Whitman College
Econ 107
Exam 4
May 2, 2003

Write all of your answers on the exam. Show all of your work.

1. Consider the Keynesian aggregate supply and aggregate demand model.
(a) (10pts) Consider the shape of the short run aggregate supply (SAS) curve. Why, as the price level falls, do firms wish to produce less total output in the short run?

(b) (5pts) Draw an aggregate demand and aggregate supply diagram in which equilibrium occurs at a level of output below Potential Gross Domestic Product (GDP). Label Potential GDP. Be sure to label your axes.

(c) (10pts) Suppose that economic policy-makers take no action to smooth the business cycle, and instead let the economy self-adjust. Describe this automatic adjustment process, and show its effects on your graph above.

2. (5pts) Suppose that a bank customer transferred \$500 from his savings account into his checking account. What would happen to M1, and what would happen to M2?

3. Suppose there is only one kind of deposit in the banking industry, a checking deposit. Bank A holds deposits of \$200,000, and total reserves of \$20,000, of which \$16,000 are required reserves.

(a) (5pts) What is the required reserve ratio in this economy?

(b) (5pts) Suppose that all the other banks in this economy hold no excess reserves, and the public uses checking deposits rather than holding currency. What is the deposit multiplier in this economy?

(c) (5pts) Suppose that all the other banks in this economy hold no excess reserves, and the public uses checking deposits rather than holding currency. By how much would the banking system expand deposits if Bank A decided to lend out its excess reserves?

4. (10pts) Suppose that over the past twenty years, a hypothetical country's Potential GDP grew at an annual rate of one percent, while its money supply grew at an average annual rate of six percent. The country's payments technology did not change during this period. If the Quantity Theory of Money holds in this economy, then what was the average annual inflation rate over this period?

5. Suppose that a lender and a borrower contract for a one year loan at a nominal annual interest rate of 8.0%.

(a) (10pts) If the lender and borrower both expect the loan to have a real annual interest rate of 4.5%, what do they expect the inflation rate to be over the year of the loan?

(b) (10pts) Would it be true that both the lender and the borrower would be pleased if the inflation rate actually turned out to be lower than they had expected? Explain your answer.

6. The current Federal Funds Rate is 1.25%, the lowest it has been in 42 years.

(a) (15pts) Consider the current state of the macroeconomy. Why might the Federal Reserve decide to lower the Federal Funds Rate yet further? Discuss current macroeconomic conditions, and refer to a Keynesian aggregate demand-aggregate supply diagram in your answer.

(b) (10pts) If the Federal Reserve did decide to lower the Federal Funds Rate, what exactly would the Federal Reserve do to make the Federal Funds Rate fall? Be explicit in your answer.