Economics 100N
UCSC

Professor K. Kletzer
Spring 2013

Problem Set 6
Due: Thursday, June 6, 2013

1. Use the basic neoclassical model of consumption presented in Section 15.2 of Jones to answer this question. Let $u(c) = \ln c$.

a) Suppose $y_{today} = y_{tomorrow}$ and $\beta = \frac{1}{1+R}$. How much does the household consume today and tomorrow? How much does the household save today?

b) Redo part a) assuming $\beta > \frac{1}{1+R}$. Does consumption grow from today to tomorrow? Is saving positive now? Do you get the opposite results if $\beta < \frac{1}{1+R}$?

c) Suppose $y_{today} = 50{,}000$ and $y_{tomorrow} = 100{,}000$. How does an increase in income today by 10,000 affect consumption today and tomorrow and saving today? Let $\beta = \frac{1}{1+R}$.

d) Suppose $y_{today} = 50{,}000$ and $y_{tomorrow} = 100{,}000$ and $\beta = \frac{1}{1+R}$. How does an increase R by 1% (0.01) affect saving today? Let R initially equal 5%.

2. Answer problem 7 of chapter 15 (page 423) using the neoclassical model with logarithmic utility and $\beta = \frac{1}{1+R}$. You might try extending the model by allowing households to live T years to practice the algebra.

3. Problem 4 of chapter 16 (page 448) is great to do.

4. So is problem 8 of chapter 16.

5. Demonstrate Ricardian equivalence using the neoclassical model as follows.

a) Write down the government budget constraint for two years (today and tomorrow or this year and next year). Assume inflation is zero so that the nominal interest rate equals the real interest rate, R. Suppose the government spends \$100 billion each year and balances its budget each year. Using the permanent income model of consumption show how taxes affect household consumption and saving.

b) Suppose the government cuts taxes today but does not change public expenditures. How does the fiscal policy need to change so that the government's budget constraint is satisfied? (For simplicity, assume the government reduces taxes from \$100 billion to 50 billion today.)

c) How does this policy change affect household consumption? How does it affect household saving today? Is investment different under the two fiscal policies? That is, how does aggregate saving change?