

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

**Intermediate Macroeconomic Theory II, Fall 2009**

**Instructor: Dmytro Hryshko**

**Final Exam (35 points). December 8.**

1. (**5 points**) Suppose that the only shocks in the economy are changes in the assessments of expected inflation  $\pi^e$ , and that the central bank is considering which policy to implement:

- keeping the money stock constant, or
- keeping the real interest rate constant.

Which policy leads to smaller fluctuations in real GDP in response to the economy's shocks? Draw an appropriate IS–LM schedule. (*Hint*: you may use the IS–LM schedule as in the textbook's discussion of the Great Depression, with nominal interest rate on the vertical axis and real GDP on the horizontal axis.)

2. (**5 points**) To fight an ongoing inflation, the government makes raising wages or prices illegal. However, the government continues to increase the money supply each year. The economy starts at full-employment output, and this long-run level of output remains constant. (You may ignore the effects of increasing money supply on expected inflation. If you choose not to, be sure to explain the way you integrate expected inflation into your answer.)
- (a) (**1 point**) Which Solow model may fit the fact that the long-run level of aggregate output remains constant?
- (b) (**2 points**) Using the Keynesian AD–AS and the IS–LM frameworks, show the effects of the government’s policies on the economy. Assume that firms meet the demand at the fixed price level. Show the effects of the policy on the IS and/or LM, if any, for at least two years.
- (c) (**2 points**) After several years in which the controls have kept prices from rising, the government declares victory over inflation and removes the price controls. What happens? Show this on your diagrams.

3. (5 points) Use the Mundell-Fleming model to predict the effects of a fall in domestic consumers' confidence on aggregate income, the exchange rate, and the trade balance in a small open economy with a fixed exchange rate regime. (Use the IS-LM schedule.)
4. (5 points) A small open economy with a floating exchange rate is in recession with *balanced trade* (that is, exports are equal to imports). If policymakers want to reach the full-employment level of output while maintaining *balanced trade*, what combination of monetary and fiscal policy should they choose? Use the Mundell-Fleming model and support your answer with a graph(-s). (Use the IS-LM schedule.)

5. (5 points) Suppose that new deposits of oil are discovered in the economy. You can interpret this as a beneficial *permanent* supply shock; in the *long run*, the costs of producing one unit of output go down and the economy can produce more for a given amount of capital and labor. Assume that firms in the economy are not affected by this event in the *short run* and the prices stay stable in the *short run*. Discuss both the short- and long-run effects of the “shock” on the equilibrium values of output, the real interest rate, consumption, investment, the price level, and the real money balances. (Use both the IS–LM and AD–AS diagrams.)
6. (a) (4 points) Consider a *fall* in lump-sum taxes, with *no change* in government purchases. Assume that the Ricardian equivalence *holds*. Discuss both the short- and long-run effects of the change on the equilibrium values of output, the real interest rate, consumption, investment, the price level, and the real money balances. Briefly state the essence of the Ricardian equivalence, and the reasons for why it may fail.

(b) (**4 points**) What is the essence of the Lucas critique? Discuss the issue in terms of either consumption function or the short-run inflation-unemployment tradeoff.

(c) (**2 points**) Assume that Bank of Canada is committed to keep the exchange rate between Canadian dollar and Japanese Yen fixed—at 100 Yen/\$1, and ready to sell and/or purchase Japanese Yen at this rate. Suppose that the demand for Canadian dollar goes up which puts an upward pressure on the value of Canadian dollar in the market so that it trades at 200 Yen/\$1 in the market. Construct an arbitrage transaction, which gives you profit at no cost. As a result of such arbitrage trades, would you observe an increase or reduction in the supply of (domestic) money in the economy?