

1. Assume that the economy of Barrikos is in short-run equilibrium, with its economic data summarized in the table provided. The government budget is balanced, and the capital and financial account (CFA) balance is zero.

|                              |    |
|------------------------------|----|
| Cyclical unemployment rate   | 6% |
| Natural unemployment rate    | 4% |
| Structural unemployment rate | 1% |
| Actual inflation rate        | 3% |
| Expected inflation rate      | 5% |

- A. What is the numerical value of the actual unemployment rate in Barrikos?
- B. Using the relevant numerical values, draw a correctly labeled graph of the short-run and long-run Phillips curves for Barrikos. Indicate the current short-run equilibrium with a point labeled X. Plot the relevant numerical values on the graph.
- C. Based on your graph in part B, identify one specific fiscal policy action that the government of Barrikos would take to move the economy toward long-run equilibrium.
- D. Assume that the fiscal policy action identified in part C is implemented.
- Will the government budget in Barrikos move into surplus, move into deficit, or remain balanced? Explain.
  - Assume there is no change in inflationary expectations. On your graph in part B, show a possible new short-run equilibrium point, labeled Z, that would result from the fiscal policy action identified in part C.
  - Draw a correctly labeled graph of the loanable funds market, and show the effect of the fiscal policy action identified in part C on the real interest rate.
- E. Barrikos has an open economy and a flexible exchange rate. Based solely on the change in the real interest rate in Barrikos shown on your graph in part D (iii), will Barrikos' capital and financial account (CFA) balance move into surplus, move into deficit, or remain the same? Explain.
- F. Based on the change in Barrikos' capital and financial account (CFA) balance identified in part E, what will happen to the international value of Barrikos' currency? Explain.

3. Italy and Japan are trading partners and have flexible exchange rates. The Italian currency is the euro and the Japanese currency is the yen.
- (a) Suppose that the exchange rate between the euro and the yen is 1 euro = 100 yen. What is the price of an Italian coat in yen if the coat costs 120 euros in Italy?
- (b) Assume that real interest rates increase in Japan. Identify what will happen to net financial capital flows between Italy and Japan.
- (c) Draw a correctly labeled graph of the foreign exchange market for the yen and show the effect of the increase in real interest rates in Japan on the value of the yen.
- (d) Based solely on the change in the exchange rate identified in part (c), what will happen to Italy's exports to Japan? Explain.

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**Begin your response to this question at the top of a new page in the separate Free Response booklet and fill in the appropriate circle at the top of each page to indicate the question number.**

**STOP**

**END OF EXAM**

**MACROECONOMICS****Section II****Total Time—1 hour****Reading Period—10 minutes****Writing Period—50 minutes**

**Directions:** You are advised to spend the first 10 minutes reading all of the questions and planning your answers. You will then have 50 minutes to answer all three of the following questions. You may begin writing your responses before the reading period is over. It is suggested that you spend approximately half your time on the first question and divide the remaining time equally between the next two questions. Include correctly labeled diagrams, if useful or required, in explaining your answers. A correctly labeled diagram must have all axes and curves clearly labeled and must show directional changes. Use a pen with black or dark blue ink.

1. Assume the United States economy is in recession.
  - (a) Draw a correctly labeled graph of the long-run aggregate supply, short-run aggregate supply, and aggregate demand curves, and show each of the following.
    - (i) Current price level, labeled  $PL_1$
    - (ii) Current output, labeled  $Y_1$
  - (b) Now assume the euro zone, a major trading partner of the United States, enters into a recession.
    - (i) What will be the effect on United States exports to the euro zone? Explain.
    - (ii) On your graph in part (a), show the effect of the change identified in part (b)(i) on real output in the United States.
    - (iii) What will be the effect of the change identified in part (b)(ii) on unemployment in the United States?
  - (c) Assume the euro zone recession causes a decrease in the demand for United States dollars in the foreign exchange market.
    - (i) Will the euro appreciate, depreciate, or remain unchanged against the dollar? Explain.
    - (ii) Draw a correctly labeled graph of the foreign exchange market for dollars, and show the effect of the decrease in the demand for dollars on the exchange rate for dollars.
  - (d) Assume the United States implements a combination of expansionary fiscal and monetary policies. In the absence of complete crowding out, what will be the effect of these policies on each of the following?
    - (i) Aggregate demand in the United States
    - (ii) The price level in the United States
    - (iii) Interest rates in the United States. Explain.

**MACROECONOMICS****Section II****Total Time—60 minutes****Reading Period—10 minutes****Writing Period—50 minutes**

**Directions:** You are advised to spend the first 10 minutes reading all of the questions and planning your answers. You will then have 50 minutes to answer all three of the following questions. You may begin writing your responses before the reading period is over. It is suggested that you spend approximately half your time on the first question and divide the remaining time equally between the next two questions. Include correctly labeled diagrams, if useful or required, in explaining your answers. A correctly labeled diagram must have all axes and curves clearly labeled and must show directional changes. Use a pen with black or dark blue ink.

1. Assume that the economy of Country X has an actual unemployment rate of 7%, a natural rate of unemployment of 5%, and an inflation rate of 3%.
  - (a) Using the numerical values given above, draw a correctly labeled graph of the short-run and long-run Phillips curves. Label the current short-run equilibrium as point B. Plot the numerical values above on the graph.
  - (b) Assume that the government of Country X takes no policy action to reduce unemployment. In the long run, will each of the following shift to the right, shift to the left, or remain the same?
    - (i) Short-run aggregate supply curve. Explain.
    - (ii) Long-run Phillips curve
  - (c) Identify a fiscal policy action that could be used to reduce the unemployment rate in the short run.
  - (d) Draw a correctly labeled graph of aggregate demand and short-run aggregate supply, and show the impact on the equilibrium price level and real gross domestic product (GDP) of the fiscal policy action identified in part (c).
  - (e) Based on the change in real GDP identified in part (d), will the supply of Country X's currency in the foreign exchange market increase, decrease, or remain the same? Explain.
  - (f) Based on your answer to part (e) and assuming a flexible exchange rate system, will Country X's currency appreciate, depreciate, or remain the same in the foreign exchange market?

2. Country X and Country Y are trading partners, and both produce furnaces and solar panels. The countries can produce the following amounts using equal amounts of resources.

Country X: 6 furnaces or 8 solar panels

Country Y: 6 furnaces or 12 solar panels

- (a) Which country has an absolute advantage in producing solar panels?
  - (b) Calculate the opportunity cost of a furnace in Country Y.
  - (c) Which country has the comparative advantage in producing furnaces? Explain.
  - (d) If the terms of trade were that 2 furnaces are exchanged for 1 solar panel, should Country X produce solar panels domestically or import solar panels from Country Y?
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3. Exchange rates and interest rates are important for macroeconomic decision making.

- (a) How does an increase in Japan's government budget deficit affect each of the following?
  - (i) The real interest rate in the short run in Japan. Explain.
  - (ii) Private domestic investment in plant and equipment in Japan
- (b) Draw a correctly labeled graph of the foreign exchange market for the euro, and show the effect of the change in the real interest rate in Japan from part (a)(i) on each of the following.
  - (i) Supply of euros. Explain.
  - (ii) Yen price of the euro
- (c) To reverse the change in the yen price of the euro identified in part (b)(ii), should the European Central Bank buy or sell euros in the foreign exchange market?

**STOP**

**END OF EXAM**