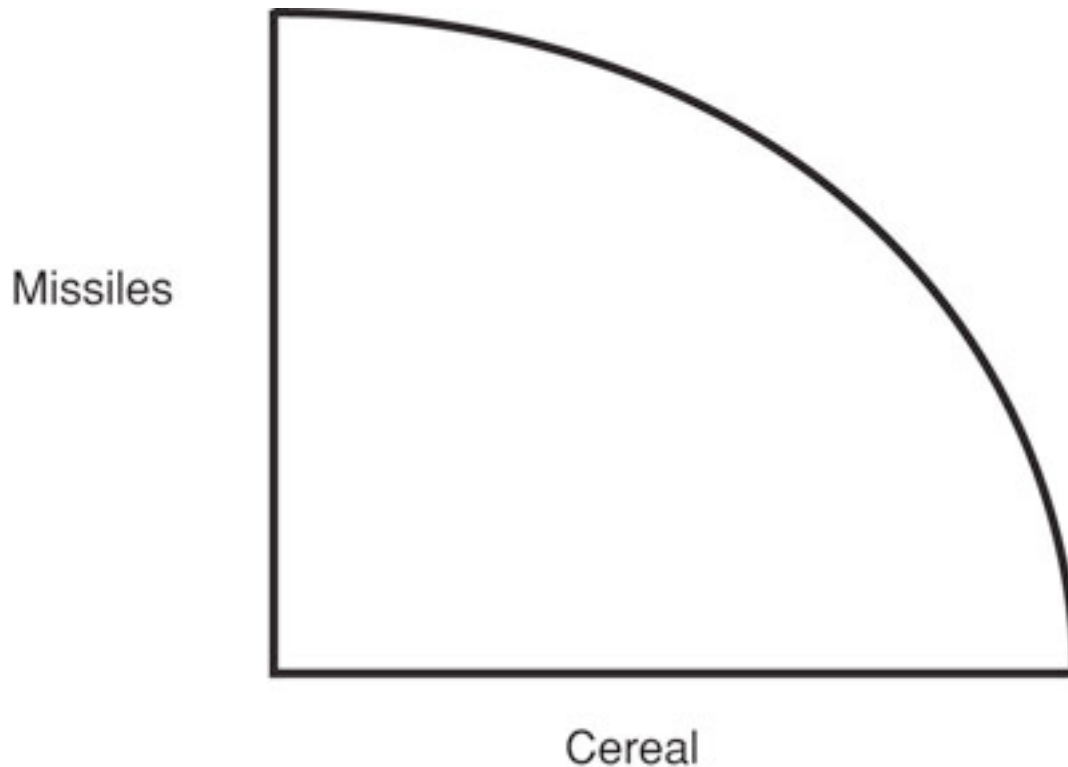


AP MACROECONOMICS Test 1



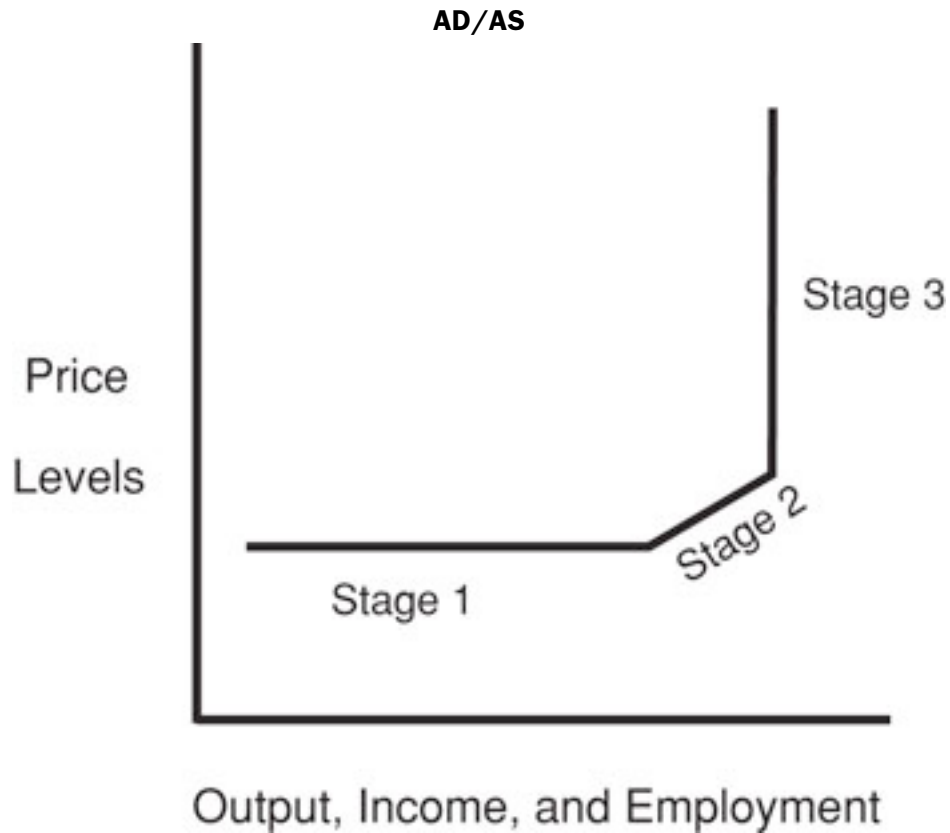
1. Which of the following would cause the production possibilities curve shown above to shift outward?
 - (A) Reopening a cereal plant that had been closed
 - (B) Rehiring laid-off cereal workers
 - (C) Using machinery for missile production instead of cereal production
 - (D) Using machinery for cereal production instead of missile production
 - (E) Developing a more efficient cereal-making process

2. Which of the following is an example of an economic trade-off?
 - (A) A 12% rate of return on an investment
 - (B) Reducing unemployment while increasing economic growth
 - (C) Increasing the national savings rate while investment spending rises
 - (D) Spending less on education programs due to an increase in military spending
 - (E) Buying milk and cookies

3. Because resources are _____, trade-offs between alternative uses of those resources must be made.
- (A) available
 - (B) scarce
 - (C) sold in markets
 - (D) tangible
 - (E) unlimited
4. Which of the following best describes “efficiency”?
- (A) Spending the least amount of money for an item
 - (B) Obtaining the largest possible output from limited resources
 - (C) Production of the items that are most in demand
 - (D) An equal distribution of scarce resources
 - (E) Lowering the price on your goods so that you sell more goods
5. Suppose two countries are each capable of individually producing two given products. Instead, each specializes by producing the good for which it has a comparative advantage and then trades with the other country. Which of the following is most likely to result?
- (A) Both countries will benefit from increased production of goods.
 - (B) Unemployment will increase in one country and decrease in the other.
 - (C) There will be more efficient production in one country but less efficient production in the other.
 - (D) The two countries will become more independent of each other.
 - (E) Both countries will be harmed by increased productive inefficiency.
6. Another way to define GDP is as the market value of
- (A) the resource inputs used in the production of output in an economy.
 - (B) all final goods and services produced in an economy in a given year.
 - (C) all final and intermediate goods and services produced in a given year.
 - (D) national income earned by consumers, producers, and exporters.
 - (E) national income earned by producers and consumers.

7. The economic indicator that measures the price change over time, using a fixed market basket of typical goods and services, is the
- (A) producer price index.
 - (B) consumer sentiment index.
 - (C) GDP.
 - (D) CPI.
 - (E) national income index.
8. From an economist's perspective, which of the following is not considered to be investment (I_g)?
- (A) Purchasing new computers for the accounting office
 - (B) Building a new plant facility
 - (C) Buying back outstanding shares of company stock
 - (D) Building an office complex
 - (E) Increases in the warehouse inventories of finished product
9. The expenditures or output approach to measuring GDP does so by totaling
- (A) spending by employees and businesses on rent, resource inputs, and consumption of fixed capital.
 - (B) payments to employees, rents, interest, dividends, undistributed corporate profits, proprietors' income, indirect business taxes paid, consumption of fixed capital, and net foreign factor income earned in the United States.
 - (C) payments to employees, rents, interest, dividends, corporate profits, proprietors' income, and indirect business taxes, and subtracting the consumption of fixed capital.
 - (D) spending for consumption, investment, net exports, and government purchases.
 - (E) the total spending for consumption and government purchases, but subtracting public and private transfer payments.
10. During the expansion phase of the business cycle
- (A) the inflation rate decreases, but productive capacity increases.
 - (B) the inflation rate and productive capacity decrease.
 - (C) employment, income, and output decrease.

- (D) employment increases, but output decreases.
 - (E) employment, income, and output increase.
11. A headline reads: “Auto sales decline and the steel industry suffers a slump; unemployment rises.” This type of unemployment can best be characterized in economic terms as
- (A) frictional.
 - (B) structural.
 - (C) total unemployment.
 - (D) cyclical.
 - (E) natural.
12. Kevin has lost his job in an automobile plant because the company began using robots for welding on the assembly line. Kevin plans to go to technical school to learn how to repair microcomputers. The type of unemployment Kevin is faced with is
- (A) frictional.
 - (B) structural.
 - (C) educational.
 - (D) cyclical.
 - (E) natural.
13. At the full employment unemployment rate, there is/are only
- (A) cyclical and frictional unemployment.
 - (B) downward pressure on wage rates.
 - (C) frictional and structural unemployment.
 - (D) cyclical unemployment.
 - (E) undercounted “discouraged workers” unemployment.



14. Refer to the preceding diagram. A decrease in total spending in stage 2 will
- (A) decrease the price level, but not employment and output.
 - (B) decrease employment and output, but not the price level.
 - (C) decrease employment, output, and the price level.
 - (D) increase employment, output, and the price level.
 - (E) cause unemployment and inflation.
15. Refer to the preceding diagram. An increase in total spending in stage 3 will increase
- (A) output and decrease price levels.
 - (B) employment and the price level.
 - (C) output and the price level.
 - (D) the price level, but not output or employment.
 - (E) the price level and decrease the natural rate of unemployment.

16. An increase in transportation costs will most likely cause the price level and real GDP to change in which of the following ways?

	Price Level	Real GDP
(A)	Increase	Increase
(B)	Increase	Decrease
(C)	Increase	No change
(D)	Decrease	Increase
(E)	Decrease	Decrease

17. Select the statement most associated with Classical economists that Keynes disagreed with.

- (A) A market economy eventually results in monopolies that damage the standard of living.
- (B) Market economies function best when government makes supply decisions.
- (C) Market economies are generally free from price and output cycles.
- (D) A market economy is self-correcting and thus will eventually recover from recession without intervention.
- (E) The factor market underpays workers without minimum wage laws.

18. Based on the circular flow model,

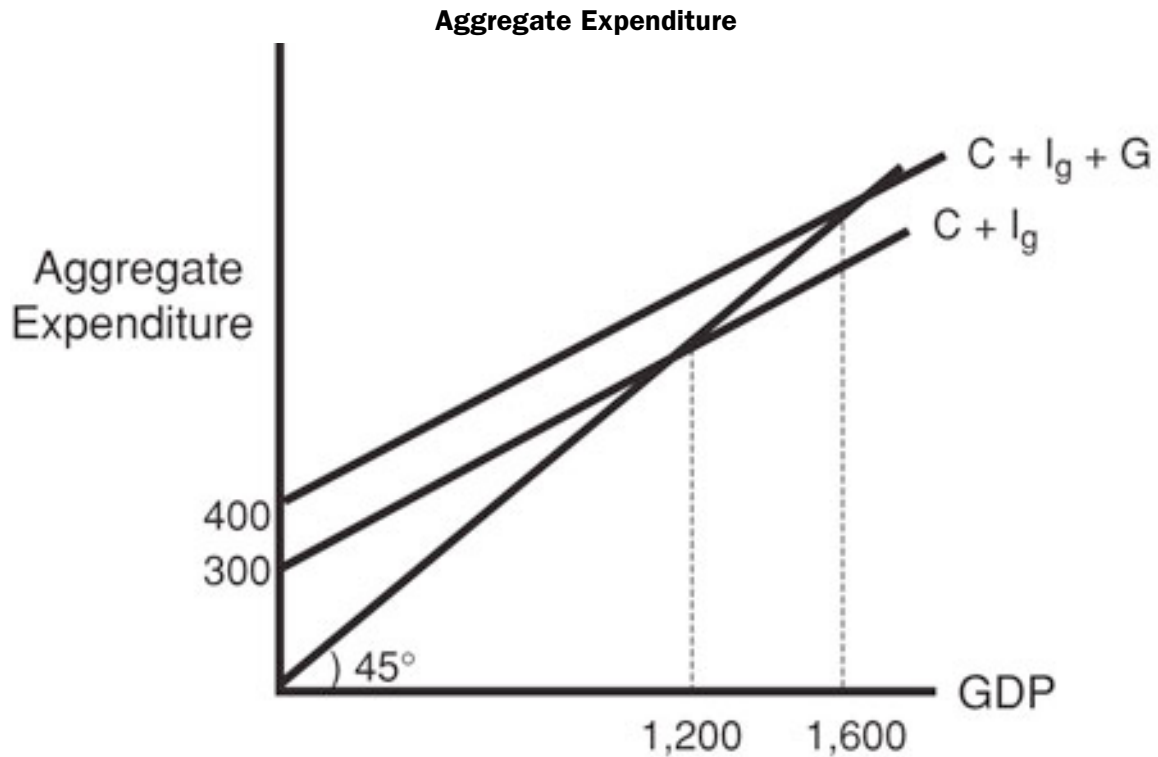
- (A) government plays no role in the flow of goods and services.
- (B) households are suppliers in the product market and consumers are suppliers in the factor market.
- (C) firms purchase goods in the product market.
- (D) households expend their income in the product market and earn their income in the factor market.
- (E) firms incur costs in the product market and obtain revenue in the factor market.

19. In the aggregate expenditures model, the primary determinant of the level of consumption and saving in the economy is the

- (A) inflation rate.
- (B) level of investment.
- (C) level of income.

- (D) level of prices.
 - (E) interest rate.
20. Consumers purchase bonds, rather than continuing to hold currency, because they believe that interest rates will decline in the future. Such purchases point to which of the following scenarios?
- (A) There has been an upward shift in consumers' marginal propensity to consume.
 - (B) Consumers expect little need for cash.
 - (C) Consumers expect the value of currency to appreciate in the short term.
 - (D) Consumers speculate that currency will depreciate in the future.
 - (E) Bonds will drop in value relative to currency.
21. In a closed private economy, if the interest rate falls, businesses expect expansion of the economy, and as a result the investment demand also rises, then the
- (A) expenditure equilibrium will shift downward and GDP will decline.
 - (B) investment schedule and aggregate expenditures schedule will shift upward.
 - (C) investment and aggregate expenditures schedules will shift downward with greater unemployment.
 - (D) investment schedule will shift upward and the aggregate expenditures schedule will shift downward, and output will decrease.
 - (E) investment schedule will shift downward and the aggregate expenditures schedule will shift upward.
22. In a closed economy with no government, an increase in autonomous investment of \$25 billion increases domestic output from \$600 billion to \$700 billion. The marginal propensity to consume is
- (A) 0.25 and the multiplier is 4.
 - (B) 0.50 and the multiplier is 2.
 - (C) 0.75 and the multiplier is 4.
 - (D) 0.80 and the multiplier is 5.
 - (E) the MPS is 0.75 with a multiplier of 4.

23. Other things being equal, if U.S. steel exports fell, the economy would see a(n)
- (A) increase in domestic aggregate expenditures and the equilibrium level of GDP.
 - (B) decrease in domestic aggregate expenditures and the equilibrium level of GDP.
 - (C) decrease in government spending and a decrease in GDP.
 - (D) zero effect on domestic GDP, because imports will offset the change in exports.
 - (E) decrease in the marginal propensity to balance trade.
24. Leakages from the income-expenditure stream are
- (A) consumption, saving, and transfers.
 - (B) investment, spending, and transfer payments.
 - (C) saving, taxes, and transfers.
 - (D) saving, taxes, and imports.
 - (E) imports, taxes, and transfers.
25. If a lump-sum tax of \$40 billion is levied and the MPS is 0.25, then the saving schedule will shift
- (A) upward by \$10 billion.
 - (B) downward by \$160 billion.
 - (C) upward by \$25 billion.
 - (D) downward by \$10 billion.
 - (E) downward by \$25 billion.
26. If a government raises its expenditure by \$25 billion and at the same time levies a lump-sum tax of \$25 billion, the net effect on the economy will be to
- (A) increase GDP by \$25 billion.
 - (B) increase GDP by less than \$100 billion, because the multiplier is 4.
 - (C) increase GDP by more than \$50 billion.
 - (D) increase GDP by \$50 billion.
 - (E) make no change in GDP.



27. Refer to the preceding graph. The size of the multiplier associated with changes in government spending in this economy is
- (A) 2.50.
 - (B) 3.00.
 - (C) 5.00.
 - (D) 6.67.
 - (E) 4.00.
28. Refer to the preceding graph. If this economy is a closed economy without a government sector, the level of GDP would be
- (A) \$1,200 billion.
 - (B) \$200 billion.
 - (C) \$300 billion.
 - (D) \$1,600 billion.
 - (E) \$500 billion.

29. As Americans increase their purchase of foreign goods and services, the aggregate expenditure relationship to the aggregate demand and supply model would indicate that a
- (A) fall in our aggregate expenditure will cause domestic price level to decrease, aggregate demand to fall, and GDP to decline.
 - (B) fall in our domestic price level will decrease our imports and increase our exports, thereby reducing the net exports component of aggregate demand.
 - (C) fall in our domestic price levels will decrease our imports and reduce unemployment.
 - (D) rise in our domestic price level will increase our imports and reduce our exports, thereby reducing the net exports component of aggregate demand.
 - (E) rise in our domestic price level will decrease our imports and increase our exports, thereby reducing the net exports component of aggregate demand.

30. Which combination of factors would most likely increase aggregate demand?

- (A) A decrease in consumer debt and an increase in the value of the dollar
- (B) An increase in consumer debt and a decrease in foreign demand for products
- (C) An increase in the money supply and a decrease in interest rates
- (D) An increase in personal taxes and a decrease in government spending
- (E) An increase in business taxes and a decrease in corporate earnings

31. If the economy is operating in stage 2, the intermediate range, of aggregate supply, and business investment decreases, then price level, income, and employment would most likely change in which of the following ways?

	Price Level	Income	Employment
(A)	Increase	Increase	Increase
(B)	Increase	Increase	Decrease
(C)	Increase	Decrease	Increase
(D)	Decrease	Increase	Decrease
(E)	Decrease	Decrease	Decrease

32. Which would most likely shift aggregate supply to the right?

- (A) An increase in corporate income tax

- (B) A decrease in the value of the dollar and an increase in the prices of imported products
- (C) An increase in minimum wage
- (D) A decrease in business subsidies
- (E) Improvements in technology
33. If firms experienced a large and rapid unplanned decrease in inventories, we would anticipate
- (A) a reduction in workforce.
- (B) a decrease in imports.
- (C) an increase in inflation.
- (D) a decline in income.
- (E) a decrease in price levels.
34. In the short run, an expansionary fiscal policy will cause aggregate demand, employment, and price level to react in which of the following combinations?
- | | Aggregate Demand | Employment | Price Level |
|-----|------------------|------------|-------------|
| (A) | Decrease | Decrease | Decrease |
| (B) | Increase | Increase | Increase |
| (C) | No Change | No Change | Decrease |
| (D) | Increase | Decrease | Increase |
| (E) | Decrease | Increase | No change |
35. If aggregate demand increases and, as a result, the price level increases, while real domestic output and employment are unaffected, we can assume that
- (A) aggregate demand intersects aggregate supply in the intermediate range of the aggregate supply curve.
- (B) aggregate demand intersects aggregate supply in the vertical range of the aggregate supply curve.
- (C) aggregate demand intersects aggregate supply in the horizontal range of the aggregate supply curve.
- (D) aggregate supply increases to accommodate the change in aggregate demand.

- (E) aggregate supply has shifted inward due to foreign supply shock.
36. The economy experiences an increase in the price level, a decrease in real domestic output, and increased unemployment. Which of the following is the most likely cause?
- (A) Increased productivity
 - (B) Increased input prices
 - (C) Decreased excess capacity
 - (D) Reduced government regulations
 - (E) Increased exports
37. Which of the following would a Keynesian recommend to combat high inflation?
- (A) No change in taxation and increased subsidy
 - (B) Increased taxation and increased government spending
 - (C) Increased taxation and decreased government spending
 - (D) Decreased taxation and no change in government spending
 - (E) No change in taxation and increased government spending
38. An economy is experiencing hyperinflation. The government wants to reduce household consumption by \$48 billion to reduce inflationary pressure. The MPC is 0.75. Which of the following government actions would achieve its objective?
- (A) Increasing spending by \$48 billion
 - (B) Raising taxes by \$6 billion
 - (C) Increasing spending by \$9 billion and raising taxes by \$48 billion
 - (D) Raising taxes by \$12 billion
 - (E) Raising taxes by \$16 billion
39. Automatic stabilizers reduce the severity of business cycle fluctuations because they produce changes in the government's budget that
- (A) result in long-run balanced budgets.
 - (B) result in constant growth of GDP.
 - (C) help offset changes in employment.

- (D) produce a cyclically adjusted budget.
 - (E) produce a full employment budget.
40. One of the criticisms of fiscal policy as a means of regulating the state of the economy is that an “operational lag” occurs between the
- (A) beginning of a recession or inflationary period and the time that it takes for government to become aware of it.
 - (B) levying of a tax and collection of the revenue.
 - (C) time the need for fiscal action is recognized and the time that legislation is passed.
 - (D) time that fiscal action is taken and the time that action has an impact on output, employment, and the price level.
 - (E) time that taxes have an impact on output, employment, and the price level and the time by which it can be determined if the tax policy is effective.
41. The crowding-out effect suggests that
- (A) an increase in household consumption is always at the expense of saving.
 - (B) any increase in MPC effects a reduction in MPS.
 - (C) government budget spending increases close a recessionary gap.
 - (D) government deficit spending may raise the interest rate and thereby reduce investment.
 - (E) government borrowing increases the money supply and encourages business investment, thereby reducing household borrowing.
42. The United States is experiencing inflation, so Congress adopts a contractionary fiscal policy to reduce inflation. The net export effect suggests that net exports would
- (A) decrease due to the resulting decrease in interest rates, thus decreasing aggregate demand and partially reinforcing the fiscal policy.
 - (B) increase, as the decline in the value of the dollar would increase exports.
 - (C) decrease, thus increasing aggregate demand and partially offsetting the fiscal policy.
 - (D) increase, thus decreasing aggregate demand and partially reinforcing the fiscal policy.

- (E) increase as imports decreased, thus increasing aggregate demand and partially offsetting the fiscal policy.
43. A senator calls for legislation reducing corporate taxes, to increase investment and promote economic growth. This senator would most likely be advocating a
- (A) contractionary fiscal policy.
 - (B) reduction in automatic stabilizers.
 - (C) nondiscretionary fiscal policy.
 - (D) supply-side fiscal policy.
 - (E) growth in aggregate demand through fiscal policy.
44. Other things being equal, the international value of foreign currencies will decrease against the U.S. dollar (\$) if
- (A) U.S. citizens increase spending on foreign goods.
 - (B) U.S. businesses reduce exports.
 - (C) the U.S. Federal Reserve lowers real interest rates.
 - (D) the number of foreign tourists to Disney World decreases.
 - (E) foreigners increase deposits into U.S. money markets.



45. Refer to the preceding graph. The domestic opportunity cost of producing 200 cellular phones in the United States is 100 bushels of wheat. In Brazil, the domestic opportunity cost of producing 200 cellular phones is 50 bushels of wheat. In this case,
- (A) Brazil has a comparative advantage in the production of wheat.
 - (B) 1 cellular phone costs the United States only 0.25 bushels of wheat.
 - (C) the United States has a comparative advantage in the production of cellular phones.
 - (D) mutual gains from trade can be obtained if the United States imports cellular phones from Brazil and Brazil imports wheat from the United States.
 - (E) mutual gains from trade can be obtained if the United States imports wheat from Brazil and Brazil imports televisions from the United States.

Commodity Mix	A	B	C	D	E	F
Banana	0	50	100	150	200	250
Commodity Mix	A	B	C	D	E	F
Banana	0	100	200	300	400	500

Nigeria's Production Possibilities						
Commodity Mix	A	B	C	D	E	F
Cocoa	750	600	450	300	150	0
Banana	0	50	100	150	200	250
Colombia's Production Possibilities						
Commodity Mix	A	B	C	D	E	F
Cocoa	2,500	2,000	1,500	1,000	500	0
Banana	0	100	200	300	400	500

46. Based upon the preceding data, the terms of trade will be
- (A) Nigeria wanting at least 2 units of cocoa for 1 unit of banana.
 - (B) no trade; neither country has a comparative advantage.
 - (C) more than 4 units of cocoa for 1 unit of banana.
 - (D) Nigeria wanting more than 5 units of banana for 1 unit of cocoa and Colombia wanting more than 3 units of banana for 1 unit of cocoa.
 - (E) Nigeria wanting more than 3 units of cocoa for 1 unit of banana and Colombia wanting more than 1 unit of banana for every 5 units of cocoa.
47. The U.S. FTC finds Japan guilty of “dumping” steel in the U.S. market. Select the description of a protective tariff response.
- (A) The United States places an excise tax on products that are not produced domestically in order to raise revenues for the steel industry.
 - (B) The United States places an excise tax on Japanese steel producers, putting them at a competitive disadvantage in selling steel in U.S. domestic markets.
 - (C) The United States sets a specific maximum amount of steel that may be imported, in a given period of time, to protect U.S. producers of steel.
 - (D) U.S. steel firms would no longer be allowed to export steel products to Japan.
 - (E) The United States restricts the issuance of licenses for imported products and sets unreasonable standards for quality or safety in order to restrict imports of steel and protect domestic markets.

48. An inflow of investment funds into the United States from overseas is likely to result from
- (A) expectations for reduced U.S. economic growth.
 - (B) a growing instability in the U.S. dollar value.
 - (C) a growing belief among investors that the U.S. dollar is overvalued.
 - (D) a rise in U.S. interest rates relative to world interest rates.
 - (E) an increase in the U.S. inflation rate.
49. The Open Market Committee of the Federal Reserve System (the Fed) is the committee that
- (A) administers FDIC and FSLIC for member banks.
 - (B) provides advice on banking policy to the Fed.
 - (C) monitors regulatory banking laws for member banks.
 - (D) sets policy on the sale and purchase of government bonds by the Fed.
 - (E) follows the actions and operations of financial markets to keep them open and competitive.
50. If bond prices increase, then their
- (A) interest rate will decrease.
 - (B) interest rate will increase.
 - (C) transactions demand for money will decrease.
 - (D) transactions demand for money will increase.
 - (E) asset demand has decreased.
51. A demand deposit at a commercial bank is
- (A) an asset to a bank and a liability to the Fed.
 - (B) a liability to the depositor and an asset to the bank.
 - (C) a liability to both the depositor and the bank.
 - (D) an asset to the depositor and a liability to the bank.
 - (E) an asset to both the depositor and the bank.

52. An individual deposits \$10,000 in a commercial bank. The bank is required to hold 20 percent of all deposits on reserve at the regional Federal Reserve Bank. The deposit increases the loan capacity of the bank by
- (A) \$11,000.
 - (B) \$10,800.
 - (C) \$9,600.
 - (D) \$8,000.
 - (E) \$6,000.
53. If the required reserve ratio is 20 percent, the effective monetary multiplier for the banking system will be
- (A) 2.
 - (B) 3.
 - (C) 4.
 - (D) 5.
 - (E) 6.
54. The primary mission of monetary policy is to assist the economy in achieving
- (A) a rapid pace of economic growth.
 - (B) an interest rate that constantly supports business investment.
 - (C) a money supply based on the gold standard.
 - (D) price stability, economic growth, and full employment level of total output.
 - (E) a balanced budget consistent with full employment.
55. If the Fed buys government bonds from commercial banks in the open market,
- (A) the Fed gives the bonds to the commercial banks, and they pay for them by writing checks that increase their reserves at the Fed.
 - (B) the banks give the bonds to the Fed, which then increases the reserves of the banks, thereby encouraging higher interest rates.
 - (C) the Fed gives the bonds to the commercial banks, and they pay for them by writing checks that decrease their reserves at the Fed.

- (D) commercial banks give the bonds to the Fed, which then pays for them by increasing the reserves of the commercial banks, thereby encouraging lower interest rates.
- (E) commercial banks give the bonds to the Fed, and it pays for them by decreasing the money supply.

56. If the Fed sells government bonds to the public in the open market,

- (A) the Fed gives the bonds to the public; the public pays for the bonds by writing a check that (when cleared) will increase the money supply.
- (B) the Fed gives the bonds to the public; the public pays for them by writing checks that (when cleared) will decrease commercial bank reserves at the Fed, raising interest rates.
- (C) banks buy the bonds from people, increasing the money supply and lowering interest rates.
- (D) the public gives the bonds to the Fed; the Fed pays for the bonds by check, which (when deposited) decreases the money supply.
- (E) the public gives the bonds to the Fed; the Fed pays for the bonds by check, which (when deposited) increases interest rates.

57. Assume that the required reserve ratio for commercial banks is 20 percent. If the Federal Reserve Banks buy \$5 billion in government securities from commercial banks, the lending ability of the banking system will

- (A) decrease by \$9 billion.
- (B) increase by \$9 billion.
- (C) increase by \$15 billion.
- (D) increase by \$20 billion.
- (E) increase by \$25 billion.



58. Refer to the preceding models, in which the numbers after the AD_1 , AD_2 , and AD_3 labels indicate the level of investment spending associated with each AD curve. All dollar amounts are in billions. The interest rate and the level of investment spending in the economy are at point E on the investment demand curve. To achieve noninflationary, full employment output in the economy, the monetary authorities should
- (A) decrease AD by increasing the interest rate from 2 to 4 percent.
 - (B) decrease AD by increasing the interest rate from 4 to 6 percent.
 - (C) increase AD by decreasing the interest rate from 4 to 2 percent.
 - (D) increase the level of investment spending from \$100 billion to \$150 billion.
 - (E) increase interest rates to 8% and reduce AD_3 to AD_2 .
59. Which of the following is the most accurate description of events when monetary authorities increase the size of commercial banks' excess reserves?
- (A) A fall in interest rates decreases the money supply, causing an increase in investment spending, output, and employment.
 - (B) The money supply is increased, which decreases the interest rate and causes investment spending, output, and employment to increase.
 - (C) A rise in interest rates increases the money supply, causing a decrease in investment spending, output, and employment.
 - (D) The money supply is decreased, which increases the interest rate and causes investment spending, output, and employment to decrease.

- (E) Bond prices fall, interest rates increase, investment spending rises, and employment and GDP increase.
60. Assume that demand-pull inflationary pressure is a growing problem for the economy. In response to this threat, the Federal Reserve decides to pursue a policy to reduce the inflationary pressure. At the same time, Congress decides to eliminate a budget surplus. Which set of policy changes by the Fed and Congress would result, thereby offsetting each other?
- | Monetary Policy | Fiscal Policy |
|-----------------------------------|----------------------|
| (A) Selling government securities | Lowering taxes |
| (B) Buying government securities | Increasing spending |
| (C) Selling government bonds | Raising taxes |
| (D) Buying government bonds | Increasing subsidies |
| (E) Selling government bonds | Increasing spending |

SECTION II

1. Suppose that the U.S. economy is at full employment and experiencing hyperinflation.
 - (a) Draw a correctly labeled aggregate demand and aggregate supply model, depicting the price level, GDP, income, and employment equilibrium of the current economy.
 - (b) Congress, which has been allowing a large budget deficit in prior years, reacts to the current state of the economy by maintaining the current spending level while raising personal income taxes to an amount equal to the amount spent. What reaction would an economist express regarding this balanced-budget proposal? Justify your answer.
 - (c) Explain how this increase in household income tax would, in the short run, affect each of the following sectors:
 - (i) Household consumption
 - (ii) Business gross investment
 - (iii) Imports
 - (iv) Exports

- (d) Given the same economic conditions, describe the action the Federal Reserve would take. Use the aggregate demand/aggregate supply model to analyze the impact of this policy on each of the following areas:
 - (i) Interest rates
 - (ii) Business gross investment
 - (iii) Output and employment
- 2. The First National Bank of Buffalo sells \$10,000 worth of government bonds to the Federal Reserve Bank of New York. The reserve ratio requirement is 20 percent.
 - (a) Explain the impact of this transaction on each of the following:
 - (i) What is the maximum amount of new loans that First National Bank can issue?
 - (ii) What will be the total impact on the nation's money supply?
 - (iii) How do banking actions of this nature affect interest rates?
 - (b) List two actions in the economy that might reduce the impact of First National's transaction.
- 3. Assume that the United States and Germany are the only two countries engaged in trade, with a floating exchange currency rate (dollars and euros), and that they trade two goods, beef and beer.
 - (a) If the United States demand for beer increased while the German demand for beef remained constant, how would each of the following be affected?
 - (i) Demand for euros
 - (ii) Trade value of the dollar
 - (b) If interest rates, at the same time, decreased in the United States while German rates remained constant, how would that change affect each of the following?
 - (i) Trade value of the dollar
 - (ii) Supply of dollars in the currency exchange market

Answer Key

Section I

- 1. (E)
- 2. (D)
- 3. (B)

4. (B)
5. (A)
6. (B)
7. (D)
8. (C)
9. (D)
10. (E)
11. (D)
12. (B)
13. (C)
14. (C)
15. (D)
16. (B)
17. (D)
18. (D)
19. (C)
20. (D)
21. (B)
22. (C)
23. (B)
24. (D)
25. (D)
26. (A)
27. (E)
28. (A)
29. (A)
30. (C)
31. (E)
32. (E)
33. (C)
34. (B)
35. (B)
36. (B)
37. (C)
38. (E)
39. (C)
40. (D)
41. (D)
42. (E)
43. (D)
44. (E)
45. (D)

- 46. (E)
- 47. (B)
- 48. (D)
- 49. (D)
- 50. (A)
- 51. (D)
- 52. (D)
- 53. (D)
- 54. (D)
- 55. (D)
- 56. (B)
- 57. (E)
- 58. (E)
- 59. (B)
- 60. (A)

DETAILED EXPLANATIONS

1. **(E)** Answers A through D all involve movements along or a return to the original PPF curve. Remember that if the curve is to shift outward, economic growth must take place. This means that an increase in one or all of the factors of production must occur (increased raw materials, labor, investment goods, or innovation). If cereal making is more efficient, the relationship between inputs of production and the resulting output has improved. You are getting increased cereal production with less input.
2. **(D)** An economic trade-off occurs when you have two g/s whose inputs are interchangeable and limited. Therefore, there must be a reduction in the output of one g/s (education) in order to increase the output of the alternative g/s (military). A government's resources are limited; it can devote those resources, in various combinations, to construction of military goods or to education goods.
3. **(B)** Scarcity, by definition, describes the nature of our existence. This simply means that resources are finite when compared to humanity's infinite needs and wants. Scarcity is the driving force behind the creation of all economic systems.
4. **(B)** Specialization—producing the g/s that you are most efficient in—applies both to the individual and to nations as a whole. Division of labor results in greater overall production, thereby increasing the general wealth. Comparative advantage reveals the economic truth that even though one producer may have superior efficiency when compared

to another, both benefit from increased productivity when the less efficient producer focuses on its strength, while the more efficient producer specializes in the alternative good.

5. **(A)** Comparative advantage demonstrates the efficiency that results from specialization. As individuals or nations specialize, their output relative to their input increases. Therefore, the total combined output for these countries increases. This increase in goods increases the standard of living of both nations.

6. **(B)** GDP is the total dollar value of all finished goods and services sold in the product market. This is done so that there is no double-counting.

7. **(D)** The consumer price index (CPI) measures the price change in a fixed basket of goods and services. The prices are compared to those of an established base (index) year; it does not measure from the previous year. This allows more accurate inflation measurement over long periods of time. One of the main criticisms of this tool is that it overestimates inflation, in part because the basket is fixed so that new g/s are excluded and original g/s that may no longer be in demand are retained.

8. **(C)** In the formula to determine GDP, $C + I_g + G + X_n$, I_g represents the gross investment in capital goods by a firm. Therefore, any expenditure that adds to the future productivity of the firm is classified as an investment. Repurchasing stock in the firm does not alter productivity, so it is not an expenditure on investment.

9. **(D)** One way to determine GDP is by summing all the expenditures on output. The same data can be compiled by adding all the components of income (in the end, they should be equal). On the expenditure side of GDP, all final goods and services are bought by four sectors. The three domestic sectors are: household consumption (C), business investment (I), and government spending (G). The other component of expenditure is foreign (X) purchase of U.S. g/s minus U.S. purchases of foreign product or exports minus imports (X_n). Therefore, the expenditure formula for determining GDP is $C + I_g + G + X_n$.

10. **(E)** The expansion phase of the business cycle means, by definition, that the output of the economy (GDP) is increasing. By the very nature of GDP, an increase must mean that employment of inputs is also increasing; as labor is a main input, its employment is also increasing. Since output equals income, if output is increasing then income must also be increasing. Price levels will also begin to rise at some point (stage 2 intermediate). However, if the economy is in deep recession (stage 1 horizontal), output can increase without price rise, as we are using so few inputs that increasing opportunity costs have not begun to have an effect on cost and thus price.

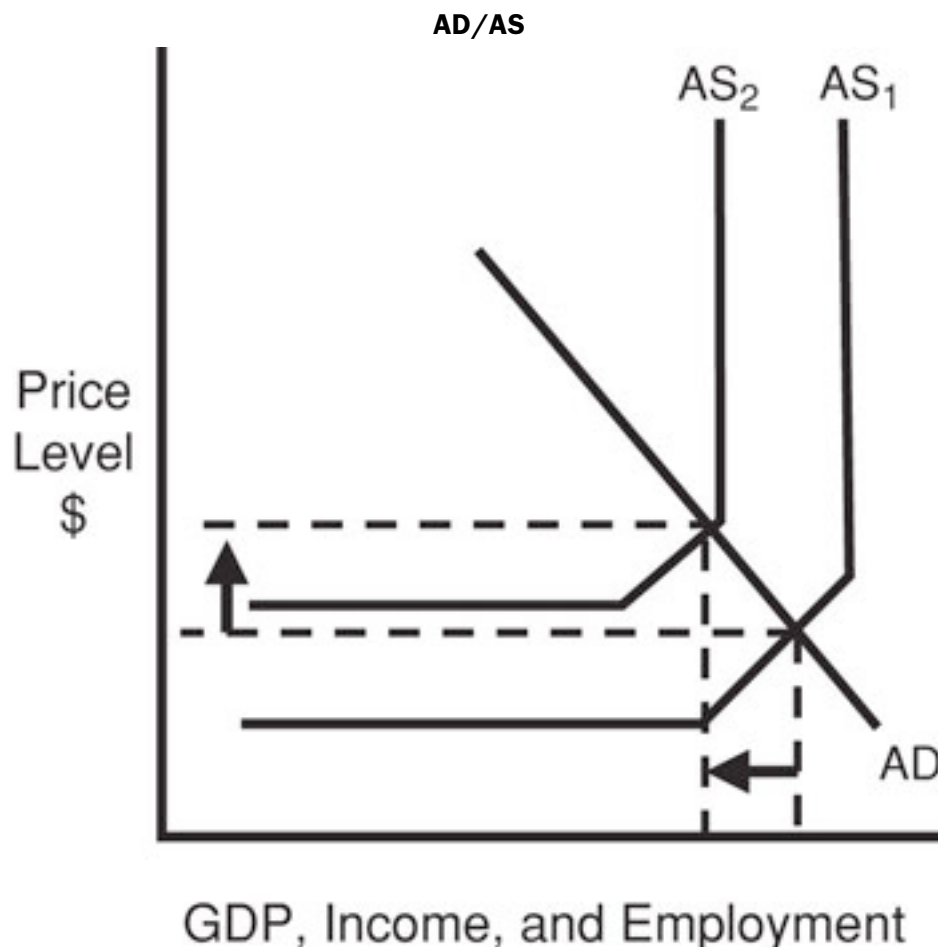
11. **(D)** A decrease in aggregate demand results in a change in aggregate supply quantity. If consumption of autos declines, then the quantity of steel supplied, as an intermediate good, would also decline. If output declines, then jobs and income must also decline.

12. **(B)** Structural unemployment, by definition, is the result of a mismatch of skills or location. This is a mismatch of job skills, as the robot has replaced the worker.

13. **(C)** Full employment does not mean 100 percent employment. By the very definition of structural and frictional unemployment, there will always be unemployed people. Therefore, to determine the unemployment due to a downturn in the business cycle, it is necessary to discount the structurally and frictionally unemployed.

14. **(C)** The second stage of the AS curve, as one moves rightward, represents diminishing marginal productivity and increasing opportunity costs that lead to rising price levels. If we reduce the aggregate demand, the AD curve moves inward, resulting in lower output, employment, and disposable income. These changes would result in overall lower price levels. Also, as fewer resource inputs are required by producers, marginal productivity would actually increase, cost per unit would decline, and a lower price would be charged.

15. **(D)** The vertical stage 3 of AS represents an economy that has reached maximum productivity. All resource inputs are being used. Therefore, any increase in aggregate demand cannot be met with increased production. Because demand has increased while supply has remained fixed, a higher price level results. This is sometimes referred to as “hyperinflation,” as the rise in prices in this environment can be very large.

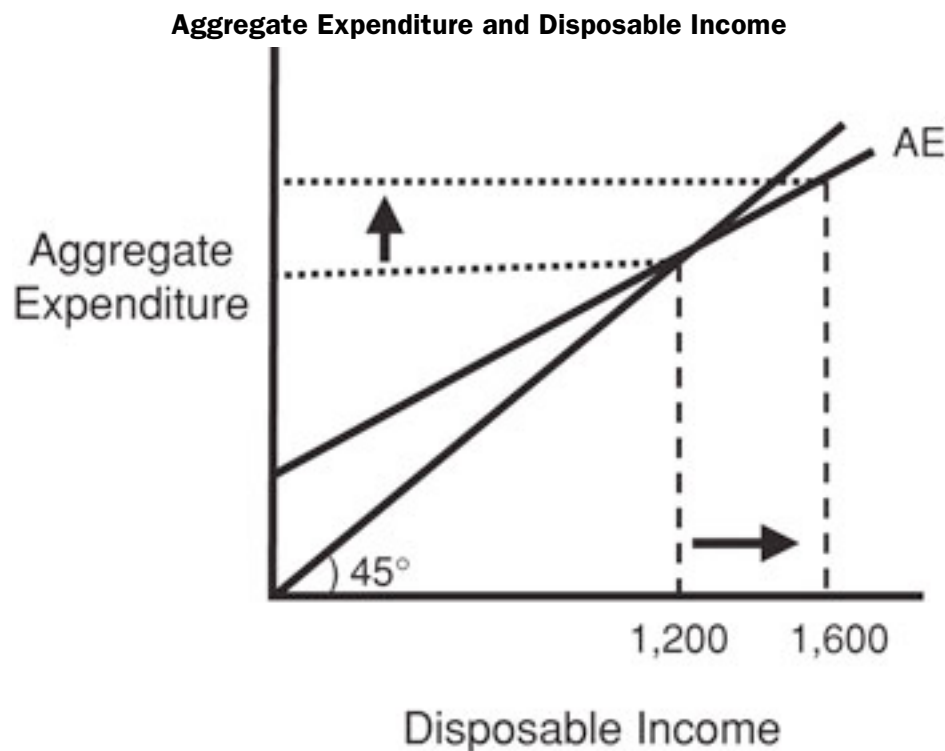


16. **(B)** Transportation input is a variable cost of supply. As more transportation is used, the cost per unit produced increases. An increase in marginal costs would be represented by a shift inward and upward of the AS curve as MC equals the supply curve. In the short run AD would remain fixed, so the result would be a decrease in output (GDP) and a rise in prices.

17. **(D)** Keynes challenged the long-held assumption of Classical economists that long-run AS is perfectly inelastic. They reasoned that price levels, output, and employment were self-regulating. Keynes argued that an economy can become fixed in a cycle of long-run recession, from which it will recover only if stimulated. Keynes argued that by increasing spending and cutting taxes (budget deficit) to the household, the C element of aggregate expenditure will stimulate expansion in the economy.

18. **(D)** By definition, the factor market is where firms purchase the inputs of production. In a free market, individual households own the input factors. Firms pay input owners, which is the household income. The product market, by definition, is where firms sell the finished product to individual households. The product market is the revenue source for firms, and households expend their income in consuming those g/s.

19. **(C)** Income has a direct relationship to aggregate expenditure. If disposable income increases, then expenditure also increases in relation to the MPC, as shown on the following graph:



20. **(D)** Bonds are an investment alternative to holding cash. Remember that inflation erodes the value of currency over time. Bonds (corporate and government) are promissory

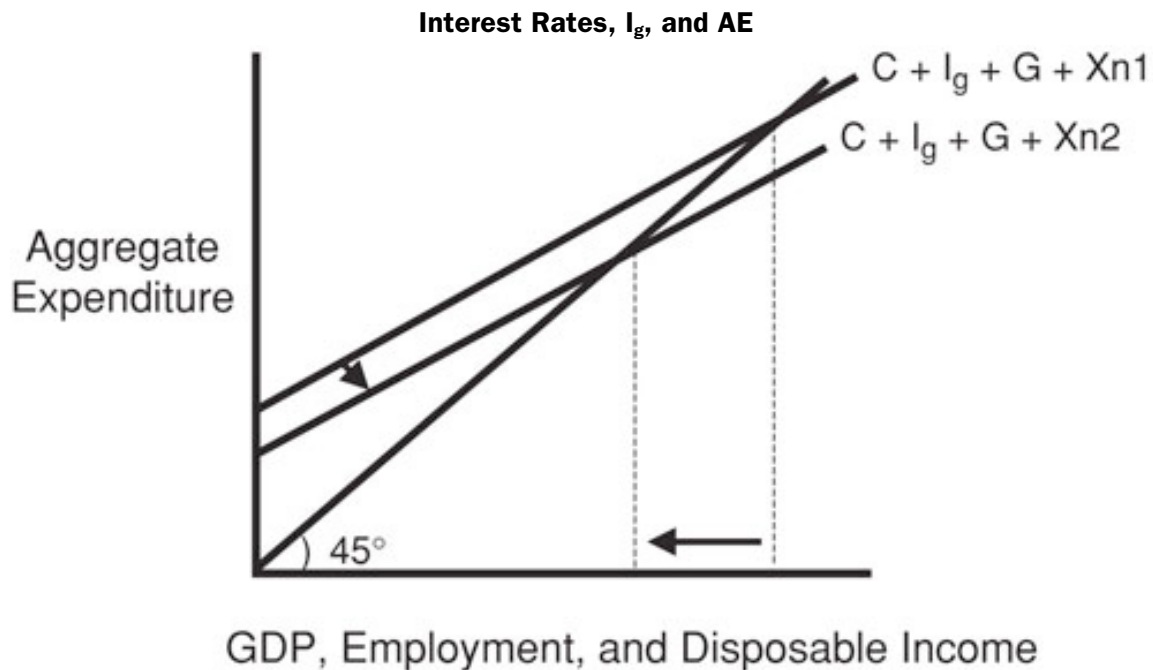
notes whereby the buyer loans money to the seller in exchange for repayment of the loaned amount (principal) plus a set interest rate of return at a set date of maturity. The risk in this investment is that the buyer foregoes the current purchasing power of the currency, in the belief that the interest payment will more than cover any inflation that might occur over the length of the bond maturity—hence the speculative nature of the investment.

21. **(B)** When interest rates fall (8 percent to 2 percent) and business expectations change, a shift in investment demand (I_d to I_{d1}) will stimulate an increase in the I_g component of AE (AE to AE_1).



22. **(C)** A change in AE of \$25 billion results in an increase in output of \$100 billion. Since an AE change of 25 yields a 100 change in output, the multiplier is 4 ($25 \times 4 = 100$). To have a multiplier of 4, the MPS must be 0.25 and the MPC 0.75. This is so because $1/\text{MPS}$ ($1/0.25 = 4$) = the multiplier and $1 - \text{MPS}$ ($1 - 0.25 = 0.75$) = MPC.

23. **(B)** Exports, as a component of AE, are an injection into the economy. If exports fell and all else remained equal, the AE would decrease and the equilibrium level of GDP would decrease.



24. **(D)** The injection-leakage analysis of AE/GDP considers, by definition, leakages to consist of savings, taxes, and imports. All three items represent no spending in the domestic economy.

25. **(D)** [This question tests knowledge of the unique relationship of tax, consumer behavior, and change in AE.] Consumers will react to taxes by adjusting their savings in an amount determined by their MPS. Tax increases will be offset by a reduction in savings. In this case, a \$40 billion dollar tax levy would be compensated for, by consumers, through a reduction in savings of \$10 billion ($40 \times 0.25 = 10$).

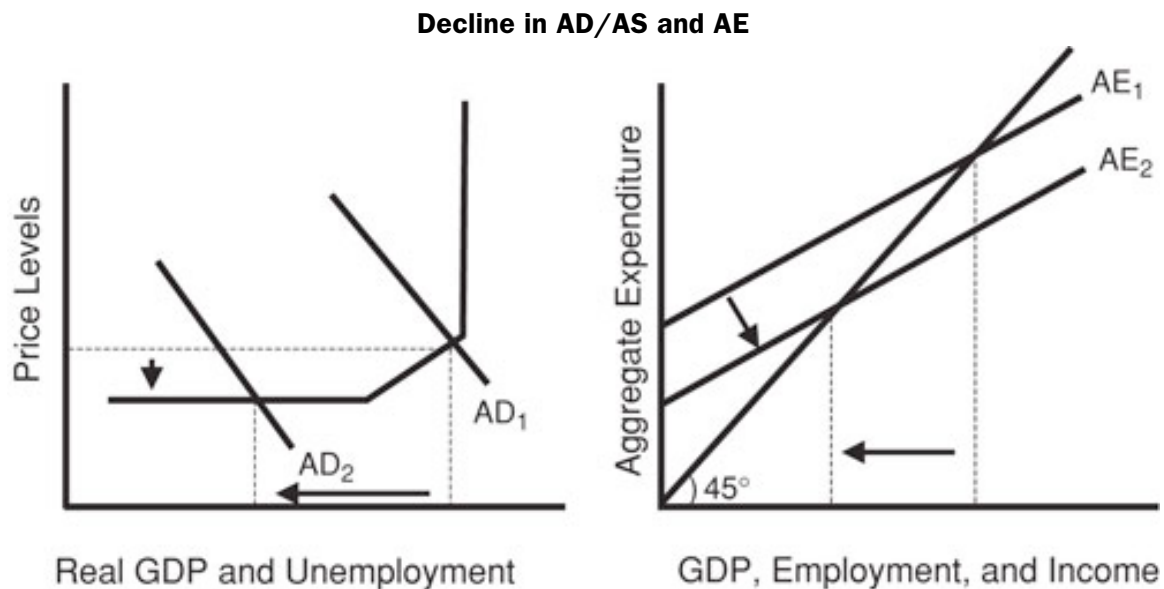
26. **(A)** [This question follows up the concept discussed in question 25.] The reaction of consumers to a tax increase, which is then subject to the multiplier, explains what is known as the balanced budget multiplier. This gap is always equal to a factor of 1. In other words, any equal combination of spending increase and tax increase (\$100 million spending and \$100 million tax increase adds \$100 million to the GDP), will always result in that amount added to the economy. This is because government spending is subject to the full multiplier, whereas taxes are first reduced by the MPS and then subject to the multiplier. Thus, a recessionary or inflationary gap always results from equal amounts of spending and tax quantities.

27. **(E)** The multiplier is 4. The formula to determine the multiplier is:

$$\frac{\text{Change in real GDP}}{\text{Change in real spending}}, \text{ so } \frac{16,000 - 1,200}{400 - 300} = \frac{400}{100} = 4$$

28. (A) \$1,200 billion. If this is a closed economy without a government sector, the aggregate expenditure would be 300 and the multiplier would remain at 4; $300 \times 4 = 1,200$.

29. (A) Purchase of imports is a leakage from domestic aggregate expenditure, so it would cause X_n to decrease. If AE falls from AE_1 to AE_2 , then so does AD, from AD_1 to AD_2 . As AD decreases so do price levels (depending on relationship to AS stage), employment, and GDP. This can be seen in the following graphic depiction:



30. (C) An increase in the money supply would put more income into the aggregate expenditure. This in turn would increase the aggregate demand. A decrease in interest rates would also help to stimulate aggregate demand, as lower rates encourage borrowing and spending. Both activities stimulate an economy.

31. (E) Business investment is a component of AE and thus has a direct influence on AD. If the other three elements of AE remained constant and I_g decreased, then AE would move downward and the AD would move inward. This is depicted in the two previous models above. Notice that price levels, GDP, and employment all decrease.

32. (E) Technology affects productivity. A technical improvement would by definition increase productivity, thereby lowering costs. A lowering of costs and increased productivity shifts the AS curve outward. This outward shift serves to decrease prices, increase output, increase income, and create employment. This could be summed up as an increase in the overall standard of living. The following model shows this event graphically:



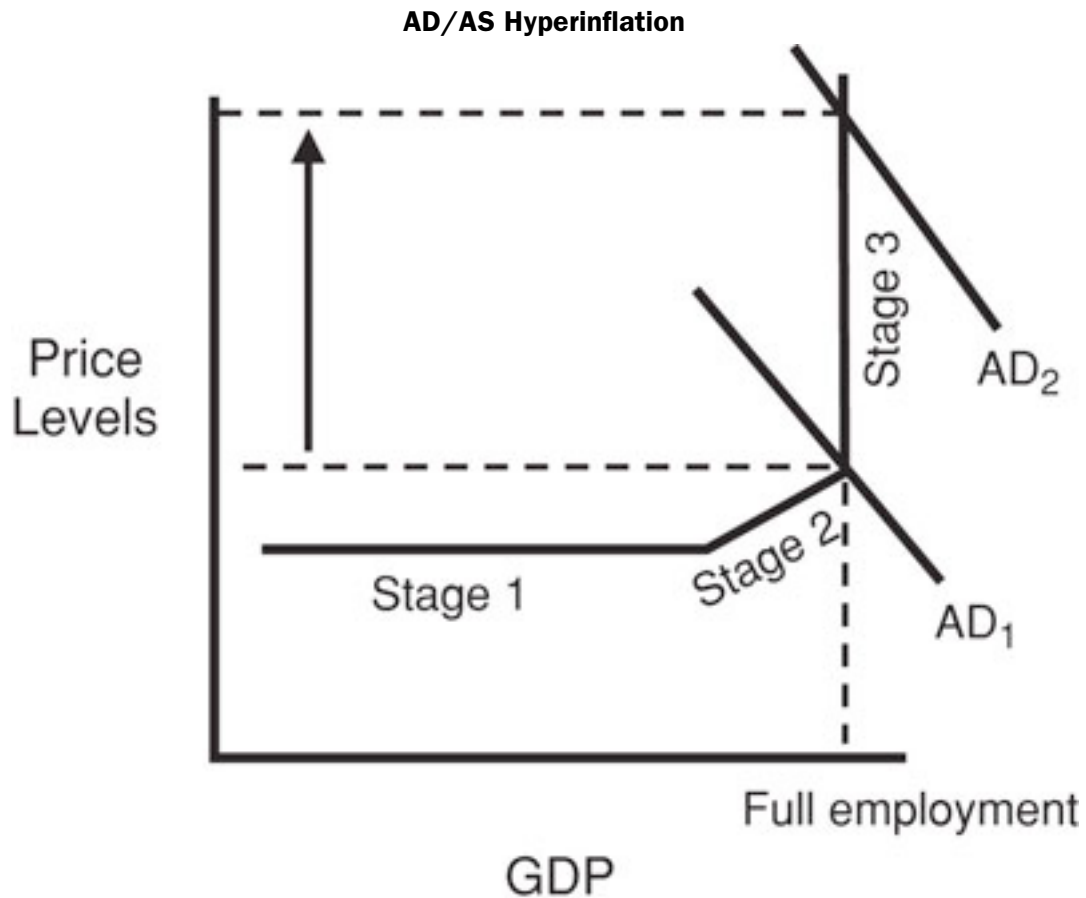
33. **(C)** If firms experienced an unplanned and rapid decrease in inventories, this means that AD has shifted to the right. A large increase in the money supply occurred and there are few additional g/s with which to immediately replace depleted inventories. When money enters the economy while few g/s enter, inflation is by definition a result. Also notice that in the AD/AS model, as you enter stages 2 and 3, price levels rise.

34. **(B)** In the short run, supply is fixed. If government increases spending while at the same time cutting taxes, the AE will increase, causing the AD to increase (move to the right). This change in AD causes an increase in employment and an increase in price levels, as shown in the following graphs:

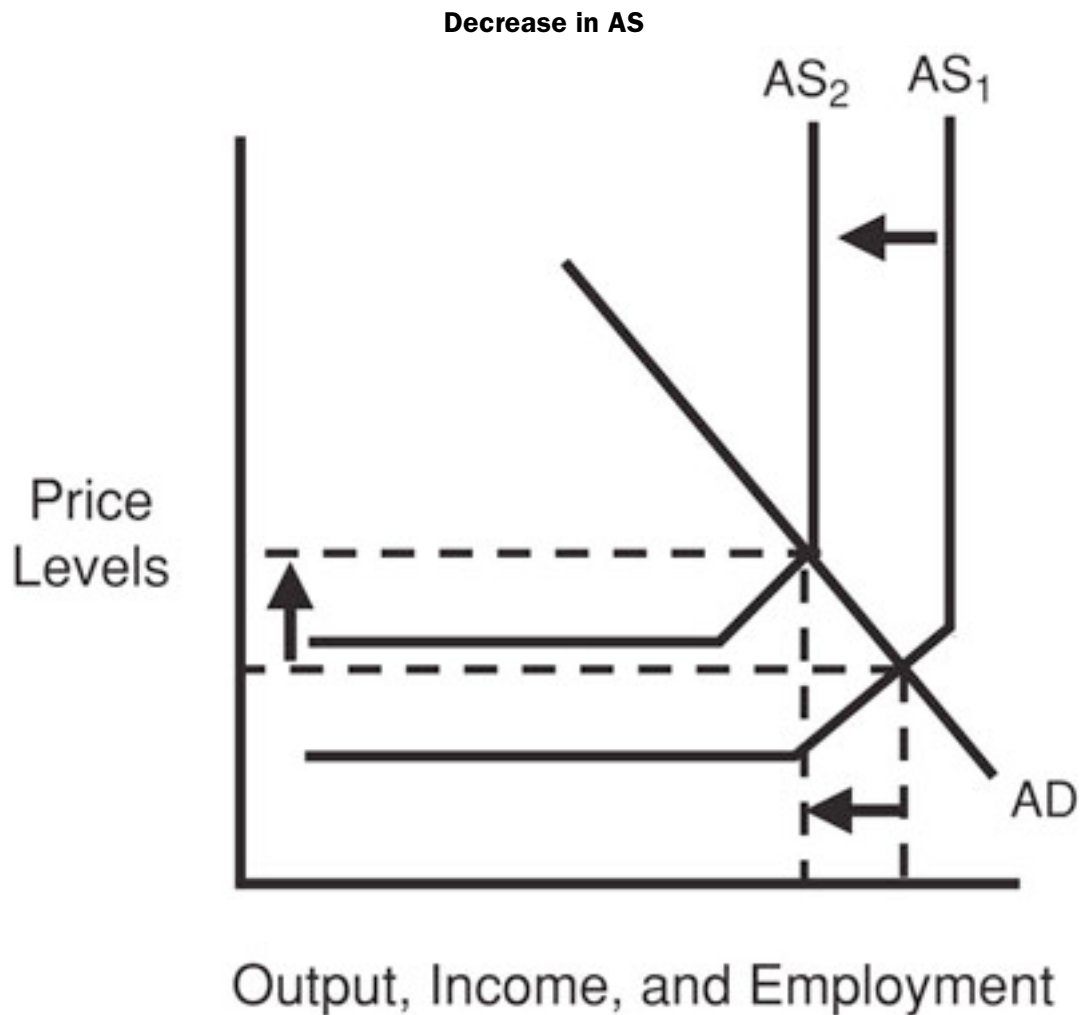
Increase in AD/AS and AE



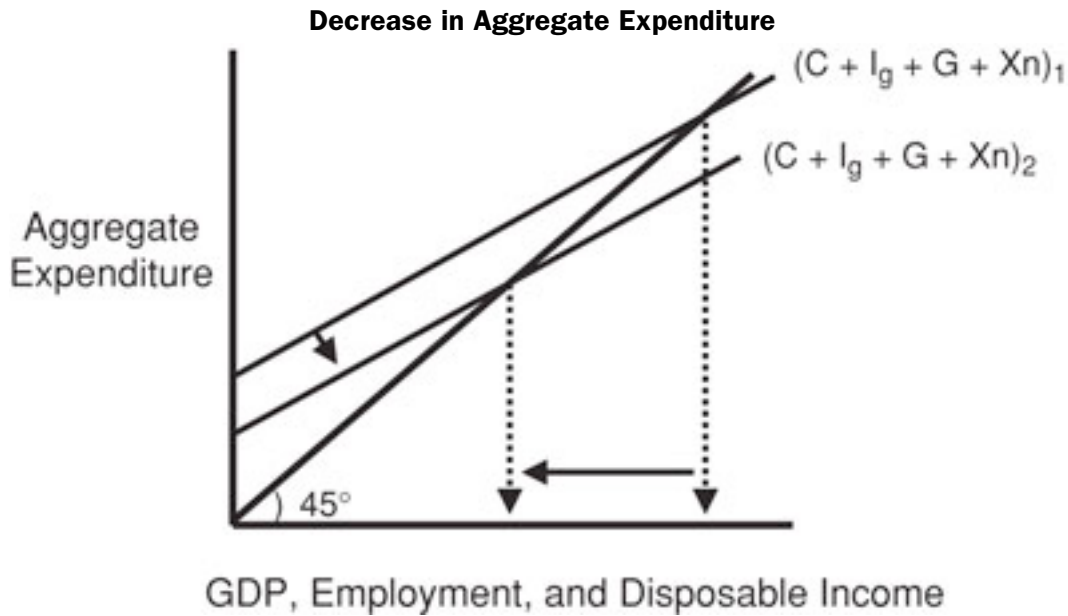
35. **(B)** If AD increases and as a result price levels rise, while GDP and employment are unaffected, the AD must be in stage 3 of the AS. This results in hyperinflation. Notice the extreme rise in prices that results from these events:



36. **(B)** For that combination to occur in the economy, the AS must have moved inward. When there is a supply shock, there is an unexpected increase in input prices, price levels rise, and GDP and employment decline.



37. **(C)** Keynes advocated government intervention in the business cycle to manage the economy in an attempt to moderate the extremes of the business cycle. Through fiscal policy, the government can counter the cycle, stimulating during recession and contracting during expansion. So, if inflation were occurring because of an AD that is too high, the government could cause a contraction in the consumption segment of AD by increasing taxes and reducing government spending.



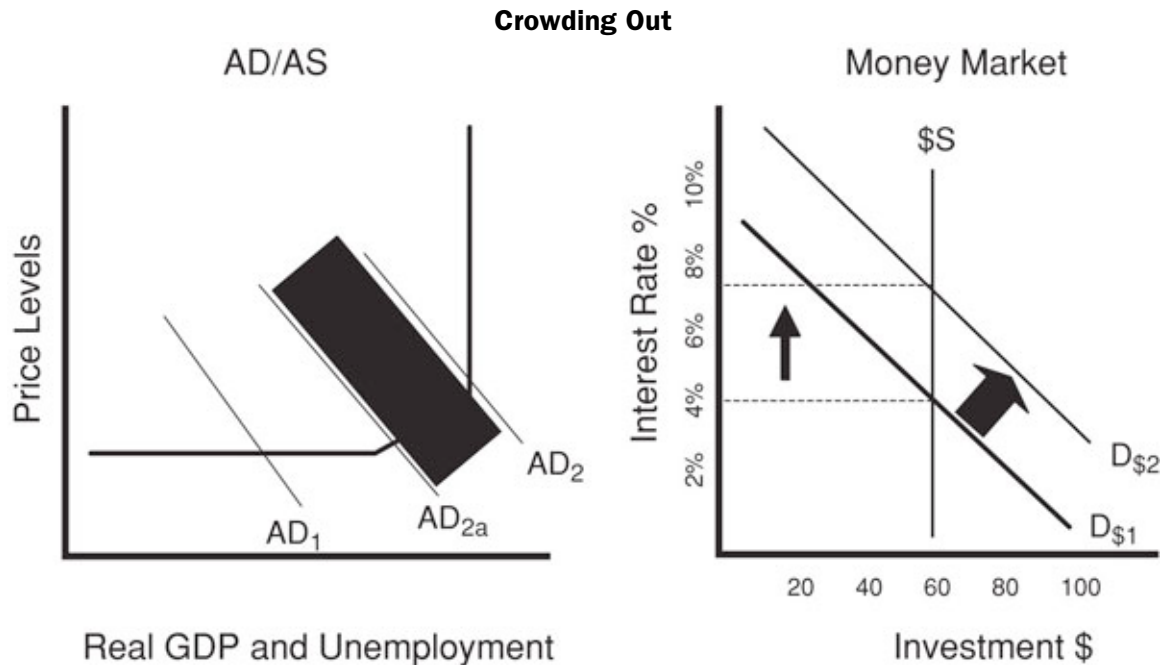
38. **(E)** [The basis for this answer involves a knowledge of both the multiplier and the realization that a change in tax is partially absorbed by the marginal propensity to save (prior to the effect of the multiplier).] With an MPC of 0.75, the MPS is 0.25; therefore, the initial tax change must be reduced by 0.25. A tax raise of \$16 billion would first be offset by a \$4 billion reduction in household savings. The remainder of \$12 billion ($16 - 4 = 12$) is then subject to the multiplier, which is 4 because it equals $1/\text{MPS}$ ($1/0.25 = 4$). A \$12 billion net tax would reduce the household consumption component of GDP by \$48 billion ($12 \times 4 = 48$).

39. **(C)** Automatic stabilizers increase or decrease with expansion and contraction of the economy. Examples of automatic stabilizers are unemployment insurance and Temporary Assistance to Needy Families (TANF). Tax revenues also change automatically, in a direct relationship with the business cycle. If GDP rises, tax revenues increase and transfer payments decline. Conversely, as GDP declines, tax revenues decrease and transfer payments increase. Therefore, automatic stabilizers produce a cyclically adjusted budget.

40. **(D)** There are many criticisms of fiscal policy. The main one is the time lags that occur in the recognition, construction, and operational impact of that policy on the business cycle. Another is that the degree of economic influence desired (great or small stimulus/contraction) is difficult to judge (fiscal policy can be like trying to swat a mosquito with a sledge hammer). Many times fiscal policy of an expansionary nature begins to have an impact long after the recession has passed. This is the advantage that monetary policy enjoys over fiscal policy, both in the almost immediate impact and the degree of influence desired. However, Neo-classical economists do contend that both monetary and fiscal stimulus/contraction power may be necessary to manage the state of the economy.

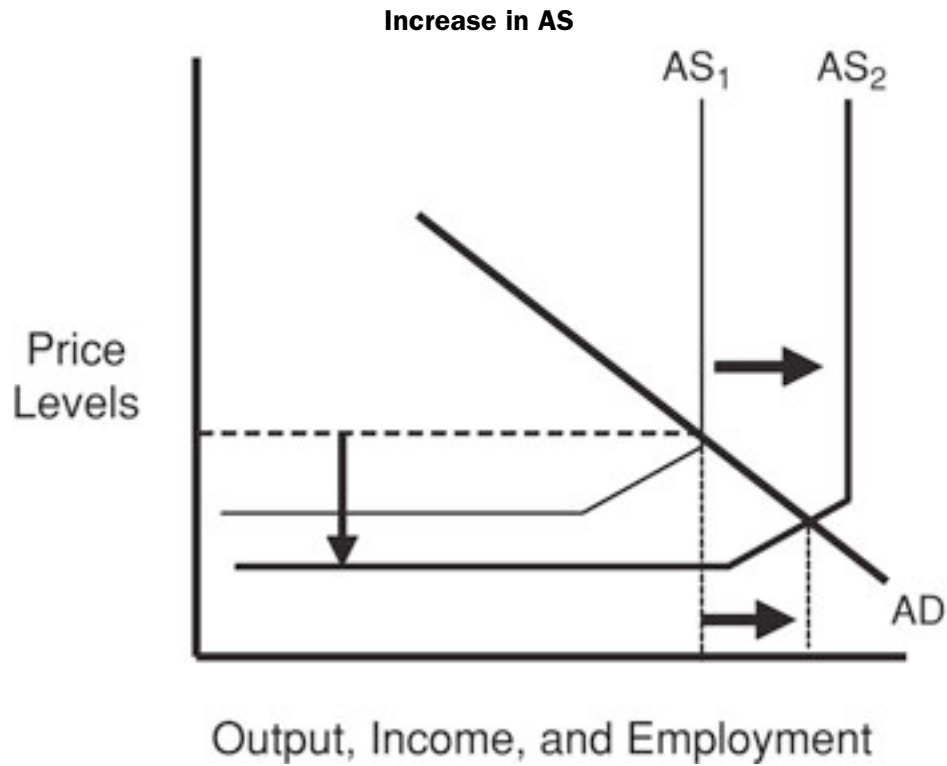
41. **(D)** Crowding out is another damaging side effect of fiscal policy that monetary policy avoids. This happens when government pursues an expansionary fiscal policy. To finance government deficit spending, the government must borrow money through the sale of

Treasury bonds. As the demand for money increases, interest rates rise and the supply of money available to business is lessened. Also, I_g will demand a lower quantity at higher interest-rate prices. This is obviously counterproductive from an injection-leakage analysis, as the decrease in I_g would partially offset the increase in G . So, as the following diagram shows, interest rates would rise from 4 percent to 8 percent, reducing the I_g component of AE . The AD/AS model demonstrates the intended results of fiscal policy, moving AD_1 to AD_2 with the actual lessened impact AD_1 to AD_{2a} , due to crowding out. Most economists contend, however, that this crowding-out effect would be rendered irrelevant during recession if the Federal Reserve cooperated with an easing of money policy.

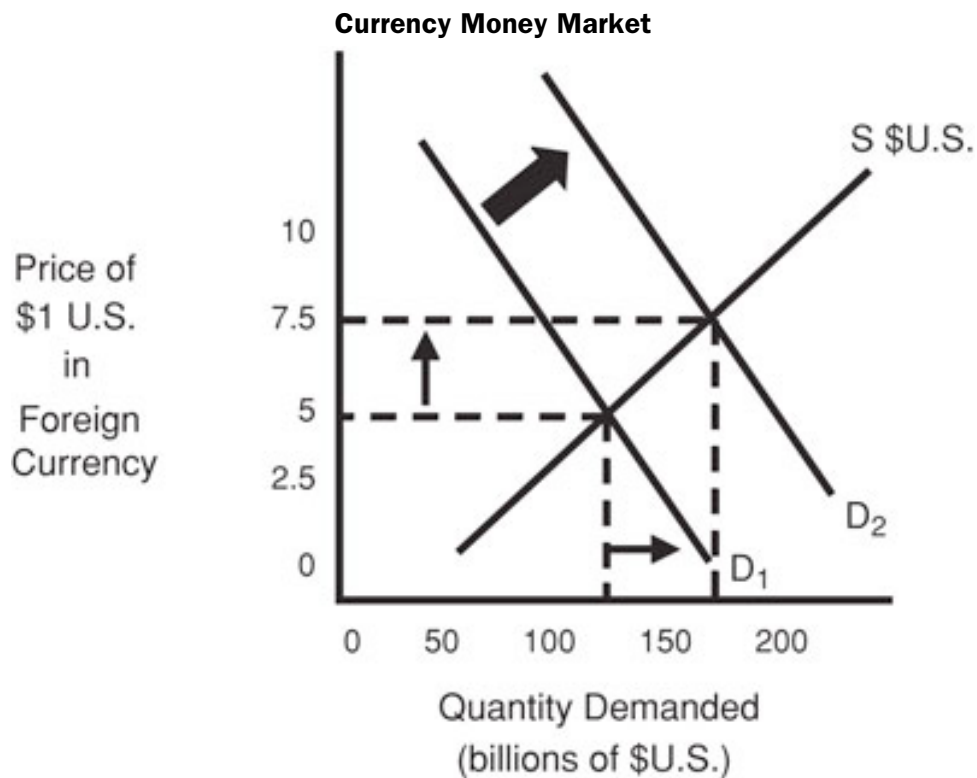


42. (E) When Congress pursues a contractionary fiscal policy, it reduces spending and increases taxes. The result of this behavior is to decrease the money supply. This causes interest rates to rise, discouraging households from purchasing g/s (both domestic and foreign). Initially, the weak dollar (due to inflation) coupled with stronger foreign currencies results in exports rising while imports fall. Thus, the X_n component of AE/AD increases and partially offsets the decrease in the C , I_g , and G components. In the long run, the higher interest rates attract foreign investors and the increased demand for the dollar causes it to appreciate, reversing the trade balance trend (long-run trade equilibrium concept).

43. (D) Supply-side economists contend that tax reductions aimed at the I_g will promote increases in productivity and thus output, along with job creation and higher income. This is attained without inflation because the increase in income is equal to the increase in output. This is a revisit of Say's Law. Many economists are critical of the degree to which tax cuts affect investment and thus AS expansion. Some contend that the lower tax rates only serve to enhance the wealth of business owners and further distort income distribution. This area continues to be investigated by economists for evidence of some impact of tax policy on AS expansion.



44. (E) If foreign demand for dollars to deposit into U.S. money markets increases (D_1 to D_2), then the value of the dollar will appreciate, because the foreign currencies would depreciate (5 to 7.5 foreign currency units per dollar).



45. **(D)** [This answer is based on the principle of comparative advantage.] Total output for two nations will be greatest when each good is produced by the one that has the lower domestic opportunity cost for that good. This is determined by calculating the ratio of the domestic opportunity cost. In the case of Brazil and the United States, the United States must give up 100 units of wheat to get 200 cellular phones ($2cp = 1w$). For Brazil, 50 units of wheat must be sacrificed to gain 200 phones ($2cp = 0.5w$). Brazil has the lower cost of producing cell phones, since $1cp = 0.25 w$ and for the United States $1cp = 0.5 w$. Both benefit by Brazil producing phones and the United States producing wheat and then trading. Both gain from specializing. If we assume that both nations were separately producing at the midpoint of their production possibilities, they would create the following scenario. They have 25 more units of wheat than before specialization.

Country	Before Specialization	After Specialization	Net Change	Gains from Trade
United States	100 cell phones	0 cell phones	-100 cell phones	0 cell phone
	50 wheat	100 wheat	+ 50 wheat	+ 25 wheat
Brazil	100 cell phones	200 cell phones	+100 cell phones	
	25 wheat	0 wheat	- 25 wheat	

46. **(E)** [This answer is based on comparative advantage analysis, as shown in the answer to question 45, and adding the terms of trade principle.] After specialization, countries will want more goods than they had prior to it. They must receive a ratio of return greater than they had from their domestic production. In this case, Nigeria (3 cocoa for 1 banana) produces bananas and Colombia (5 cocoa for 1 banana) produces cocoa. Nigeria will want to get more than its domestic return of 3 cocoa for 1 banana (say, 4 cocoa for 1 banana +1), which increases its standard of living. Colombia will want to get a greater return than its domestic production of 1 banana for 5 cocoa (say, 1.25 banana for 5 cocoa).

47. **(B)** “Dumping” is when a nation (or firm) sells a good below cost as a means of harming its competition. Under the rules established by the World Trade Organization (WTO), countries found guilty of dumping goods in another nation’s market may be penalized by the WTO, which may allow the offended nation to place a tariff on the foreign producer’s good as a remedy. This tax punishes the offending nation and returns the field to a competitive market.

48. **(D)** If interest rates rose in the United States, the higher rate of return on invested money would attract foreign investors. Because they have to exchange their foreign currency into dollars to purchase U.S. securities, the demand for U.S. dollars would increase. If the demand for dollars increased, the value of the dollar would appreciate (see model for question 44).

49. **(D)** The FOMC is the monetary policy-making branch of the Federal Reserve system. Its membership of five Fed bank presidents and the seven members of the Board of Governors meets approximately every six weeks to set the discount rate and the federal funds rate. The federal funds rate is attained through the sale or purchase of Treasury bonds in the open market.

50. **(A)** Critical to FOMC policy is the indirect relationship that exists between bond prices and their interest yield. When bond prices rise (say, due to increased demand), the interest rate yield on those bonds declines. If the FOMC increases the money supply by purchasing bonds, their yield would decline (as would interest rates—easy money). If the Fed decreases the money supply by selling bonds, their yield would increase (as would interest rates—tight money).

51. **(D)** By definition, a deposit at a bank is placed on the bank's books as a liability, as this is money that is owed by the bank to the depositor. The deposit is an asset to the depositor, as it represents value owned by the depositor.

52. **(D)** This function is at the heart of the fractional reserve banking system. The Federal Reserve sets a reserve ratio requirement for member banks. Reserves in excess of this required amount are available for loan. In this case, the reserve is 20 percent; if \$10,000 is deposited, then \$2,000 is reserved with the Fed and \$8,000 is available to loan.

53. **(D)** Because loan proceeds are deposited by the recipients into their banks, that action adds to the reserves of that depository. The additional deposit, after the reserve ratio is met, increases the depository's assets and the money is reloaned. This is known as the money multiplier. The formula is $1/\text{reserve ratio requirement (rrr)}$. In this case, the rrr is 0.20, so the multiplier is 5 ($1/0.20 = 5$).

54. **(D)** The established mission of the Federal Reserve and its monetary policy is to achieve price stability, an environment conducive to economic growth, and full employment.

55. **(D)** When the FOMC orders bonds to be purchased from commercial banks, the bond is given to the Fed in exchange for a credit to the reserves of the commercial bank. This credit enables the bank to increase its loans and thus the money supply. This increase in the money supply relative to the demand for money generally lowers interest rates, thereby encouraging expansion in the economy.

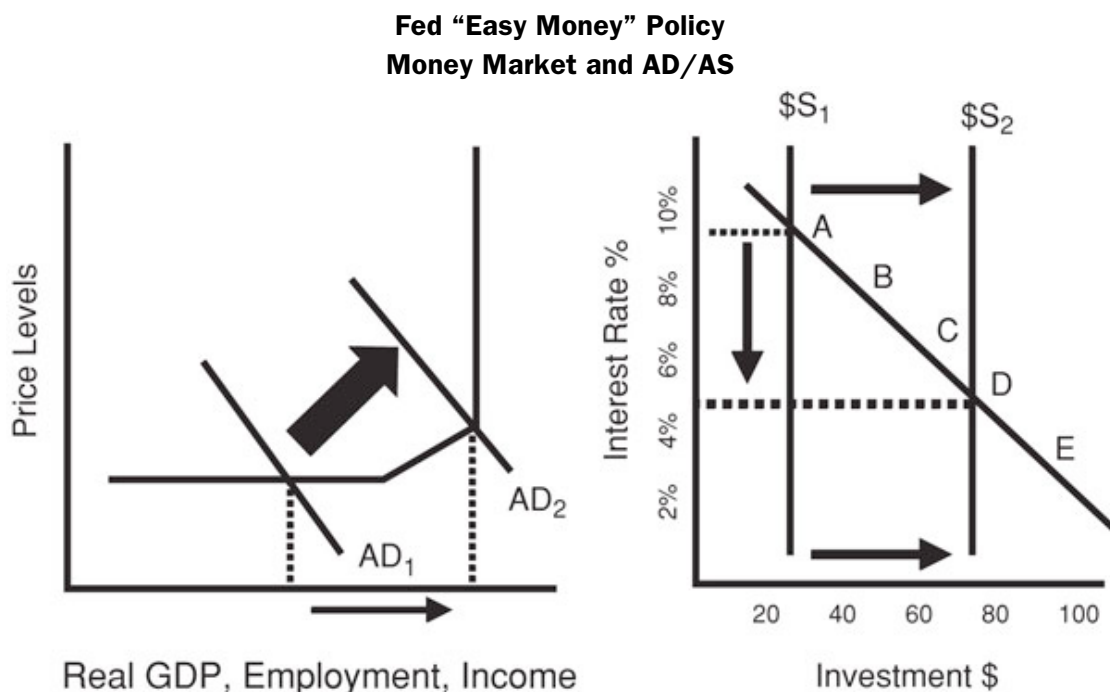
56. **(B)** This action has the opposite impact of the action taken in question 55. When the Fed sells bonds, it removes money from circulation and replaces it with a bond. As money is removed from the market, available interest rates rise. Also, as the supply of bonds in the bond market increases, their price decreases. As mentioned earlier, this increases their interest rate yield.

57. **(E)** If the reserve is 20 percent, the multiplier is 5 ($1/0.20 = 5$). If \$5 billion is added to commercial bank reserves, 5 times that amount would eventually enter the economy ($\$5 \text{ billion} \times 5 = \25 billion).

58. (E) The current interest rates are too expansionary and as a result the economy is in hyperinflation. From the money market model, it is clear that at $I = \$40$ billion, the interest rate is 8 percent. The higher interest rate would tighten money, slow expenditure, and move AD back to stage 2.



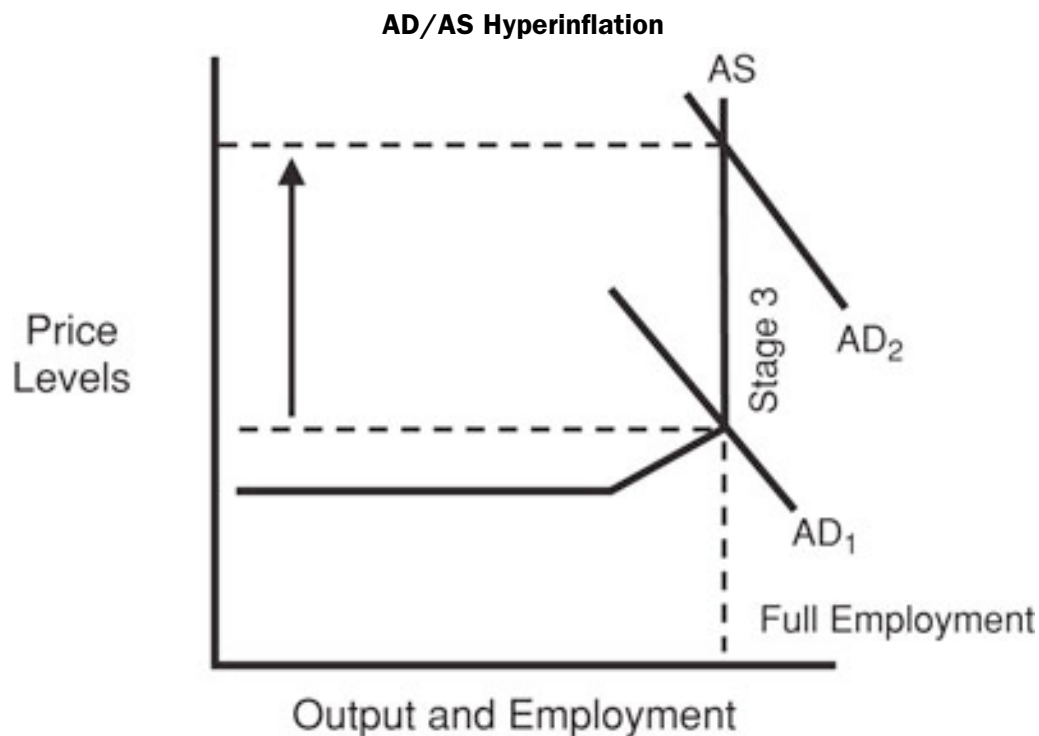
59. (B) [This question again focuses on the relationship between interest rates, I_g , AE, AD, and GDP.] In this case, monetary policy has been one of easy money (\$S1 to \$S2) that encourages (interest rates 10 to 4 percent) business investment (\$20 to \$80), thus increasing the AE/AD (AD_1 to AD_2) and stimulating expansion of the economy. When output increases, so too do employment and income.



60. (A) The monetary policy of selling government securities would reduce the money supply, increase interest rates, and reduce the I_g component of AE/AD . This would be contractionary in nature. This reduction of expenditure would be offset by a fiscal policy of lowering taxes, which would increase income, increase AE/AD , and be expansionary in nature.

SECTION II

1. (a) The economy depicted by AD_2/AS portrays hyperinflation. Notice that no additional g/s can be produced, as we are at our maximum short-run production possibilities frontier. Thus, any increase in AD (AD_1 to AD_2) only serves to cause massive inflation of price levels.



(b) This change in the relationship between spending (injection) and taxation (leakage) would be an improvement over the prior years of deficit spending, as it is an expansionary policy employed to combat recession. However, an economist would criticize this policy as failing to account for the inflationary budget gap that would occur. When spending and taxation are equal, a budget gap (factor of 1) results, because households will account for a portion (equal to the MPS, with the balance then subject to the multiplier) of their tax by reducing their savings. Because government spending is subject to the full multiplier, an injection of money thus results from the imbalance. This policy will expand the

money supply and generate even more inflation. This fiscal policy will not halt the hyperinflation.

- (c) (i) The increase in household income tax would decrease disposable income, thereby reducing the consumption component of AE/AD. The effect would be moderated by the reduction in MPS.
- (ii) The reduction in household spending would decrease business investment, thereby reducing the I_g component of AE/AD.
- (iii) The decrease in disposable income would reduce spending on imports.

The decreased demand for money would cause interest rates to decrease and the dollar to depreciate in value.

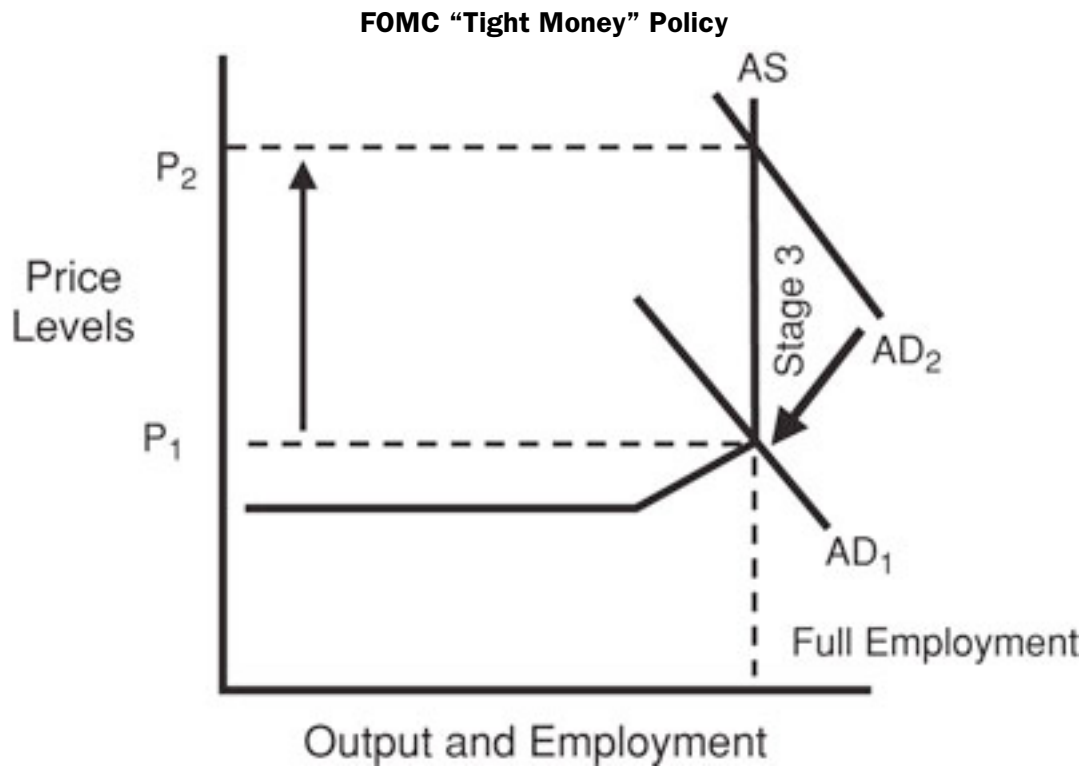
The dollar's devaluation in currency markets would further increase the price of foreign goods to America, further decreasing the demand for imports.

- (iv) Lower domestic price levels would cause exports to increase.

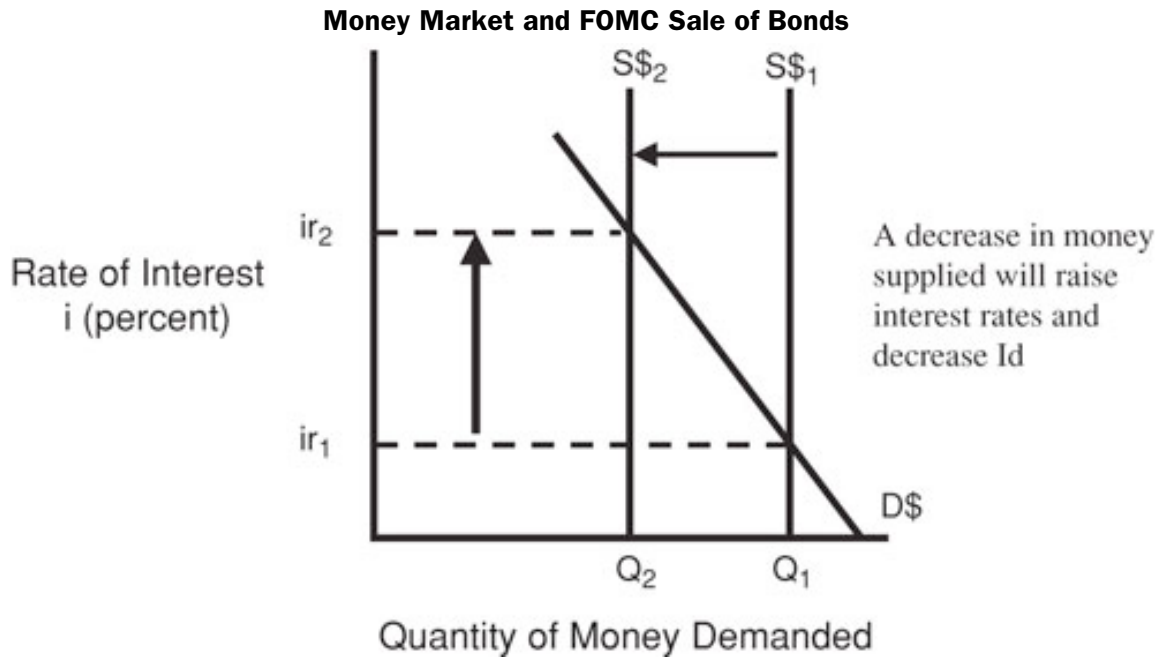
Short-run depreciated dollars would increase exports.

Reduction in the transaction demand for money would cause interest rates to decrease, and the foreign demand for dollars for investment purposes would decrease, leading to additional devaluation.

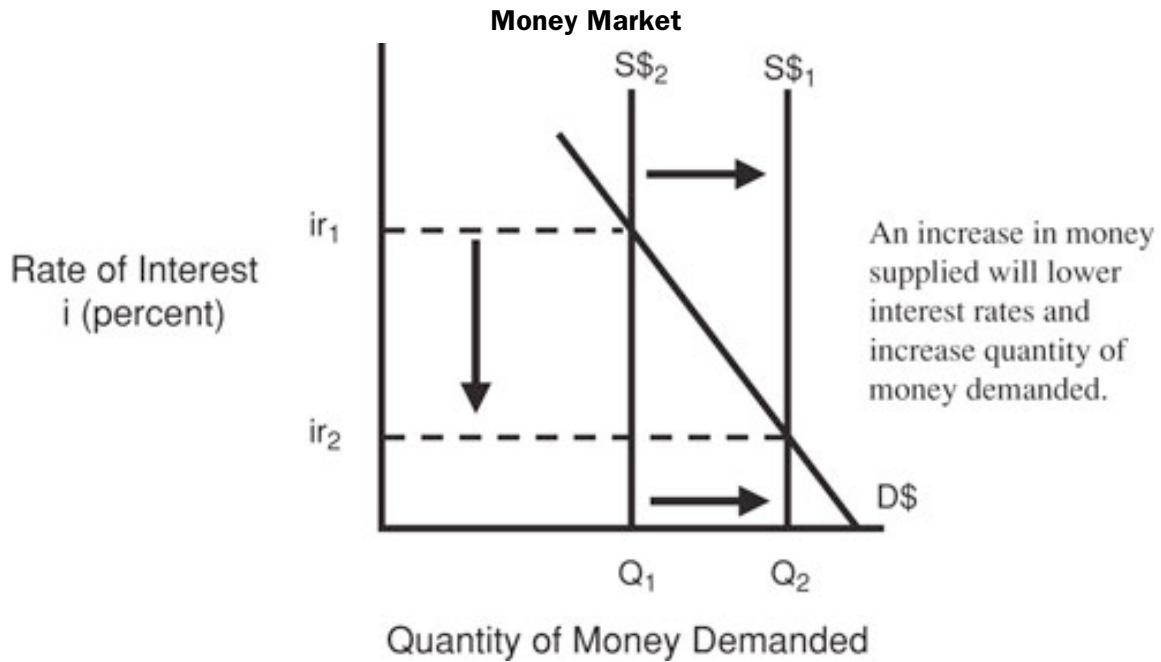
(d) The Fed would pursue a contractionary monetary policy and decrease the money supply. The decrease in the money supply through the sale of government bonds would cause interest rates (federal funds rate) to rise, which would reduce both the consumer and business investment components of aggregate expenditure and thereby cause aggregate demand to decrease, as seen by the shift of AD_2 to AD_1 . This would lower price levels and combat inflation.



- (i) The tightening of the money supply ($S\$_1$ to $S\$_2$) through the sale of government bonds by the Fed would raise interest rates (ir_1 to ir_2). The higher price of money would cause the quantity demanded of money to decrease (Q_1 to Q_2). The decrease in money borrowed and expended would cause the AD to decrease, as depicted in the preceding “tight money” figure.



- (ii) FOMC policy is aimed at the business gross investment segment of the aggregate expenditure. The higher interest rates should decrease business investment.
 - (iii) The higher interest rates should decrease business investment and lower AD. If overtightening occurs, it may lead to decreased output, decreased income, and lowered employment.
2. (a) (i) Because the Fed would pay for the bond by adding \$10,000 to the balance sheet of the bank, First National would not have to reserve any of the money and could loan out the entire \$10,000.
- (ii) With a 20 percent reserve ratio, the money multiplier will be 5. Assuming that all the banks loan out all their excess reserves and that no leakages occur, the money supply would increase by \$50,000. This “easy money” policy would expand the money supply and the AD, leading to increased output and employment.
 - (iii) As indicated in the preceding response, the increase in the money supply would serve to lower interest rates (ir_1 to ir_2) and increase the quantity of money demanded (Q_1 to Q_2). The following Money Market model graphically portrays this action:

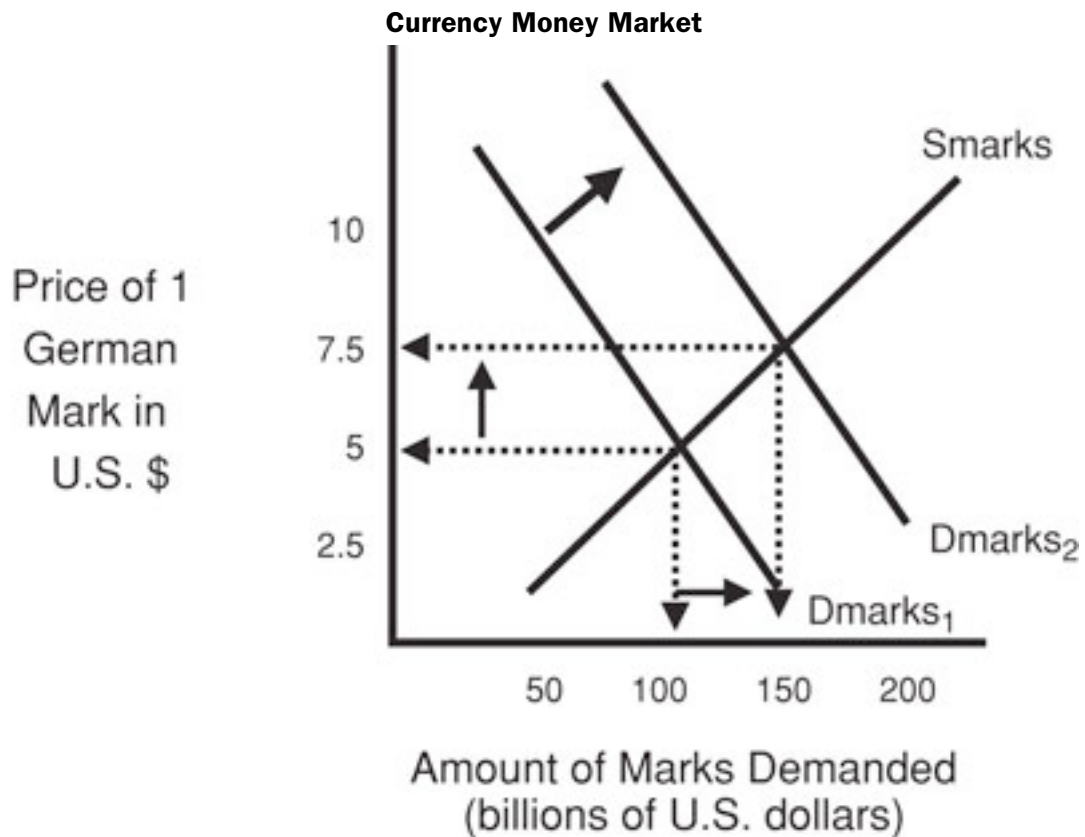


- (b) (i) If businesses and consumers have negative expectations about the future state of the economy, they may choose not to borrow money. This would reduce the impact of the increased money supply at lower interest rates.
- (ii) Banks might decide to hold excess reserves and not make loans.

or

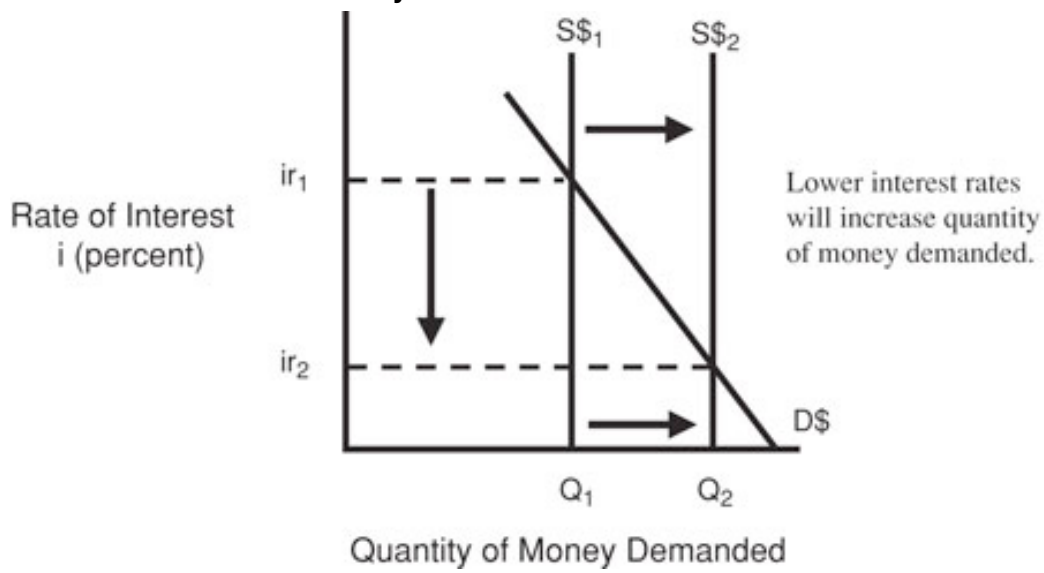
Businesses or consumers might decide to increase their currency holdings.

3. (a) (i) The U.S. demand for euros ($D_{\text{euros}1}$ to $D_{\text{euros}2}$) would increase to pay for the greater quantity of beer imported. Remember, the Germans would want to be paid in euros.



- (ii) As seen in the preceding model, the price of the euro in dollars would increase (\$5.00 per euro to \$7.50 per euro). This would mean that the dollar had depreciated in value. It takes more dollars to buy German beer.
- (b) (i) If interest rates declined, the quantity of dollars demanded in the economy would increase. This would be inflationary, thus further eroding the value of the dollar. Also, lower interest rates would discourage German investment in the U.S. economy, thus reducing the German demand for dollars and contributing to further weakening of the dollar. In the end, these outcomes would dampen U.S. enthusiasm for German beer, make German beer relatively more expensive to Americans, and reduce U.S. imports.

Money Market and Lower Interest Rates



- (ii) The supply of U.S. dollars into the currency market would increase ($S_{\$us1}$ to $S_{\$us2}$). This would further weaken the international value of the dollar (0.20 euros per dollar to 0.13 euros per dollar). The cheaper dollar would increase the German quantity demanded. In the long run (trade equilibrium), the appreciation of the German euro would increase the German demand for imported beef as it became relatively cheaper.

Currency Money Market

