Problem Set #1

Due Tuesday, February 12, 2008

Problem Sets MUST be word-processed except for graphs and equations.

QUESTIONS

A. Multiple Choice Questions. Circle the letter corresponding to the best answer. (1 points each.)

1. Positive analysis of economic policy:
   a. Examines the economic consequences of policies but does not address the question of whether those consequences are desirable.
   b. Examines the economic consequences of policies and addresses the question of whether those consequences are desirable.
   c. Generates less agreement among economists than normative analysis.
   d. Is rare in questions of economic policy.

2. Because government services are not sold in markets:
   a. They are excluded from measurement of GDP.
   b. The government tries to estimate their market value and uses this to measure the government’s contribution to GDP.
   c. They are valued at their cost of production.
   d. Taxes are used to value their contribution.

3. An adverse supply shock would:
   a. Shift the production function up and decrease marginal products at every level of employment.
   b. Shift the production function down and decrease marginal products at every level of employment.
   c. Shift the production function down and increase marginal products at every level of employment.
   d. Shift the production function up and increase marginal products at every level of employment.

4. Which of the following events would lead to an increase in the marginal product of labor for every quantity of labor?
   a. An increase in the real wage.
   b. A decrease in the real wage.
   c. A favorable supply shock such as a fall in the price of oil.
   d. An adverse supply shock such as a reduced supply of raw materials.
5. As a result of the superb economics essay that you wrote during this semester, you won the Adam Smith prize of $100. The receipt of these funds would be an example of:

   a. The substitution effect being stronger than the income effect.
   b. The income effect being stronger than the substitution effect.
   c. A pure income effect.
   d. A pure substitution effect.

6. A tremendous flood along the Mississippi River destroys thousands of factories, reducing the nation’s capital stock by 5%. What happens to current employment and the real wage rate?

   a. Both employment and the real wage rate would increase.
   b. Both employment and the real wage rate would decrease.
   c. Employment would increase and the real wage rate would decrease.
   d. Employment would decrease and the real wage rate would increase.

7. When a person gets an increase in current income, what is likely to happen to consumption and saving?

   a. Consumption increases and saving increases.
   b. Consumption increases and saving decreases.
   c. Consumption decreases and saving increases.
   d. Consumption decreases and saving decreases.

8. Suppose your company is in equilibrium with its capital stock at its desired level. A permanent decline in the expected interest rate now has what effect on your capital stock?

   a. Raises it because the future marginal productivity of capital is higher.
   b. Lowers it because the future marginal productivity of capital is lower.
   c. Raises it because the user cost of capital is now lower.
   d. Lowers it because the user cost of capital is now higher.

9. The saving-investment diagram shows that a higher real interest rate due to a leftward shift of the saving curve:

   a. Raises the profitability of investment for firms.
   b. Causes the amount of firms’ investment to increase.
   c. Increases the total amount of saving because of the increase in the real interest rate.
   d. Causes the total amounts of saving and investment to fall.

10. A temporary supply shock, such as a drought, would:

    a. Increase the marginal productivity of capital and increase desired investment.
    b. Decrease the marginal productivity of capital and decrease desired investment.
    c. Have little or no effect on desired investment.
    d. Decrease both the marginal productivity of capital and the marginal productivity of labor in the long-term future.
B. Answer BOTH of the following questions in the space below.

1. **Production Functions and Labor Market Equilibrium.** In 1995 an earthquake in Kobe, Japan destroyed thousands of factories, reducing the nation’s capital stock by 10%.
   
   a. Based only on this information, use Production Function and Labor Market diagrams to accurately and clearly show:
      
      1. Japan’s initial economic situation (before the earthquake), and
      2. The effects the earthquake had on Japan’s economic output, employment, and the real wage rate.
   
   b. Provide a brief economic explanation of the changes you showed in your diagrams above. Be sure to discuss what happens to economic output, employment, and the real wage rate.

2. **Saving-Investment Diagram.** As part of an economic stimulus package, the government is going to reduce the effective marginal tax rate on capital.
   
   a. Based only on this information, use a Saving-Investment diagram to accurately and clearly show:
      
      1. The economy’s initial economic situation (before the change in tax rates).
      2. The effects that a reduction in the effective marginal tax rate on capital will have on saving, investment, and the real interest rate.
   
   b. Provide a brief economic explanation of the changes you showed in your diagram above. Be sure to discuss what happens to saving, investment, and the real interest rate.