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Fall 2004, Intermediate Macroeconomics, section 4

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. **[25 points]** Circle the appropriate answer on each of the following items. Circle multiple items if necessary:

   (a) In the intertemporal model with money, money demand can increase if:
   a) total factor productivity decreases; b) more ATMs are put in place; c) the stock market becomes more risky; d) the money supply increases.

   (b) In the data money is:
   a) procyclical; b) acyclical; c) countercyclical; d) impossible to tell.

   (c) In the intertempoal model with money, total factor productivity shocks imply that:
   a) prices are countercyclical; b) prices are acyclical; c) prices are procyclical; d) it all depends.

   (d) The following items are part of M1, but not M0:
   a) savings accounts; b) debit card balances; c) credit card balances; d) bank notes.

   (e) With the Golden Rule:
   a) savings maximize output; b) savings maximize consumption; c) the slope of the production function equals the marginal return of (per capita) capital; d) the slope of the production function equals the population growth rate plus the depreciation rate.

   (f) Endogenous growth means:
   a) one has to assume growth in total factor productivity to obtain sustained growth; b) economies converge all by themselves to the steady-state equilibrium; c) one does not assume that a variable grows and yet one obtains sustained growth; d) endogenous variables grow.

(g) The Friedman Rule is optimal because:
a) households are indifferent between holding bonds or money; b) households would be able to buy more as prices decrease; c) one could get more cash goods than credit goods; d) the central bank has better control of the money supply.

(h) In the intertemporal model with money, the following variables are endogenous:
a) current capital; b) future capital; c) money supply; d) money demand.

(i) The Fisher Relationship says:
a) $R = r - i$; b) $R = r + i$; c) $R = i - r$; d) $R = 0$.

(j) Money is neutral because:
a) prices are fully flexible; b) markets are in equilibrium; c) the model economy lasts just two periods; d) wages are set in advance.

2. **[15 points]** All of the following have been used as money in the past. Explain why they are not anymore: gold, tobacco leaves, stones.

3. **[10 points]** Explain why governments subsidize savings (typically through tax credits).

4. **[10 points]** Explain why governments subsidize schooling, often to the point of making it free.

5. **[40 points]** Take the intertemporal model with money. Assume a positive shock to current government expenses. Assume that this is financed by a change in the money supply.

   (a) Why did we need this last assumption? How else could the increased goverment expenses be financed?

   (b) Describe what the shocks considered in the lead of the question could be in the real world.

(c) Show graphically the impact of such shocks on the real interest rate, the price level, output, employment, and the real wage.

(d) Discuss the cyclical behavior of consumption, investment, prices, real wages, and employment if the economy were hit only by shocks as described above in the intertemporal model with money.

(e) Are such shocks a good explanation of business cycles, assuming there would be only only this type of shocks.

(f) Compare your results to the intertemporal model without money: what is different? Why?

6. **Bonus question [10 points]** Under what circumstances would the Fisher Relationship not hold?