Name (Please print) __________________________________________________________

Assigned Seat ________________________

Circle your section time:  2:00  3:30

ECO202: PRINCIPLES OF MACROECONOMICS
SECOND MIDTERM EXAM
SPRING 2001
Prof. Bill Even

Directions

1. There are two parts to the exam. The first part consists of 34 multiple choice and short answer questions. These are worth 3 points each. There are 4 bonus questions on the IMF and Becker talk worth 2 points each. All of your answers to the first 37 questions go on the answer sheet attached to the end of the exam. The second part of the exam consists of short essay problems worth 16 points. There is space provided after each question for the second part of the exam. No credit will be given for answers that are misplaced.

2. You may use a calculator.

3. You have until the end of the period to finish the exam. No extra time will be allowed.

4. Academic dishonesty is a serious offense. In the event I found someone behaving in a dishonest manner, I will ask that the maximum penalty allowed by the university be imposed.
1. The interest rate that the Federal Reserve charges a bank for a loan of reserves is called the _____ rate.

2. The interest rate that banks charge each other for a loan of reserves is call the ______ rate.

3. If the Fed wanted to increase the amount of loans available in the banking system, the Fed should
   a. buy government bonds from member banks.
   b. sell government bonds to member banks.

4. If the Fed wanted to increase the amount of loans available in the banking system, the Fed should
   a. increase the required reserve ratio.
   b. decrease the required reserve ratio.

5. The required reserve ratio:
   a. is generally higher for checking account balances than savings account balances.
   b. is generally lower for checking account balances than savings account balances

6. Bank reserves equal:
   a. cash held by the bank
   b. cash held by the bank + bank deposits at the Federal Reserve.
   c. cash held by the bank + bank deposits at the Federal Reserve + government securities.
   d. cash held by the bank + bank deposits at the Federal Reserve + government securities + savings deposits.
To answer the next 6 questions, assume that the banking system starts with the following "base case" balance sheet and that
* the public initially holds $10 billion of cash outside the bank.
* the reserve ratio is 20%
* banks always loan out excess reserves.

**BALANCE SHEET (All figures are in billions of $)**

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<thead>
<tr>
<th>Deposits at Fed</th>
<th>$1000</th>
<th>Demand Dep.'s</th>
<th>$10,000</th>
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<tr>
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<tr>
<td>Cash</td>
<td>$1000</td>
<td></td>
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<td>Govt. Secur.'s</td>
<td>$5000</td>
<td>Owner's Equity</td>
<td>$2000</td>
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<td>$12000</td>
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<td>$12,000</td>
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Based on the above information:
7. The monetary base is $______ billion.
8. M1 is $______ billion.

Suppose that the reserve ratio is reduced from 20 to 10%.
9. Once the banking system has adjusted to this higher reserve ratio loans will be $______ billion and demand deposits will be $______ billion.

10. Starting with the base case balance sheet, if the Fed buys $5 billion of government securities from the bank and the bank system adjusts to the change, demand deposits will be $______ billion and loans will be $______ billion.

11. Starting with the base case balance sheet, if the public withdraws $5 billion of demand deposits as cash and holds the cash outside the bank, after the bank system adjusts to the change, M1 will *[increase, decrease]* by $______ billion.
12. As an economy goes into recession, which form of spending is likely to fall the most?
   a. consumer durables.  
   b. consumer non-durables.  
   c. purchases of capital goods.  
   d. government purchases.

13. Which of the four components of the expenditure side of GDP is largest?
   a. consumption.  
   b. investment  
   c. government purchases.  
   d. net exports.

14. Suppose there are sticky wages in the short run. If there is an increase in aggregate demand, we should expect:
   a. lower real wages and a decrease in unemployment.  
   b. lower real wages and an increase in unemployment.  
   c. higher real wages and a decrease in unemployment.  
   d. higher real wages and an increase in unemployment.

15. Which of the following would be most capable of reducing the level of GDP in an economy?
   a. an increase in military spending by the government  
   b. a personal income tax cut.  
   c. an increase in stock prices.  
   d. a reduction in consumer confidence regarding future job security.
To answer the next 4 questions, refer to the diagram below representing the labor market and the production function for the economy.  (Note: bill. = billions, mill.=millions)

16. Suppose that the price level is 2 and the nominal wage is $10. Based on the above diagram, we should expect unemployment will be:
   a. above the natural rate.
   b. below the natural rate.
   c. equal to the natural rate.

17. If the price level is 2 and nominal wage is $10, in the long run, we would expect:
   a. upward pressure on real wages.
   b. downward pressure on real wages.
   c. neither upward or downward pressure on real wages.

18. Suppose the the economy currently employs 100 million hours of labor. Productivity would be $_____.

19. If there is an increase in labor supply, we would expect:
   a. real wages would fall and productivity would rise.
   b. real wages and productivity would fall.
   c. real wages would rise and productivity would fall.
   d. real wages and productivity would rise.
To answer the next 3 questions, refer to the diagram below and assume that wages are sticky.

Suppose that the economy is at the point A in the above diagram.
20. At A, the economy’s unemployment rate is (above, below) the natural rate and there is (upward, downward) pressure on real wages.
   a. above; upward.   b. above; downward.   c. below; upward.   d. below; downward.

21. If AD is unchanged, in the long run, the economy’s price level will (rise, fall) and the unemployment rate will (rise, fall).
   a. rise; fall   b. rise; rise.   c. fall; rise.   d. fall; fall.
Suppose the economy is initially at the point B in the above diagram and that wages are sticky. Suppose that there is a decrease in government spending and there are no supply effects.

22. The short run effect of this policy is that prices in the U.S. will _____ and the U.S. unemployment rate will ______.
   a. increase; increase. b. increase; fall c. decrease; rise. d. decrease; fall.

23. In the “sticky wage model”, this decrease in government spending will ______ real wages in the short run.
   a. increase; b. decrease; c. not change.

24. The long run effect of this policy (as compared to values at the starting point B) is that employment will ______ and the real wage will _____.
   a. increase; increase. b. increase; decrease. c. not change; not change. d. not change; decrease.
To answer the next 3 questions, suppose that the economy is faced with the short run (SRPC) and long run (LRPC) Phillips curves drawn below.

25. If everyone expects 5 percent inflation and the economy generates only 3% inflation, the unemployment rate will be _______.

26. If everyone expects 4 percent inflation, the Phillips curve will be:
   a. SRPC1
   b. SRPC0
   c. a curve somewhere between SRPC0 and SRPC1.
   d. a curve above SRPC1.

27. Which of the following would cause a shift of the short run Phillips curve from SRPC0 to SRPC1?
   a. a decrease in the expected rate of inflation in the economy.
   b. an increase in the expected rate of inflation in the economy.
   c. a decrease in real interest rates.
   d. an increase in real interest rates.

28. Which of the following was the smallest source of revenues for the federal government in 1998 came from:
   a. Social Security and Medicare taxes.
   b. the personal income tax.
   c. the corporate income tax.
   d. excise taxes.

29. The largest category of expenditures for the federal government in 1998 was:
   a. transfers.
   b. defense.
   c. interest on the debt.
   d. transportation.
30. According to the “majority view”, a larger government budget surplus will lead to
a. lower interest rates and more private investment.
b. lower interest rates and less private investment.
c. higher interest rates and more private investment.
d. higher interest rates and less private investment.

31. In contrast to the “majority view” of deficits, according to the minority view a larger surplus will cause:
a. a decrease in private saving and higher interest rates.
b. an increase in private saving and higher interest rates.
c. a decrease in private saving and no change in interest rates.
d. an increase in private saving and no change in interest rates.

32. The Laffer curve shows:
a. that as tax rates rise, tax revenue falls.
b. that as tax rates rise, tax revenue rises.
c. that as tax rates rise, tax revenue may either rise or fall.
d. none of the above.

33. During an economic expansion, we would expect that government transfers would ____ and
tax revenues would ____.
a. increase; increase. c. decrease; increase.
b. increase; decrease. d. decrease; decrease.

BONUS QUESTIONS.

34. The International Monetary Fund
a. is an organization managed by the United States alone.
b. is an organization with members from the 12 largest industrialized economies.
c. is an organization with members from 183 countries throughout the world.

35. The International Monetary Fund
a. makes loans to countries when they have balance of payments problems.
b. provides technical assistance regarding macroeconomic policies to low income countries seeking help.
c. provides financial assistance to low income countries to assist them in fighting poverty.
d. all of the above.
36. In his speech at Miami University, Gary Becker:
   a. supported the use of school vouchers to increase competition between schools.
   b. argued against the use of school vouchers because of the effect it would have on school segregation.
   c. indicated that the courts have ruled school vouchers for some private schools are unconstitutional because of the separation of church and state.
   d. a and c.
   e. b and c.

37. In his speech at Miami University, Gary Becker:
   a. pointed out that the rate of return to human capital increased over the past 20 years.
   b. pointed out that the rate of return to human capital decreased over the past 20 years.
   c. pointed out that the GDP does not include the production of human capital as investment.
   d. b and c.
   e. a and c.
ESSAY QUESTIONS.

1. (4 points) Give two distinct reasons that a surprise cut in interest rates generally causes an increase in stock prices.

Some possible answers include:
- lower interest rates make bonds relatively less attractive than stocks, thus causing some people to switch to stocks and drive stock prices up.
- lower interest rates may reduce a firm's borrowing costs, thus driving up firm profits and the price people are willing to pay for the stock.
- lower interest rates may increase the demand for a firm's product, thus driving up firm profits and the price people are willing to pay for the stock.

2. (4 points) Quoting an article from CNNFN,
"The U.S. economy grew at a 1 percent annual rate in the fourth quarter, the government said Thursday, a bit slower than previously thought and the weakest performance in 5-1/2 years. .... The report shows just how quickly and deeply the U.S. economy has slowed since last spring, when it was growing at a 5.6 percent annual rate. At that time the Federal Reserve was raising interest rates in a bid to rein growth back to a more sustainable pace that wouldn't spark inflation."

Draw an AD/AS curve and use it to show how increasing interest rates last spring could "rein growth back to a more sustainable pace that wouldn't spark inflation." Be sure to combine your graphic with a written explanation of what the graph shows. LABEL YOUR AXES IN THE DIAGRAM.

If AD is rising in the economy from AD0 to AD1, prices will begin to rise from P0 to P1. By raising interest rates, the Fed can reduce investment and consumption spending. This would lower the growth in AD and cause prices to rise by less.
3. (4 points) Give two distinct reasons that a cut in income tax rates might generate an increase in tax revenue.

*Lower tax rates could generate higher revenue because:*

- the lower rates could induce people to work more and thus there would be more taxable income.
- the lower rates could induce people to cheat less on their taxes and thus there would be more taxable income.
- the lower rates could induce people to shelter less of their income from taxes and thus there would be more taxable income.

4. (4 points) It has often been argued that the Federal Reserve can increase the money supply at a faster rate if a rapid growth in technology improves labor productivity. Use a long run AS and AD curve to explain how technological growth is "anti-inflationary". Be sure provide a written explanation of what your graph shows. LABEL YOUR AXES!

![Long run AS and AD Curve Diagram]

An increase in labor productivity would generate a higher level of output at full employment and thus shift the LRAS curve to the right, as reflected in the shift from LRAS to LRAS'. An increase in LRAS puts downward pressure on prices. This can be seen in the above diagram since the shift from LRAS to LRAS' causes the price level to drop from P0 to P1.
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