

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.
- Will real output in Vortania increase, decrease, or remain the same in the short run? Explain.
  - 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?
- The capital and financial account (CFA) balance in Vortania. Explain.
  - 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 Moneyland is in equilibrium with an actual unemployment rate equal to the natural rate of unemployment.

- (a) Draw a correctly labeled graph of the aggregate demand, short-run aggregate supply, and long-run aggregate supply curves, and show each of the following.
- The current equilibrium real output and price level, labeled  $Y_1$  and  $PL_1$ , respectively
  - The full employment output, labeled  $Y_F$
- (b) Assume that consumer spending in Moneyland decreases from \$110,000 to \$100,000 as a result of a decrease in disposable income in Moneyland from \$135,000 to \$110,000.
- Calculate the marginal propensity to consume in Moneyland. Show your work.
  - Show the short-run effect of the decrease in consumer spending in Moneyland on your graph in part (a), labeling the new equilibrium real output and price level  $Y_2$  and  $PL_2$ , respectively.
- (c) Following the decrease in consumer spending, explain how the economy would adjust in the long run in the absence of any policy actions.
- (d) The central bank of Moneyland is concerned about the short-run effects of the decrease in consumer spending on the broader economy and is considering taking action rather than waiting for the long-run adjustment process. Assuming the banking system in Moneyland has ample reserves, identify a specific monetary policy action the central bank of Moneyland would take to increase consumer spending.
- (e) Draw a correctly labeled graph of the reserve market in Moneyland, and show the effect of the monetary policy action identified in part (d) on the policy rate.
- (f) How would the change in the policy rate shown on your graph in part (e) affect each of the following in Moneyland in the short run?
- The quantity of national savings
  - Unemployment. Explain.

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.

2. Assume that commercial banks must hold a minimum of 20% of their deposits as reserves. Now suppose that the central bank of the country sells \$100,000 of government bonds to commercial banks.
- (a) Calculate the maximum change and state the direction of change in the money supply as a result of the central bank bond sale. Show your work.
- (b) Draw a correctly labeled graph of the money market and show the effect of the change in the money supply identified in part (a) on the nominal interest rate.
- (c) Given the change in the money supply in part (a), if the velocity of money is constant, what will happen to the nominal gross domestic product? Explain.
- (d) Based on the change in the nominal gross domestic product in part (c), what happens to the price level if the real gross domestic product is constant?

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