Chapter 13
Exchange Rates, Business Cycles, and Macroeconomic Policy in the Open Economy

**Multiple Choice Questions**

1. The price of one currency in terms of another is called
   (a) the exchange rate.
   (b) purchasing power parity.
   (c) the terms of trade.
   (d) a currency band.
   Answer: A
   Level of difficulty: 1
   Section: 13.1

2. An exchange-rate system in which the nominal exchange rate is set by the government is known as
   (a) a flexible-exchange-rate system.
   (b) a floating-exchange-rate system.
   (c) a fixed-exchange-rate system.
   (d) an exchange-rate union.
   Answer: C
   Level of difficulty: 1
   Section: 13.1

3. The Bretton Woods system relied on
   (a) a flexible-exchange-rate system.
   (b) a floating-exchange-rate system.
   (c) a fixed-exchange-rate system.
   (d) an exchange-rate union.
   Answer: C
   Level of difficulty: 1
   Section: 13.1
4. The real exchange rate is  
(a) the price of one currency in terms of another.  
(b) the price of domestic goods relative to foreign goods.  
(c) the quantity of gold that can be purchased by one unit of currency.  
(d) the difference in interest rates between two countries.  
Answer: B  
Level of difficulty: 1  
Section: 13.1

5. When the domestic currency strengthens under a fixed-exchange-rate system, this is called  
(a) a depreciation.  
(b) an appreciation.  
(c) a devaluation.  
(d) a revaluation.  
Answer: D  
Level of difficulty: 1  
Section: 13.1

6. Three-wheel cars made in North Edsel are sold for 5000 pound. Four-wheel cars made in South Edsel are sold for 10,000 mark. The real exchange rate between North and South Edsel is four three-wheel cars for three four-wheel cars. The nominal exchange rate between the two countries is  
(a) 0.50 mark/pound.  
(b) 0.66 mark/pound.  
(c) 1.50 mark/pound.  
(d) 2.00 mark/pound.  
Answer: C  
Level of difficulty: 3  
Section: 13.1

7. When the domestic currency buys fewer units of foreign currency, the  
(a) nominal exchange rate rises.  
(b) nominal exchange rate falls.  
(c) real exchange rate rises.  
(d) real exchange rate falls.  
Answer: B  
Level of difficulty: 2  
Section: 13.1

8. From 1980 to 2000, the yen/dollar exchange rate fell from 240 yen/dollar to 102 yen/dollar, while the dollar/pound exchange rate fell from 2.22 dollar/pound to 1.62 dollar/pound. As a result,  
(a) the dollar appreciated relative to the yen, but depreciated relative to the pound.  
(b) the dollar depreciated relative to the yen, but appreciated relative to the pound.  
(c) the dollar appreciated relative to both the yen and the pound.  
(d) the dollar depreciated relative to both the yen and the pound.  
Answer: B  
Level of difficulty: 2  
Section: 13.1
9. A rise in the real exchange rate is called
   (a) a real depreciation.
   (b) a real appreciation.
   (c) a real bargain.
   (d) a real devaluation.
Answer: B
Level of difficulty: 1
Section: 13.1

10. If the real exchange rate rises by 2%, domestic inflation is 3%, and foreign inflation is 1%, what is
    the percent change in the nominal exchange rate?
    (a) 6%
    (b) 4%
    (c) 2%
    (d) 0%
Answer: D
Level of difficulty: 2
Section: 13.1

11. If the nominal exchange rate rises by 5%, domestic inflation is 2%, and foreign inflation is 3%, what
    is the percent change in the real exchange rate?
    (a) 8%
    (b) 6%
    (c) 4%
    (d) 2%
Answer: C
Level of difficulty: 2
Section: 13.1

12. If all countries produce the same good (or the same set of goods) and goods are freely traded among
    countries, so that the real exchange rate equals one, then the relationship between domestic and
    foreign prices and the nominal exchange rate is
    (a) \( P = P_{\text{For}} / e_{\text{nom}} \).
    (b) \( P = e_{\text{nom}} / P_{\text{For}} \).
    (c) \( e_{\text{nom}} = P \times P_{\text{For}} \).
    (d) \( P = P_{\text{For}} \).
Answer: A
Level of difficulty: 1
Section: 13.1
13. The idea that similar foreign and domestic goods, or baskets of goods, should have the same price when priced in terms of the same currency is called
(a) equity.
(b) purchasing power parity.
(c) efficiency.
(d) the tragedy of the commons.
Answer: B
Level of difficulty: 1
Section: 13.1

14. Purchasing power parity means that
(a) \( e_{mm} = P_{for} / P \).
(b) \( P = P_{for} \).
(c) \( P = e_{mm} / P_{for} \).
(d) \( e_{mm} = mc^2 \).
Answer: A
Level of difficulty: 1
Section: 13.1

15. Empirical evidence shows that in the short run, purchasing power parity _____, and in the long run, purchasing power parity _____.
(a) holds; does not hold
(b) holds; holds
(c) does not hold; holds
(d) does not hold; does not hold
Answer: C
Level of difficulty: 1
Section: 13.1

16. Purchasing power parity does not hold in the short to medium run because
(a) exports don’t equal imports.
(b) exchange rates fluctuate too much.
(c) most business cycles are caused by shocks to aggregate demand.
(d) countries produce different goods.
Answer: D
Level of difficulty: 1
Section: 13.1
17. Purchasing power parity does not hold in the short to medium run because
   (a) exports don’t equal imports.
   (b) exchange rates fluctuate too much.
   (c) some goods aren’t internationally traded.
   (d) most business cycles are caused by shocks to aggregate demand.
   Answer: C
   Level of difficulty: 1
   Section: 13.1

18. Suppose purchasing power parity holds. If the price level in the United States is 100 dollar per good and the price level in Japan is 250 yen per good, then the nominal exchange rate is ______ yen per dollar.
   (a) 0.25
   (b) 0.4
   (c) 2.5
   (d) 4.0
   Answer: C
   Level of difficulty: 2
   Section: 13.1

19. Relative purchasing power parity occurs when
   (a) purchasing power parity holds between every two countries.
   (b) purchasing power parity only holds in recessions.
   (c) the nominal exchange rate is constant.
   (d) the real exchange rate is constant.
   Answer: D
   Level of difficulty: 1
   Section: 13.1

20. When the rate of appreciation of the nominal exchange rate equals the foreign inflation rate minus the domestic inflation rate, we say there is
   (a) relative purchasing power parity.
   (b) purchasing power parity.
   (c) a Phillips curve.
   (d) an aggregate supply shock.
   Answer: A
   Level of difficulty: 1
   Section: 13.1

21. When the dollar rises relative to other currencies,
   (a) foreign goods are more expensive in terms of dollars.
   (b) foreign currency is more expensive in terms of dollars.
   (c) U.S. goods become more expensive to foreigners.
   (d) foreign currency is more expensive in the United States, but foreign goods are cheaper.
   Answer: C
   Level of difficulty: 2
   Section: 13.1
22. Suppose the euro/yen exchange rate falls while the dollar/yen exchange rate rises. What happens to the price of goods imported into Japan?
   (a) European goods become more expensive while U.S. goods become cheaper.
   (b) European goods become cheaper while U.S. goods become more expensive.
   (c) Both European and U.S. goods become more expensive.
   (d) Both European and U.S. goods become cheaper.
   Answer: A
   Level of difficulty: 2
   Section: 13.1

23. A depreciation of the dollar causes
   (a) a decrease in U.S. exports.
   (b) an increase in U.S. imports.
   (c) an increase in the prices of U.S. imports.
   (d) an increase in the prices of U.S. exports.
   Answer: C
   Level of difficulty: 1
   Section: 13.1

24. When the euro falls in value relative to other currencies, then
   (a) goods imported into Europe rise in price.
   (b) European exports rise in price.
   (c) neither European exports nor imports rise in price.
   (d) both European exports and imports rise in price.
   Answer: A
   Level of difficulty: 1
   Section: 13.1

25. Suppose the dollar/euro exchange rate falls. Then
   (a) French firms will import more from the United States into France.
   (b) U.S. firms will export less to France.
   (c) the dollar is less valuable relative to the euro.
   (d) the euro is more valuable relative to the dollar.
   Answer: B
   Level of difficulty: 2
   Section: 13.1

26. There’s been a real depreciation of the dollar over the past month. In the long run, you would expect the quantity of
   (a) American imports to fall and the quantity of American exports to fall.
   (b) American imports to rise and the quantity of American exports to rise.
   (c) American imports to fall and the quantity of American exports to rise.
   (d) American imports to rise and the quantity of American exports to fall.
   Answer: C
   Level of difficulty: 1
   Section: 13.1
27. The J curve implies that a real depreciation will cause
(a) the nominal exchange rate to appreciate in the short run and depreciate in the long run.
(b) the nominal exchange rate to depreciate in the short run and appreciate in the long run.
(c) net exports to fall in the short run and rise in the long run.
(d) net exports to rise in the short run and fall in the long run.
Answer: C
Level of difficulty: 1
Section: 13.1

28. The rapid depreciation in the dollar from 1985 to 1987 caused net exports during this period
(a) to rise as the J curve would have predicted, but with a short lag (less than one year).
(b) to rise as the J curve would have predicted, but with a long lag (more than one year).
(c) to fall as the J curve would have predicted, but with a short lag (less than one year).
(d) to fall as the J curve would have predicted, but with a long lag (more than one year).
Answer: B
Level of difficulty: 2
Section: 13.1

29. According to the “beachhead effect,” in order to undo the effects of a strong-dollar period, the real value of the dollar
(a) must fall to at least half of its value before appreciation of the dollar began.
(b) must fall to the value it had before appreciation of the dollar began.
(c) must fall to a much lower level than it had before appreciation of the dollar began.
(d) must actually appreciate before it depreciates to undo the effects of a strong-dollar period.
Answer: C
Level of difficulty: 1
Section: 13.1

30. Under a flexible-exchange-rate system, an increase in the demand for Japanese yen would cause the U.S. dollar/Japanese yen exchange rate to
(a) fall.
(b) rise.
(c) remain unchanged, because supply also increases.
(d) remain unchanged, because the exchange rate is set by the central bank.
Answer: B
Level of difficulty: 2
Section: 13.2

31. In a flexible-exchange-rate system, the value of a currency is determined by
(a) the government.
(b) the intersection of the IS and LM curves.
(c) the demand and supply for the currency in the foreign exchange market.
(d) Swiss gnomes.
Answer: C
Level of difficulty: 1
Section: 13.2
32. An increase in domestic output would cause a _____ in net exports and a _____ in the exchange rate.
   (a) rise; rise
   (b) rise; fall
   (c) fall; rise
   (d) fall; fall
   Answer: D
   Level of difficulty: 2
   Section: 13.2

33. A rise in the domestic real interest rate would cause a _____ in net exports and a _____ in the exchange rate.
   (a) rise; rise
   (b) rise; fall
   (c) fall; rise
   (d) fall; fall
   Answer: C
   Level of difficulty: 2
   Section: 13.2

34. Which of the following changes would cause American net exports to increase?
   (a) An increase in the real value of the dollar
   (b) An increase in American income
   (c) An increase in foreign income
   (d) A shift in demand by American consumers away from domestically produced goods
   Answer: C
   Level of difficulty: 1
   Section: 13.2

35. Which of the following changes would cause American net exports to decrease?
   (a) A decrease in the real value of the dollar
   (b) A decrease in American income
   (c) An increase in foreign income
   (d) A shift in demand by American consumers away from domestically produced goods
   Answer: D
   Level of difficulty: 1
   Section: 13.2

36. The U.S. real interest rate rises relative to the British real interest rate. British net exports _____ and the British exchange rate _____.
   (a) increase; rises
   (b) increase; falls
   (c) decrease; rises
   (d) decrease; falls
   Answer: B
   Level of difficulty: 2
   Section: 13.2
37. Goods market equilibrium in the open economy occurs when
   (a) desired saving equals desired investment.
   (b) output equals desired consumption plus desired investment plus government spending.
   (c) desired consumption equals desired investment.
   (d) desired saving minus desired investment equals net exports.
   Answer: D
   Level of difficulty: 1
   Section: 13.3

38. In an open economy, a decrease in net exports because of reduced demand for domestic products by foreigners should cause the domestic real interest rate to _____ and should cause desired saving minus desired investment to _____.
   (a) rise; rise
   (b) rise; fall
   (c) fall; rise
   (d) fall; fall
   Answer: D
   Level of difficulty: 3
   Section: 13.3

39. A decrease in foreign output would cause the domestic country’s net exports to _____ and cause the domestic country’s IS curve to _____.
   (a) rise; shift up
   (b) rise; shift down
   (c) fall; shift up
   (d) fall; shift down
   Answer: D
   Level of difficulty: 2
   Section: 13.3

40. A decrease in the foreign real interest rate would cause the domestic country’s net exports to _____ and cause the domestic country’s IS curve to _____.
   (a) rise; shift up
   (b) rise; shift down
   (c) fall; shift up
   (d) fall; shift down
   Answer: D
   Level of difficulty: 2
   Section: 13.3

41. A shift in demand toward the home country’s goods would _____ the domestic real interest rate and _____ net desired saving (desired saving less desired investment) in the economy.
   (a) lower; increase
   (b) lower; decrease
   (c) raise; increase
   (d) raise; decrease
   Answer: C
   Level of difficulty: 2
   Section: 13.3
42. A temporary decrease in government purchases would _____ the domestic real interest rate and _____ net desired saving (desired saving less desired investment) in the economy.
   (a) lower; increase
   (b) lower; decrease
   (c) raise; increase
   (d) raise; decrease
   Answer: A
   Level of difficulty: 2
   Section: 13.4

43. In a Keynesian model, a temporary increase in government purchases would cause output to _____ and the domestic real interest rate to _____, in the short run.
   (a) remain unchanged; increase
   (b) remain unchanged; decrease
   (c) increase; increase
   (d) increase; decrease
   Answer: C
   Level of difficulty: 1
   Section: 13.4

44. In the short run in the Keynesian model, an increase in the domestic money supply would cause domestic output to _____ and the domestic real interest rate to _____.
   (a) rise; rise
   (b) fall; rise
   (c) rise; fall
   (d) fall; fall
   Answer: C
   Level of difficulty: 2
   Section: 13.4

45. An increase in the American money supply would cause the value of the dollar to _____ and net American exports to _____ in the short run using a Keynesian model.
   (a) rise; rise
   (b) fall; rise
   (c) rise; fall
   (d) fall; fall
   Answer: D
   Level of difficulty: 2
   Section: 13.4
46. The Federal Reserve has just purchased bonds in the market, carrying out open market operations. In the short run in the Keynesian model, this would cause the foreign real interest rate to _____ and foreign output to _____.
(a) increase; increase
(b) increase; decrease
(c) decrease; increase
(d) decrease; decrease
Answer: A
Level of difficulty: 2
Section: 13.4

47. According to the classical model, an increase in the American nominal money supply would cause the nominal exchange rate to _____ and the real exchange rate to _____.
(a) depreciate; appreciate
(b) appreciate; depreciate
(c) depreciate; remain unchanged
(d) appreciate; remain unchanged
Answer: C
Level of difficulty: 1
Section: 13.4

48. Suppose Japan is currently running a current account surplus. The most effective way of eliminating this current account surplus would be to temporarily _____ government purchases and _____ the domestic money supply.
(a) increase; increase
(b) increase; decrease
(c) decrease; increase
(d) decrease; decrease
Answer: A
Level of difficulty: 3
Section: 13.4

49. You have just noticed that the dollar appreciated and you suspect that the American government was behind this change. Which would you choose as the most likely cause of this appreciation in the real exchange rate?
(a) An increase in the money supply
(b) A decrease in the money supply
(c) A temporary increase in government purchases
(d) A temporary decrease in taxes
Answer: B
Level of difficulty: 3
Section: 13.4
50. To encourage more investment, Mexico has lowered its tax rates to reduce the user cost of capital. Argentina is unable to pay back its foreign debts, causing its expected future marginal product of capital to fall. Mexico’s real exchange rate will _____ and its net exports will _____.
   (a) depreciate; fall
   (b) appreciate; rise
   (c) depreciate; rise
   (d) appreciate; fall
   Answer: D
   Level of difficulty: 3
   Section: 13.4

51. Under a system of fixed exchange rates, what happens if a country’s currency is overvalued?
   (a) The central bank loses official reserve assets.
   (b) The central bank gains official reserve assets.
   (c) The currency appreciates.
   (d) The exchange rate rises.
   Answer: A
   Level of difficulty: 1
   Section: 13.5

52. Under a system of fixed exchange rates, what happens if a country’s currency is undervalued?
   (a) The central bank loses official reserve assets.
   (b) The central bank gains official reserve assets.
   (c) The currency depreciates.
   (d) The exchange rate falls.
   Answer: B
   Level of difficulty: 1
   Section: 13.5

53. If a country has an overvaluation problem, the best solution is to
   (a) increase the official rate.
   (b) buy less of its currency in the foreign exchange market.
   (c) sell more of its currency in the foreign exchange market.
   (d) decrease the money supply.
   Answer: D
   Level of difficulty: 1
   Section: 13.5

54. International businesses like a fixed-exchange-rate system because
   (a) they like large swings in currency values when devaluation or revaluation occur.
   (b) they profit by speculating on devaluation or revaluation.
   (c) they can plan better if they know what the exchange rate will be.
   (d) fixed exchange rates are economically efficient.
   Answer: C
   Level of difficulty: 1
   Section: 13.5
55. When a group of countries agree to share a common currency, they are said to have formed a
   (a) currency union.
   (b) welfare state.
   (c) monetary alliance.
   (d) monetary cartel.
   Answer: A
   Level of difficulty: 1
   Section: 13.5

56. Currency unions are rare because
   (a) they’re to no one’s advantage.
   (b) countries are reluctant to give up having their own currencies.
   (c) having flexible exchange rates has the same benefits and none of the costs.
   (d) speculative attacks are likely to occur.
   Answer: B
   Level of difficulty: 1
   Section: 13.5

57. Compared to a system of fixed exchange rates, currency unions are beneficial because they
   (a) allow exchange rates to float.
   (b) allow every country to have an independent monetary policy.
   (c) reduce the costs of trading goods and assets.
   (d) restrict what countries can do with fiscal policy.
   Answer: C
   Level of difficulty: 1
   Section: 13.5

58. Compared with a system of fixed exchange rates, currency unions are beneficial because they
   (a) restrict what countries can do with fiscal policy.
   (b) allow exchange rates to float.
   (c) allow every country to have an independent monetary policy.
   (d) eliminate the possibility of speculative attacks.
   Answer: D
   Level of difficulty: 1
   Section: 13.5

59. Monetary policy in the European Monetary Union is determined by
   (a) the Bundesbank.
   (b) the European Union Senate.
   (c) the European Central Bank.
   (d) None of the above
   Answer: C
   Level of difficulty: 1
   Section: 13.5
60. The Maastricht treaty was the first step toward
(a) having free trade between Russia and China.
(b) European monetary union.
(c) gaining credibility for monetary policy.
(d) reducing the costs of disinflation.
Answer: B
Level of difficulty: 1
Section: 13.5

■ Essay Questions

1. The nominal exchange rate is 15 crowns per florin, the domestic price level is 6 florins/bottle, and the foreign price level is 2 crowns/bushel.
   (a) What is the real exchange rate?
   (b) What is the real exchange rate in the foreign country?
   (c) If the domestic price level rises to 8 florins/bottle, what must the nominal exchange rate become if the real exchange rate remains unchanged?

Answers:
   (a) 45 bushels/bottle
   (b) 1/45 bottle/bushel
   (c) 11.25 crowns per florin
Level of difficulty: 2
Section: 13.1

2. Suppose the real exchange rate is 10, the domestic price level is 8, and the foreign price level is 4.
   (a) What is the nominal exchange rate?
   (b) Suppose the real exchange rate rises by 10%, the inflation rate in the domestic country is 6%, and the inflation rate in the foreign country is 4%. By what percentage does the nominal exchange rate change?
   (c) Suppose the nominal exchange rate rises by 5%, the real exchange rate rises by 8%, and domestic inflation is 3%. What is the foreign inflation rate?

Answers:
   (a) 5
   (b) 8%
   (c) 0%
Level of difficulty: 2
Section: 13.1

3. What is purchasing power parity? Why might it not hold?

Answers: Purchasing power parity is the idea that similar foreign and domestic goods, or baskets of goods, should have the same price when priced in terms of the same currency. Purchasing power parity may not hold because countries produce different baskets of goods and services, because some goods and services aren’t traded internationally, and because transportation and legal barriers may prevent prices of traded goods from being equalized.

Level of difficulty: 1
Section: 13.1
4. What happens to the exchange rate and net exports in each of the following cases?
   (a) The foreign real interest rate falls.
   (b) Foreign output rises.
   (c) Foreign demand for domestic goods rises.
   (d) Domestic output rises.
   (e) The domestic real interest rate falls.

   **Answers:**
   (a) Exchange rate rises, net exports fall.
   (b) Exchange rate rises, net exports rise.
   (c) Exchange rate rises, net exports rise.
   (d) Exchange rate falls, net exports fall.
   (e) Exchange rate falls, net exports rise.

   Level of difficulty: 2
   Section: 13.2

5. Describe the effects of a rise in the domestic real interest rate on the exchange rate and on both domestic and foreign net exports.

   **Answers:** The rise in the domestic real interest rate leads to a rise in the demand for domestic assets, raising the exchange rate. The rise in the exchange rate reduces domestic net exports and raises foreign net exports.

   Level of difficulty: 2
   Section: 13.2

6. Describe the effects of contractionary fiscal policy by the domestic government on output, the real interest rate, and net exports in both the domestic and foreign country, using a Keynesian model.

   **Answers:** Domestic country: output falls, real interest rate falls, and net exports rise.
   
   Foreign country: output falls, real interest rate falls, and net exports fall.

   Level of difficulty: 2
   Section: 13.4

7. Describe the effects of contractionary monetary policy by the domestic central bank on output, the real interest rate, and net exports in both the domestic and foreign country, using a Keynesian model in the short run. What happens in the long run?

   **Answers:** Domestic country: output falls, real interest rate rises, and net exports rise.
   
   Foreign country: output falls, real interest rate falls, and net exports fall.
   
   There are no real effects in the long run.

   Level of difficulty: 2
   Section: 13.4
8. A classical economy is described by the equations

\[
AD: \quad Y = 1000 + 100M/P \\
AS: \quad \bar{Y} = 1500
\]

The real exchange rate is 3 bushels/bottle, the domestic nominal money supply is 30 florins, and the foreign price level is 8 crowns/bushel.

(a) What is the nominal exchange rate?
(b) If the government wants to maintain an official nominal exchange rate of 6 crowns/florin, what must the nominal money supply be?

Answers:
(a) 4 crowns/florin
(b) 20 florins

Level of difficulty: 2
Section: 13.5

9. (a) What happens to the fundamental value of a country’s exchange rate when it raises its money supply in a fixed-exchange-rate system? Does this make the currency overvalued or undervalued if originally the official rate equaled the fundamental value?
(b) What happens to the fundamental value of a country’s exchange rate when the foreign country raises its money supply? Does this make the currency overvalued or undervalued if originally the official rate equaled the fundamental value?
(c) So, if a country wants to maintain its official rate equal to its fundamental value, what must it do when the foreign country raises its money supply? What happens to inflation?

Answers:
(a) Fundamental value falls below the official rate, so the currency is overvalued.
(b) Fundamental value increases above the official rate, so the currency is undervalued.
(c) The country must raise its money supply. This leads to inflation worldwide.

Level of difficulty: 3
Section: 13.5

10. Describe how the euro was created. What are the benefits of the monetary union? What are the costs?

Answers: The European countries unified their currencies to reduce the costs of trading goods and assets. This is beneficial as it reduces transactions costs and because the European economy would rival that of the United States in scope and wealth. The potential costs are that there may be political conflict if countries disagree about monetary policy, or if inflation isn’t as stable or low as some countries desire.

Level of difficulty: 1
Section: 13.5