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Fall 2006, Intermediate Macroeconomics, section 1

ECON 219 Final Exam

General recommendations:

- Read questions thoroughly.
- Please respond on this copy.
- You have two hours.
- Work individually.
- There are six pages.
- 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) Liquidity demand increases if:
   a) the money supply increases; b) inflation increases; c) output increases; d) the interest rate increases.

   (b) In a model with money neutrality, a 10% increase in the money supply:
   a) increases output, by 10%; b) increases output, but by less than 10%; c) increases prices, by 10%; d) increases prices, but by less than 10%.

   (c) Currently, US dollars are backed by:
   a) gold; b) public infrastructure; c) bank deposits; d) social security claims.

   (d) Among the role of money are:
   a) facilitating transactions; b) supplying credit to businesses; c) allowing the intertemporal transfer of wealth; d) increasing productive capital in the firm.

   (e) Empirically since WWII, prices are:
   a) procyclical; b) acyclical; c) countercyclical; d) we cannot tell.

   (f) The Friedman Rule specifies that:
   a) inflation should be negative; b) inflation should be zero; c) inflation should positive; d) inflation is irrelevant.

   (g) The Golden Rule says that:
   a) one should save a much as possible; b) one should save as little as possible; c) one should save between a) and b); d) savings are not relevant.

   (h) One result of the intertemporal model with money is that:
   a) increasing the money supply is good; b) increasing the money supply is bad; c) increasing the money supply has variable results, depending on the circumstances; d) increasing the money supply does not matter.

2. **[15 points]** Money concepts.

   (a) What is an open market operation? Describe it in terms relevant to the intertemporal model with money.

   (b) What statistical definition of money can best be described as exogenous? Why?

   (c) What is the impact of a change in the money supply <u>in the long run</u>?

3. **[20 points]** Growth models.

(a) Explain what sustained growth is. How can it be attained in the Solow model?

(b) Does the Solow model exhibit convergence? In which way? Does this correspond to data?

4. **[45 points]** Take the intertemporal model with money. Assume the economy is at equilibrium. Then decrease future total factor productivity.

   (a) Show graphically what the consequences are for all endogenous variables of the model.

   (b) Is this kind of shock a good explanation of the business cycle? Give details.

(c) Give an example of what such a shock may be in “real life.”

(d) Given such shocks to future total factor productivity, how should the central bank behave in order to stabilize prices? Explain.

(e) What impact does such a policy have on other variables?

(f) What is the challenge that the central bank faces when implementing such a policy?

5. **Bonus question [10 points]** Think of an endogenous growth model that highlights the contribution of research and development. Based on the Solow growth model, sketch how you would modify it to obtain sustained growth.