Name:
Section No.:
SSN:
GSI:

Economics 102
Introduction to Macroeconomics
Prof. Alan Deardorff

Final Exam

Form 1

April 27, 1998

Instructions

1. Please do not open the exam book until you are told to do so.

2. Place your name, student id, section number and form number on the exam **AND** on the scantron sheet. *This is worth 2 points on the exam.*

3. This exam has 100 points and is 120 minutes long. Multiple choice questions are 2 points each. Choose the best answer from those given. The point values of all other questions are shown in parentheses.   There is no penalty for guessing.

4. Answers to the multiple choice questions in Part I should be marked on the scantron sheet. Answers to Part II should be written on this exam book.

5. Good luck!

GSI	Sections	
Axel	#209 - Thu 1-2:30	
Chul	#208 - Thu 1-2:30	#212 - Thu 2:30-4
Kishen	#206 - Thu 10-11:30	#210 - Thu 8:30-10
Lucie	#202 - Thu 10-11:30	#203 - Thu 11:30-1
Reuel	#204 - Thu 1-2:30	#211 - Thu 2:30-4
Ufuk	#205 - Thu 2:30-4	#207 - Thu 11:30-1

Name, Student Id, Section Number, Form Number on BOTH scantron and exam book (2 pts)

Part 1: Multiple Choice (60 points, 2 each)

Select the **best** answer of those given.

1. In 1998 the U.S. government purchases an Israeli fighter plane produced in 1998. This transaction would be recorded in the U.S. Gross Domestic Product account for 1998 as:

   a. An increase in imports only

   b. An increase in both consumption and imports

   c. An increase in both government purchases and imports

   d. An increase in consumption and a decrease in imports

   e. No change in any of the categories of expenditure

2. A typical consumer in Econland consumes 2 units of X, 1 unit of Y and 4 units of Z each year. The following table gives data on the prices of these commodities:

Good	1992 Price	1993 Price	1994 Price
X	$10	$11	$10
Y	$6	$6	$6
Z	$2	$1	$3

   Using 1992 as a base year the price index would be _____ in 1992, _____ in 1993 and _____ in 1994.

   a. 18; 18; 19

   b. 34; 32; 38

   c. 100; 100; 106

   d. 100; 94; 112

   e. 106; 100; 119

3.   The following are hypothetical data on the CPI and nominal wage for an economy:

Year	CPI	Nominal Wage
1990	100	10
1991	110	12
1992	115	13
1993	135	14

According to this table the **real** wage in 1990 dollars was highest in _____ at _____.

a.   1990; 10

b.   1992; 11.30

c.   1992; 13

d.   1993; 10.37

e.   1993; 14

4.   All of the following will increase output in the long run **except**:

a.   A better quality of education

b.   The discovery of new oil fields

c.   An increase in labor force participation.

d.   A decrease in nominal wages.

e.   The discovery of better technology.

5.   When an unemployed worker stops searching for a job without finding one, the
unemployment rate will ___ and the labor force participation rate will ___.

a.   rise; rise

b.   rise; fall

c.   fall; rise

d.   fall; fall

e.   fall; not change.

6. Assume that no one holds cash, banks do not hold any excess reserves, and the required reserve ratio is 20%. If the Fed sells $100 in bonds then the money supply will _____ by _____.

   a. increase; $20

   b. increase; $500

   c. decrease; $20

   d. decrease; $500

   e. increase; $2000

7. Using the quantity theory of money and holding all other variables constant, in the long run an increase in the Money Supply of x percent causes the price level to

   a. fall by less than x percent

   b. fall by exactly x percent

   c. rise by less than x percent

   d. rise by exactly x percent

   e. rise by more than x percent

8. Suppose the money supply of a country is reduced to half of what it was before. Which of the following will happen in the economy in the long run?

   I.   Price level doubles.
   II.   Price level falls by half.
   III. Nominal exchange rate (e=foreign currency/domestic currency) doubles.
   IV.   Real exchange rate (E=ep/p*) doubles.

   a. I only

   b. II only

   c. I and III

   d. II and III

   e. II, III and IV

9. Suppose that the price of goods in Japan is 2000 Japanese Yen, while the price of goods in the U.S. is $10. The nominal exchange rate is 100 Yen/ $. What is the real exchange rate between Japanese and American goods (Japanese goods per American good)?

    a. 1/2

    b. 2

    c. 200

    d. 100

    e. None of the above

10. Suppose that the price level increased 1% in Germany and 3% in the US, while the dollar depreciated 3% with respect to German mark. Which of the following are correct?

    I.   Inflation is higher in the US.
    II. German goods became cheaper relative to US goods.
    III. Purchasing power parity has been preserved.

    a. I only

    b. II only

    c. III only

    d. I and II

    e. I and III

11. In the long run if there is an increase in desired net exports at every real exchange rate, then there will be a(n) _____ in net foreign investment , a(n) _____ in the real exchange rate, and a(n) _____ in the real interest rate.

    a. increase; appreciation; increase

    b. increase; depreciation; increase

    c. increase; depreciation; decrease

    d. no change; depreciation; no change

    e. no change; appreciation; no change

12. In the long run if there is an increase in desired national savings at every real interest rate, then there will be a(n) _____ in real domestic investment and a(n) _____ in the real exchange rate.

    a. increase; increase

    b. increase; decrease

    c. decrease; decrease

    d. no change; decrease

    e. no change; increase

13. If output in the economy is currently above the natural rate of output as shown in the graph below, and if there is no policy intervention by the government, what would we expect eventually to happen?

    a. The AD shifts right

    b. The AD shifts left

    c. The LRAS shifts left

    d. The SRAS shifts right

    e. The SRAS shifts left
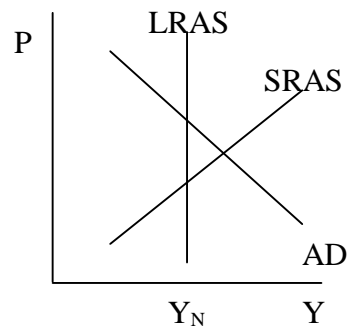
14. Which of the following statements is **true**?

    a. Domestic real investment always equals public saving.

    b. The aggregate demand curve slopes downward because of misperceptions concerning the price level and/or menu costs.

    c. A contractionary fiscal policy reduces production of goods and services, shifting the short run aggregate supply (SRAS) curve to the left.

    d. An increase in the price level shifts the aggregate demand curve to the left.

    e. None of the above.

15. Consider the US economy initially in long-run equilibrium. Due to the benefits of the Roth IRA, babyboomers then decide to save more at every interest rate. What will be the effect on the nominal interest rate in the short run and in the long run?

   a.   fall in the short run but rise in the long run

   b.   fall in both the short run and long run

   c.   rise in both the short run and long run

   d.   rise in the short run but fall in the long run.

   e.   remain unchanged in the short run but fall in the long run

16. All of the following contribute to explaining why the aggregate demand curve is downward sloping **except**:

   a.   An increase in prices reduces real wealth causing consumption to fall.

   b.   An increase in prices reduces the purchasing power of money.

   c.   An increase in prices causes the real interest rate to rise, thereby reducing domestic investment expenditures.

   d.   An increase in prices causes the dollar to appreciate, thereby decreasing net exports.

   e.   An increase in prices causes the (nominal) money supply to fall, thereby causing a fall in investment expenditures.

17. Consider an economy currently in short-run equilibrium at a level of output less than the natural rate of output. All of the following are possible ways the economy could return to equilibrium at the natural rate of output **except**:

   a.   As the economy experiences unemployment above the natural rate, there will be downward pressure on wages.

   b.   The government increases transfers paid for unemployment benefits.

   c.   The Fed buys government bonds.

   d.   The government raises taxes to balance the budget.

   e.   The Fed reduces the reserve requirement.

18.   Which of the following will represent the effect of an increase in Capital (K)?

   a.   Price level increases in the short run.

   b.   A leftward shift of the SRAS curve.

   c.   A fall in the price level in the long run.

   d.   A fall in consumption in the long run.

   e.   An increase in the natural rate of unemployment.

19. In the AD/AS model, which of the following will increase U.S. aggregate demand?

   a.   a severe stock market crash

   b.   an increase in the real interest rate

   c.   an appreciation of the U.S. real exchange rate

   d.   recessions in foreign economies (U.S. major trading partners)

   e.   none of the above

20. An increase in government purchases stimulates output, which increases the demand
    for money and raises interest rates, and this, in turn, lowers investment. This is an
    example of

   a.   the long run effect.

   b.   the wealth effect.

   c.   the crowding out effect.

   d.   the rational expectations adjustment mechanism.

   e.   none of the above.

21. Suppose that the U.S. economy is in equilibrium at Y_N (the natural rate of output), and that the government cuts spending to reduce a budget deficit. If the Fed wishes to stabilize the economy at Y_N, which of the following policies could it use to achieve this result?

    a.   sell bonds to individuals in the open market.

    b.   sell bonds to the government.

    c.   raise the discount rate.

    d.   reduce the required reserve ratio.

    e.   cut the income tax rate.

22. If the Fed purchases bonds, we would expect that, in the short run, the AD curve will shift _____, GDP will _____ and the interest rate will _____.

    a.   right, increase, decrease

    b.   left, increase, increase

    c.   right, decrease, increase

    d.   left, decrease, decrease

    e.   right, increase, not change

23. The Fed lowered the discount rate during the period 1990 to 1992 and then raised the discount rate from 1992 to 1995. With this information it is likely that policy makers were most concerned about _____ in the first period and _____ in the second period.

    a.   inflation, unemployment

    b.   unemployment, inflation

    c.   inflation, trade deficit

    d.   unemployment, trade deficit

    e.   none of the above

24. Suppose the Japanese government were to implement both a fiscal expansion and a monetary contraction that together keep aggregate demand unchanged. We would expect all of the following to happen in response, **except**

    a. the interest rate would rise in Japan

    b. the price level would rise in Japan

    c. net exports of Japan would decrease

    d. investment in Japan would decrease

    e. net exports of other countries would increase

25. Which of the following will cause a rightward movement along the short-run Phillips Curve, as illustrated in the movement from point a to point b in the diagram below?

    a. An oil price hike

    b. A decrease in the reserve requirement

    c. A purchase of bonds by the Fed

    d. A reduction in income tax rates

    e. A decrease in government purchases
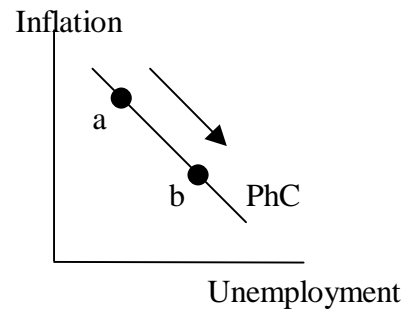
26. Which of the following statements about the Phillips curve is **not** true?

    a. There is no tradeoff between inflation and unemployment in the long run.

    b. An expansionary monetary policy shifts the short run Phillips curve to the left in the short run.

    c. Unemployment can be lower than the natural rate of unemployment at the cost of higher inflation in the short run.

    d. An increase in expected inflation shifts the short run Phillips curve to the right.

    e. A change in the slope of the short run aggregate supply curve affects the slope of the short run Phillips curve.

27. Which of the following would **not** result in an *immediate* shift to the right of the (short run) Phillips Curve?

    a. an increase in the price of oil.

    b. an increase in expected inflation.

    c. an increase in the natural rate of unemployment.

    d. a decrease in the required reserve ratio.

    e. all of the above would result in an immediate shift to the right.

28. Which of the following is a valid reason why the Phillips Curve cannot be used by policy makers as a menu of choices in the long run?

    a. The Phillips Curve cannot be used unless the natural rate of inflation is zero.

    b. The Phillips Curve slopes downward.

    c. The Phillips Curve shifts due to changes in expectations of inflation.

    d. The Phillips Curve is only a long run relationship.

    e. Higher government spending results in higher inflation and lower unemployment.

29. Which of the following is **not** one of the tax reforms mentioned by any of the commentators on revamping the tax code in the *Wall Street Journal* on April 15?

    a. Flat tax

    b. Inflation tax

    c. Consumption tax

    d. Value added tax

    e. Sales tax

30. The *Wall Street Journal* has described plans in Japan for the use of a "stimulus package." Each of the five diagrams below shows, as solid lines, possible positions of Japan's aggregate demand and supply curves (short and long run), together with a dotted arrow indicating a shift in one of these curves. Based on the discussion in the *WSJ*, which diagram comes closest to depicting **both** the current situation of the Japanese economy **and** the change that the stimulus package is intended to bring about?
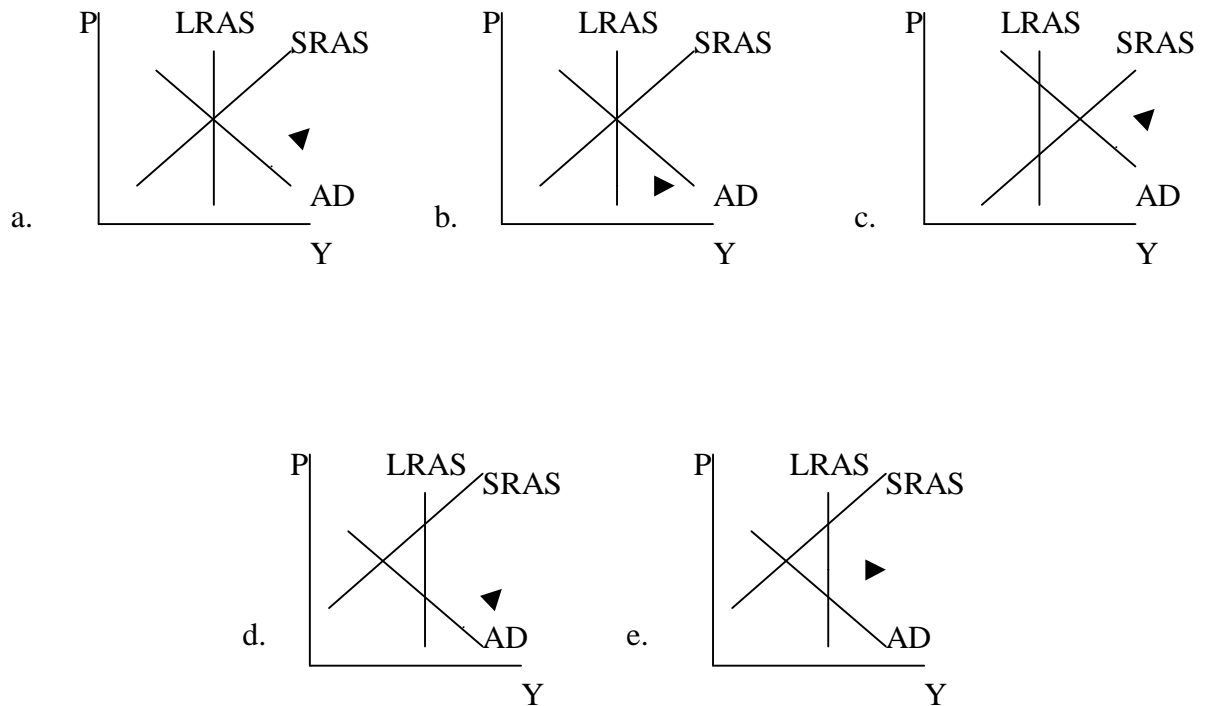
Part II: Short Answer (38 points)

1. (14 points) In this question you will analyze the long run effects of a change in international capital flows, assuming that there is no net effect on real output.

    ➡ There is a decrease in foreign demand for U.S. financial assets at any real interest rate.

    a. (6 points) In the space provided below illustrate the effects of this event using the diagrams of Mankiw's Open Economy Model (including determination of the real interest rate and the real exchange rate). Make sure that you clearly label all axes, all curves, and the direction of change for all variables.

b. (8 points) Give the direction of change for each of the following variables:

      i.   real interest rate _____

      ii.   real exchange rate _____

      iii. national savings _____

      iv. private savings _____

      v.   domestic investment _____

      vi. net foreign investment _____

      vii. net exports _____

      viii. consumption _____

2.   (14 points) For this question you will analyze the effects of a macroeconomic policy
     change using the AS/AD diagram in the short and long run, and also the short run
     MS/MD diagram. Assume for the sake of this question that the change in macro
     policy does not lead to any changes in the factors of productivity in the long run.
     Also, assume that the economy starts in long run equilibrium.

 ➡The government reduces purchases of goods.

     a.   (3 points) Illustrate the short run effects of this policy in an AS/AD diagram.
          Briefly (one sentence or less) explain why you shifted the curve(s) that you did.

     b.   (4 points) Based on the changes you found in part (a), show the effects of this
          policy in the short run diagram of money supply and demand. Again explain
          briefly why you shifted the curve(s) that you did. How does this policy effect the
          real interest rate in the short run?

c. (3 points) Redraw your diagram from part (a) in the space below. Then illustrate
    the long run change(s) that will occur. Briefly explain.

d. (4 points) Comparing the old long run equilibrium (before the change in
    government purchases) to the new long run equilibrium, how have the following
    variables changed:

    i.   The Real interest rate _____

    ii.   Domestic Investment _____

    iii. Net Exports   _____

    iv.   Consumption   _____

3.   In this question you will analyze the effects of certain policy changes using the Phillips curve diagram on the next page. The economy starts in long run equilibrium prior to these changes, at the point labeled S on the short-run Phillips curve PhC_0 with expected rate of inflation $E\pi_0$ and unemployment equal to the natural rate, u_N. Assume that expected inflation is fixed in the short run, that it adjusts toward actual inflation over time, and that it equals actual inflation in the long run.

➡The Congress enacts a tax cut, in the hope of pleasing voters prior to a Congressional election.

a.   (4 points) Illustrate the effects of this tax cut in the diagram, assuming that the Fed does not initially respond with any change in monetary policy. First, in the diagram on the next page, label as PhC_A the short-run Phillips curve appropriate to this new situation, and label as A a point on it where the economy might be after the tax cut. Then indicate, by circling the answers below, what happens to the unemployment rate and the rate of inflation.

       The unemployment rate: rises   falls   stays the same   **[circle one]**

       The rate of inflation: rises   falls   stays the same   **[circle one]**

b.   (2 points) Now show what happens next, as expected inflation adjusts toward the new actual rate of inflation that you found in part (a). Continue to assume no change in monetary policy. Again, identify the new short-run Phillips curve as PhC_B and mark a point B on it where the economy could be.

c.   (2 points) Finally, show what will happen to the economy in the long run, if the Fed now does the best it can to fight inflation while not allowing the unemployment rate to move above its natural rate. Identify as PhC_C a short-run Phillips curve that might prevail in the long run, and a point C that represents the long-run combination of unemployment and inflation that will be approached.

d.   (2 points) Based on your analysis, comparing now to the rates that prevailed before these policies were begun, what effects has the tax cut (and accompanying monetary policies) had on unemployment and inflation in the long run?

       The unemployment rate: rises   falls   stays the same   **[circle one]**

       The rate of inflation: rises   falls   stays the same   **[circle one]**