank? Explain your logic. Given that problem, what do you think the central bank did on November 10<sup>th</sup>? Explain your logic.
- B) Draw the supply and demand for the US\$ with the £ as the other currency. Draw a fixed exchange rate with an undervalued currency. Explain how your graph shows it is undervalued. What will have to happen to the money supply if the government wants to keep that exchange rate? Why must they do that? Can they do that forever? Explain your logic.

5) (34 points) Use the data in the Excel file [exam4.xlsx](#) to forecast sales through the end of 2006. How much are the seasonally adjusted sales for August of 2003? If their sales for 2007 were \$1500, then how much would they expect to sell in March of 2007? Do all calculations in the Excel sheet. If you want to explain anything, then do it on the spreadsheet.