

Test 1
Econ322 Section 002
Chappell
February 16, 2009

Name _____

Last 5 Digits _____

Instructions

Fill in your name and last five digits of your student number on this test sheet.

Multiple Choice questions must be answered on the test form. Please fill in your last name and your first name in the spaces provided. Then bubble in the appropriate letters below your name.

You must also fill in the last 5 digits of your student number in the field called "ID Number." Use the 5 columns on the left when you fill in these digits. Then bubble in the appropriate spaces below your number.

Problems and Analytical Questions should be answered directly on the test sheet. You must show your work. If you do not show your work, you may not get full credit even if your numerical answer is correct.

- 7) A variable that tends to move at the same time as aggregate economic activity is called 7) _____
- A) a leading variable.
 - B) an acyclical variable.
 - C) a lagging variable.
 - D) a coincident variable.
- 8) Which of the following is true? 8) _____
- A) Employment is countercyclical and unemployment is coincident with the business cycle.
 - B) Employment and unemployment are both procyclical.
 - C) Employment is procyclical and unemployment is countercyclical.
 - D) Employment and unemployment are both coincident with the business cycle.
- 9) The two main characteristics of a graph of the production function, plotting output (vertical axis) against the quantity of labor input (horizontal axis), are 9) _____
- A) it slopes upward from left to right, and the slope becomes flatter as the input increases.
 - B) it slopes downward from left to right, and the slope becomes flatter as the input increases.
 - C) it slopes upward from left to right, and the slope becomes steeper as the input increases.
 - D) it slopes downward from left to right, and the slope becomes steeper as the input increases.
- 10) An adverse (negative) supply shock would 10) _____
- A) shift the production function down and increase 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 up and increase marginal products at every level of employment.
 - D) shift the production function up and decrease marginal products at every level of employment.
- 11) An increase in the real wage rate will cause 11) _____
- A) the quantity of labor demanded to rise.
 - B) the labor demand curve to shift to the left.
 - C) a movement along the labor demand curve.
 - D) the labor demand curve to shift to the right.

- 17) An increase in expected future output while holding today's output constant would 17) _____
- A) decrease today's desired consumption and decrease desired national saving.
 - B) increase today's desired consumption and decrease desired national saving.
 - C) increase today's desired consumption and increase desired national saving.
 - D) decrease today's desired consumption and increase desired national saving.
- 18) If the substitution effect of the real interest rate on saving is larger than the income effect of the real interest rate on saving, then a rise in the real interest rate leads to a _____ in desired consumption and a _____ in desired saving, for someone who's a lender. 18) _____
- A) rise; rise
 - B) fall; rise
 - C) fall; fall
 - D) rise; fall
- 19) If the government cuts taxes today, issuing debt today and repaying the debt plus interest next year, a rational taxpayer will 19) _____
- A) increase consumption today, before taxes go up next year.
 - B) spend the full amount of the tax cut today and reduce consumption next year.
 - C) leave a smaller gross bequest to her or his heirs.
 - D) increase saving today, leaving consumption unchanged.
- 20) Calculate the user cost of capital of a machine that has a price of \$5000 and depreciates at a rate of 25%, when the expected real interest rate is 5%. 20) _____
- A) \$150
 - B) \$500
 - C) \$5000
 - D) \$1500
- 21) Suppose your company is in equilibrium, with its capital stock at its desired level. A permanent decline in the expected real interest rate now has what effect on your desired capital stock? 21) _____
- A) Lowers it, because the user cost of capital is now higher
 - B) Raises it, because the user cost of capital is now lower
 - C) Raises it, because the future marginal productivity of capital is higher
 - D) Lowers it, because the future marginal productivity of capital is lower
- 22) You are trying to figure out how much capacity to add to your factory. You will increase capacity as long as 22) _____
- A) the expected marginal product of capital is greater than or equal to the expected marginal product of labor.
 - B) the expected marginal product of capital is greater than or equal to the marginal product of capital.
 - C) the expected marginal product of capital is positive.
 - D) the expected marginal product of capital is greater than or equal to the user cost of capital.

- 23) Any change in the economy that raises desired national saving for a given value of the real interest rate will shift the desired national saving curve to _____
- A) the right and increase the real interest rate.
 - B) the left and decrease the real interest rate.
 - C) the left and increase the real interest rate.
 - D) the right and decrease the real interest rate.
- 24) A temporary decrease in government purchases would cause _____
- A) a rightward shift in the saving curve and a rightward shift in the investment curve.
 - B) a rightward shift in the saving curve and a leftward shift in the investment curve.
 - C) a rightward shift in the saving curve, but no shift in the investment curve.
 - D) no shift in the saving curve, but a leftward shift in the investment curve.
- 25) An invention that raises the future marginal product of capital would cause an increase in desired investment, which would cause the investment curve to shift to the _____ and would cause the real interest rate to _____.
- A) left; increase
 - B) left; decrease
 - C) right; decrease
 - D) right; increase

Problems and Analytical Questions

Show all of your work on all problems and analytical questions.

Question 1

Suppose that you purchase a government bond for \$400. One year later, you receive principal and interest totaling \$436. During the year, the consumer price index rose from 150 to 162.

(a) Calculate the nominal rate of interest paid by this bond.

(b) Calculate the real rate of interest paid by this bond.

Question 2

Suppose that the marginal product of labor is:

$$MPN = 200 - 0.5N$$

The aggregate quantity of labor supplied is:

$$N = 300 + 8w$$

In these equations, N refers to the number of workers employed and w is the real wage rate.

(a) What is the equilibrium real wage?

(b) What is the equilibrium level of the number of workers employed?

Question 3

An economy has a full employment level of output, Y , equal to 5000. Government purchases, G , are equal to 1000.

Desired consumption is given by:

$$C^d = 3000 - 2000r + 0.10Y$$

Desired investment is given by:

$$I^d = 1000 - 4000r$$

In the equations above, Y is real output and r is the expected real rate of interest.

(a) What is the equilibrium level of the expected real rate of interest?

(b) What is the equilibrium level of desired consumption?