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Fall 2004, Intermediate Macroeconomics, section 3

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, the optimal amount of money is:
   a) equal to total output; b) equal to total consumption; c) equal to the consumption of cash goods; d) irrelevant as long as it is not zero.

   (b) The stylized fact that the return of capital is steady in the long run is:
   a) true in the data; b) not true in the data; c) true in the Solow growth model; d) not true in the Solow growth model.

   (c) Some early forms of money like commodity money did not survive because:
   a) they were outlawed; b) quality control was difficult; c) small change was difficult to implement; d) people disagreed on which good to use.

   (d) The following items are part of M1:
   a) savings accounts; b) debit card balances; c) credit card balances; d) bank notes.

   (e) In the intertemporal model with money, we considred a household with two people that are separated from each other during the period in order to:
   a) add realism to the household; b) take into account that some people work and others not; c) to force the use of money; d) allow for fertility in the model.

   (f) The fact that governements tend to encourage savings with various fiscal incentives is a sign that:
   a) inflation is too high; b) households are impatient; c) government spending is too low; d) interest rates are too low.

(g) The Friedman Rule says that:
a) there is no free lunch; b) the Fed is responsible for the Great Depression; c) the nominal interest rate is equal to the real interest rate plus the inflation rate; d) the inflation rate should be negative.

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

(i) The nominal return of money is:
a) $-R$; b) $-(r+i)$; c) $-r$; d) $-i$.

(j) Money is superneutral when:
a) money has no real impact; b) a change in money has no real impact; c) a change in money growth has no real impact; d) real variables have an impact on money.

2. **[10 points]** Explain how the Federal Reserve Banks can increase the money supply in the US.

3. **[15 points]** Describe graphically what we mean by the Golden Rule in macroeconomics.

4. **[15 points]** Explain what policies could increase the long run growth rates of economies, considering results from an endogenous growth model. Are there short term costs?

5. **[35 points]**

   (a) Take the intertemporal model with money. Assume a positive shock to future government expenses. Assume that this is financed by a change in the money supply.Why did we need this last assumption?

   (b) Describe what the shocks described above 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]** We saw that the Ricardian equivalence holds when households can save with bonds. Assume bonds are not present, but that households can use money as a savings vehicle. Does the Ricardian equivalence still hold? Explain.