Economic 100B  
Macroeconomic Analysis  
Professor Steven Wood  
Spring 2008  

Exam #2

Please sign the following oath:

The answers on this test are entirely my own work. I neither gave nor received any aid while taking this test. I will not discuss the questions on this test until after 5:00 p.m. on April 3, 2008.

________________________________________
Signature

Any test turned in without a signature indicating that you have taken this oath will be assigned a grade of zero.

Graph Instructions

When drawing diagrams, the following rules apply:

1. Completely, clearly and accurately label all axes, lines, curves, and equilibrium points.

2. The original diagram and any equilibrium points MUST be drawn in black or pencil.

3. The first change in any variable, curve, or line and any new equilibrium points MUST be drawn in red.

4. The second change in any variable, curve, or line and any new equilibrium points MUST be drawn in blue.

5. The third change in any variable, curve, or line and any new equilibrium points MUST be drawn in green.

Do NOT open this test until instructed to do so.

Good Luck!
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A. Multiple Choice Questions. Circle the letter corresponding to the best answer. (3 points each; total of 30 points.)

1. An increase in the real interest rate would cause an increase in the real demand for money:
   a. No matter what the change in expected inflation.
   b. If expected inflation fell by less than the rise in the real interest rate.
   c. If expected inflation fell by the same amount as the rise in the real interest rate.
   d. If expected inflation fell by more than the rise in the real interest rate.

2. Suppose that a new law imposes a tax on all trades of bonds and stocks. What is the likely effect on money demand?
   a. Money demand declines first, and then rises when inflation increases.
   b. Money demand rises.
   c. The overall effect is ambiguous.
   d. Money demand declines.

3. The IS curve would unambiguously shift to the right if there were:
   a. An increase in both government purchases and corporate taxes.
   b. An increase in both government purchases and the expected future marginal product of capital.
   c. An increase in the expected future marginal product of capital and a decrease in expected future output.
   d. A decrease in both corporate taxes and the expected future marginal product of capital.

4. Suppose that the Federal Reserve reduces the real interest rate to below 2%. This drastic action leads to fear and panic among households and businesses about what information the central bank might have about the economy. We could analyze this by:
   a. A rightward shift of the LM curve.
   b. A leftward shift of the LM curve.
   c. A rightward shift of the LM curve and a leftward shift in the IS curve.
   d. A rightward shift of the IS curve and a leftward shift of the LM curve.

5. An adjustable rate loan is a loan where the interest rate the borrower pays adjusts when the central bank changes interest rates. Compared to the U.S., Britain has a much more substantial proportion of adjustable rate loans. As a result, one would expect:
   a. A steeper IS curve in Britain than in the U.S.
   b. A flatter IS curve in Britain than in the U.S.
   c. A steeper LM curve in Britain than in the U.S.
   d. A flatter LM curve in Britain than in the U.S.
6. In general equilibrium, a decrease in money supply causes the real interest rate to _______ and the price level to _______:
   a. Rise; rise.
   b. Rise; fall.
   c. Fall; fall.
   d. Remain unchanged; fall.

7. If the expected rate of inflation rate rose at the same time the natural rate of unemployment increased, the Phillips curve:
   a. Would shift to the left.
   b. Would shift to the right.
   c. Would not shift.
   d. Might shift left, right, or not shift depending on which effect was larger.

8. The cost of disinflation would be low if:
   a. Expected inflation falls as inflation falls.
   b. Wage and price controls were used.
   c. The Phillips curve was nearly vertical.
   d. The Phillips curve adjusted slowly to changes in inflation.

9. In the DAD-SAS model, an rightward shift of the DAD curve leads to permanently higher inflation because:
   a. Of supply shocks.
   b. Of positive output gaps.
   c. Of negative output gaps.
   d. Inflationary expectations have permanently changed.

10. Standard economic theory says that a recession will have no effect on productivity. An alternative theory suggests that a recession can increase productivity permanently because it forces inefficient firms out of business. If this alternative theory is correct, then an unfavorable DAD shock will cause:
    a. Inflation to fall more quickly and end up lower than under the standard theory.
    b. Inflation to fall more slowly and end up higher than under the standard theory.
    c. Inflation to fall more slowly and end up lower than under the standard theory.
    d. Inflation to fall more quickly and end up higher than under the standard theory.
B. Answer BOTH of the following questions in the space provided. (35 points each, total of 70 points.)

1. **IS – LM Model.** Suppose the economy was initially in general equilibrium, that Ricardian equivalence does not hold, that any adjustment to long-term equilibrium takes 4 years, and that any long-term supply shock effect on full-employment output is greater than any short-term inflation shock effect on output.

The following year a substantial fall in home prices resulted in a significant decline in household wealth. This also caused a substantial increase in the riskiness of the stock market. In response, the government temporarily reduced income taxes for many households while the central bank increased the money supply.

Assume that any fiscal policy effect on output is the same size as any monetary policy effect on output. Further assume that any non-policy effects on output are individually twice as large as any policy effect on output.

a. Based only on this information, use an IS – LM diagram to accurately and clearly show:

i. The economy’s initial general equilibrium position (in black),

ii. The separate effect that each of these changes has on the economy’s IS and LM curves, (sequentially in red, blue, and green), and

iii. The economy’s short-term equilibrium position after these events occur.
b. Provide a brief economic explanation of the changes you shown in your diagram above. Be sure to compare the level of output and the real interest rate between the initial general equilibrium and the new short-term equilibrium that exists after these events occur.

c. How would your answers above be different if complete Ricardian equivalence did hold? Be sure to provide a brief economic explanation.
2. **DAD – SAS Model.** Suppose the U.S. economy was initially in general equilibrium, that Ricardian equivalence does not hold, that any adjustment to long-term equilibrium takes 4 years, that any demand shocks have a larger effect on output than any inflation (or short-term supply) shocks, and that any long-term supply shock effect on full-employment output is smaller than any short-term inflation shock effect on output.

The following year the degree of globalization suddenly increased. As a result, U.S. multinational firms stopped investing in production facilities domestically and started investing in production facilities in China and India. These firms then imported goods and services from China and India to sell to their U.S. customers. Because of much lower production costs abroad, imported goods prices in the U.S. fell substantially. The increase in international competitive pressures also led to an increase in U.S. productivity because U.S. companies needed to compete in the new globalized world.

   a. Based only on this information, use a DAD-SAS diagram to accurately and clearly show:

   i. The U.S. economy’s *initial* general equilibrium (in black),

   ii. The short-run effect on U.S. output and inflation from each of these changes (in red),

   iii. The effects on U.S. output and inflation during the first 2 years of the adjustment process (in blue and green), and

   iv. The U.S. economy’s *final* general equilibrium situation (in black).
b. Provide a brief economic explanation of the changes you showed in your diagram above as well as the adjustment process that the economy undergoes with respect to output and inflation. Be sure to compare the level of output, inflation, and the natural rate of unemployment between the initial and final general equilibrium situations.
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