

1. Assume that the economy of Vortania is in long-run equilibrium.
 - A. Draw a correctly labeled graph of the short-run and long-run Phillips curves for the economy of Vortania, and label the long-run equilibrium point as P.
 - B. Assume that new residential construction projects are being implemented in Vortania.
 - i. Will real output in Vortania increase, decrease, or remain the same in the short run? Explain.
 - ii. Assuming no change in inflationary expectations, on your graph in part A, show the short-run effect of the new residential construction projects on Vortania's economy, labeling the new short-run equilibrium point as S.
 - C. Vortania and Rhodara are trading partners with flexible exchange rates. The currency of Vortania is the Vortanian crown (VTC), and the currency of Rhodara is the Rhodaran mark (RHM). Assume that Vortania's capital and financial account (CFA) balance is zero. Now assume that Vortania imposes new tariffs on imports from Rhodara. Draw a correctly labeled graph of the foreign exchange market for the Vortanian crown, and show the effect of the tariffs on the SUPPLY of the Vortanian crown and the international value of the Vortanian crown.
 - D. Based solely on the change in the international value of the Vortanian crown shown in part C, will Vortania's net exports increase, decrease, or remain the same in the short run?
 - E. Based on the change in net exports identified in part D, what will happen to each of the following in the short run?
 - i. The capital and financial account (CFA) balance in Vortania. Explain.
 - ii. Employment in Vortania
 - F. Assume the central bank of Vortania wants to return the Vortanian crown to its international value before the imposition of the tariffs. Would the central bank buy or sell Vortanian crowns in the foreign exchange market? Explain.

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.
 - i. Will the government budget in Barrikos move into surplus, move into deficit, or remain balanced? Explain.
 - ii. 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.
 - iii. 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.

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 United States economy is currently in a short-run equilibrium with the actual unemployment rate above the natural rate of unemployment.
 - (a) Draw a single correctly labeled graph with both the long-run Phillips curve and short-run Phillips curve. Label the current short-run equilibrium point P.
 - (b) Assuming no policy actions are taken, will the short-run Phillips curve shift to the right (upward), shift to the left (downward), or remain the same in the long run? Explain.
 - (c) If the Federal Reserve Bank wants to lower unemployment, what expansionary open-market operation should it use?
 - (d) How will the open-market operation you identified in part (c) affect each of the following?
 - (i) Federal funds rate. Explain.
 - (ii) Real interest rate in the short run.
 - (e) Given your answer in part (d)(ii), what is the effect on real gross domestic product (GDP) in the short run? Explain.
 - (f) Japan and the United States are major trading partners. Indicate how the change in real GDP you identified in part (e) will affect the demand for the Japanese yen in the foreign exchange market.
 - (g) Draw a correctly labeled graph of the foreign exchange market for the Japanese yen, showing the effect of the change in demand identified in part (f) on the value of the Japanese yen relative to the United States dollar.