

**Economics 470/570**  
**Fall 2010**  
**Final Exam**

**Name:** \_\_\_\_\_

**Part I - Definitions. Define each of the following (5 points each, 30 points total).**

1. Fractionally backed and fiat money
2. Discount window and discount rate
3. Crowding out
4. Effectiveness lag
5. Natural rate of output
6. Monetary neutrality

**Part II. Answer SIX of the following questions (20 points each, 120 points total).**

1. How independent is the Fed? What factors contribute to independence? What factors work against independence? Discuss arguments for and against the independence of the Fed.
2. (a) Explain why the demand curve for reserves slopes downward. Explain the shape of the supply curve for reserves. (b) Use the supply and demand model for bank reserves to explain and illustrate the effects of an open market operation to buy bonds.
3. (a) What are the functions of money, i.e. why does money exist? Relative to a barter economy, what problems are overcome by the use of money? (b) How do nominal interest rates, ex-ante real interest rates, and ex-post real interest rates differ? Of the two real rates, which is the most important for understanding economic decisions?
4. (a) Explain why investment is less sensitive to interest rate changes in recessions as compared to when the economy is operating closer to full employment. (b) Use the IS-LM model to show that fiscal policy becomes more effective relative to monetary policy as investment becomes less sensitive to the interest rate (examine the cases where the IS curve is either vertical or horizontal). Explain the result intuitively. What does this imply about the use of monetary and fiscal policy over the business cycle?
5. What is debt monetization? Why might governments choose to monetize the debt? What problems can debt monetization cause?
6. (a) Show that it is possible in a model with expectations (e.g. using the New Classical model) for an increase in the money supply to reduce output if the change in the money supply is smaller than expected. (b) Compare and contrast the effects of an unexpected increase or decrease in the money supply on prices and output in the New Classical and New Keynesian models.
7. (a) Do Monetarists agree with Friedman's contention that inflation is always and everywhere a monetary phenomenon? Explain using the AD-AS model. (b) Do Keynesians agree with Friedman's contention that inflation is always and everywhere a monetary phenomenon? Explain using the AD-AS model.