Problem Set Two: Growth
Econ105C, Spring 2008

Section 1: Multiple Choice Questions

1. What is the current national saving rate in the U.S.?
   a. Around 30%;
   b. Around 0;
   c. Around 17%;
   d. None of the above.

2. Which of the following would cause permanent growth in the long run?
   a. education;
   b. population growth;
   c. saving and investment;
   d. none of the above.

Section 2: Calculations

3. Suppose an economy has the following production function: $Y = K^{0.3} L^{0.7}$. In this economy, population grows at 3%; capital depreciates at 10%. Please calculate its golden-rule saving rate.

Section 3: Essays

4. In the U.S., the capital stock is about 2.5 times of one year’s GDP; depreciation of capital is about 10 percent of GDP; capital income is about 30 percent of GDP. Use this information to argue whether the U.S. is accumulating too much capital, or too little?

5. Suppose that an economy is already at a steady state (with population growth, but without technological progress) with a saving rate below the optimal level. The government raises its saving rate successfully to the golden-rule level. Plot the dynamics of capital per capita, output per capita, and consumption per capita during the transitory period from the old steady state to the new steady state.