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Fall 2010, Intermediate Macroeconomics, section 4

ECON 2202 Final Exam

General recommendations:

- Read questions thoroughly.
- Please respond on this copy. There are six pages.
- Work individually.
- You have two hours.
- Good luck!

Your name:

- 1. **[20 points]** Circle the appropriate answer on each of the following items. Circle multiple items or none if necessary:
 - (a) For the Malthusian model to hold true, we need to assume:
 - i. no population growth,
 - ii. no technology growth,
 - iii. no capital accumulation,
 - iv. stable prices.
 - (b) The Golden Rule of growth maximizes
 - i. steady-state growth,
 - ii. steady-state output,
 - iii. steady-state consumption,
 - iv. steady-state savings.
 - (c) Human capital has a lot of potential for sustained growth because
 - i. it has decreasing returns to scale,
 - ii. it can be accumulated very rapidly,
 - iii. there is no cost to accumulate it,
 - iv. social returns are higher than private returns.
 - (d) As seen in class, financial markets may exhibit imperfections because
 - i. banks are greedy,
 - ii. households are irrational,
 - iii. households are better informed,
 - iv. the government regulates markets.

- (e) The real return of money is
 - i. *R*,
 - ii. r,
 - iii. *i*,
 - iv. −*i*.
- (f) The Friedman Rule states that the optimal inflation rate is
 - i. 2–4%,
 - ii. *r*,
 - iii. R,
 - iv. −*r*.
- (g) Aggregate demand depends negatively on the real interest rate because:
 - i. government deficits increase with higher interest rates,
 - ii. household demand more money when rates are high,
 - iii. consumption demand is downward sloping,
 - iv. firms' marginal product of capital depends on the interest rate.
- (h) To be used as commodity money, a good should be
 - i. very rare,
 - ii. homogeneous,
 - iii. heavy,
 - iv. durable.
- 2. [40 points] Inflation
 - (a) How can the central bank increase inflation? What is the consequence for money demand?

(b) What are the consequences for households? For firms?

(c) Work out the impact of this increase in inflation in the monetary intertemporal model.

(d) What is the impact on endogenous variables? Compare your results to the stylized facts about the business cycles. How well do changes in inflation fare as an explanation for economic fluctuations?

(e) According to this model, characterizes as much as possible the policy change necessary to achieve an increase of inflation by x percentage points. (this is a difficult question)

3. [20 points] Growth

- (a) What is meant by "convergence"?
- (b) What does the data tell us about convergence?

(c) Explain why the Solow growth model concludes that there should be convergence. Explain what assumption are important.

- 4. **[20 points]** Suppose you want, as a government, to improve the average growth rate of the economy. Discuss the merits of each of the following policies using what you learned in class.
 - (a) Subsidy to savings.

(b) Subsidy to education.

(c) Monetary policy.

5. **Bonus question [10 points]** We have discussed how credit market imperfections may have an impact on the real side of the economy. Conjecture how these imperfections could influence money demand.