Macroeconomic Theory

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Spring 2011 Midterm Examination #2

Answer questions 1 and 2 and two of the remaining three questions. You may use notes, texts, calculators, or any other inanimate objects. Exams will be collected at 9:40. Please reaffirm the *Honor Code*.

“Achieving free trade is like getting to heaven. Everyone wants to get there but not too soon.” - anonymous

1. Use the following version of the IS-LM model to answer all parts of this question.

Endogenous Exogenous

Consumption: C = 200 + .8\*Yd Variables Variables

Dispoable Income: Yd = Y - T

Taxes T = 125 + .25\*Y C, Yd, T, Y M, G, P, Yf

Investment I = 200 – 20\*r AD, I, r, NX (foreignY)

Net Exports NX = 100 - .2\*Y – 5\*r + .1Yf Md

Aggregate Demand AD = C + I + G + NX

Goods Market Equilibrium Y = AD

Money Demand Md = (.5Y – 50\*r)\*P

Money Market Equilibrium Md = M Assume Y<Yp

1. (6) Solve for the IS curve and identify its slope.
2. (4) Solve for the LM curve and identify its slope.
3. (4) Find the reduced form statement for Y.
4. (6) Based on the results in part c, does monetary policy or fiscal policy have a larger impact on GDP? Support your answer.
5. (5) What would be the effect of a decline in foreign income (Yf) on output and interest rates in this economy? Support your answer.
6. Consider a Solow growth model (1G type) with the following production function.

 Yt = Kt.4 (Techt\*Lt).6

* 1. (5) Specify and explain the steady state condition for this model.
	2. (7) Assume that technology grows at a rate of g percent per year and labor grows at n percent per year. Determine the equilibrium time path for y (output per laborer at any given time period .)
	3. (6) Determine how fast output per laborer grows along its steady-state path.
	4. (7) What would be the effect of an increase in the savings rate on the steady state path for output per laborer and capital per unit of labor? (You may use graphical or mathematical analysis for this part.)

3. True, false, or uncertain. Use Model 3 (IS-LM model) to determine the answers.

Be sure to explain your answers.

1. (8) Increased dependence on international trade makes monetary policy more effective.
2. (7) Increased dependence on international trade makes fiscal policy more effective.

4. (15) Many economists argue that China’s savings rate is too high. Based on the Solow Model (1G), explain how one could determine whether it was too high or not. Be sure to identify the key factors that would drive such a determination.

5. (15) Characterize points A, B, and C in the graph below. (Characterize means indicate for each market whether it clears, exhibits excess demand, or exhibits excess supply.)

 r IS LM

 A

 B

 C

 Y