

# MACROECONOMICS ANSWERS AND EXPLANATIONS

## PART I

1. Which of the following is included in U.S. GDP?
- I. The value of movies made in Africa by U.S. citizens.
  - II. The value of olive oil made in Italy and sold in the U.S.
  - III. The value of blue jeans made in the U.S. and sold in Japan.
  - IV. The value of wine made in the U.S. by Canadian citizens.
- (A) II, III, and IV only  
(B) I and III only  
(C) II and IV only  
(D) IV only  
(E) III and IV only
2. One of the primary issues covered within macroeconomics is
- (A) the behavior of households
  - (B) the pricing decisions of a firm
  - (C) the purchasing decisions of a consumer
  - (D) inflation
  - (E) price discrimination

1. E U.S. GDP is the total value of all final goods and services produced in a year within the U.S. Since the movies and olive oil were produced elsewhere, they can be ruled out. GDP excludes imports but includes exports, so the blue jeans are included even though they are exported to Japan. The wine is included as well, because although Canadians make it, it fits the criteria of being produced within the U.S.
2. D Macroeconomics is the branch of economics that deals with the whole economy and the big picture. The behavior of smaller units within the economy including households, firms, and consumers is covered within microeconomics. Price discrimination is also a micro concept, dealing with pricing by an individual firm. Inflation, on the other hand, is a macro concept, resulting from the combined actions of many individuals and firms.

3. In a given period the average price level in the country of Sherwood tripled, and Robin's income increased from \$30,000 to \$60,000. What happened to Robin's nominal and real income?

	<u>Nominal Income</u>	<u>Real Income</u>
(A)	Increased	Decreased
(B)	Increased	Increased
(C)	Decreased	Decreased
(D)	Increased	Stayed the same
(E)	Decreased	Increased

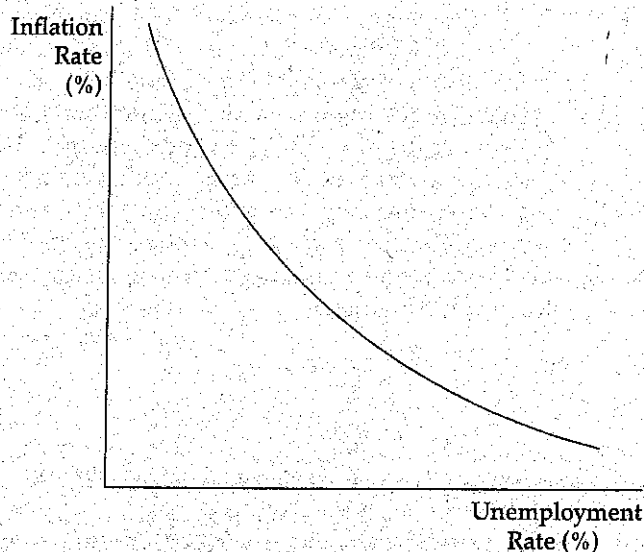
4. The upward sloping section of the aggregate supply curve can be explained by

- (A) excess capacity that allows output to increase without upward pressure on prices
- (B) the physical limit on output that prevents additional output from being produced
- (C) wages and other input prices that adjust more slowly than output prices
- (D) accurate information within firms about how their prices compare to the overall price level
- (E) a rational desire to produce more at higher price levels because the prices received for items sold will in turn allow the sellers to purchase more output from others

3. A Robin's nominal income is the number of dollars he received, so that increased from \$30,000 to \$60,000. Robin's real income is the buying power of the dollars he receives. Since prices have tripled while his nominal income doubled, prices have gone up by more than income. He will be able to buy less with his \$60,000 now than when he received half of this income but prices were one-third what they are now. Thus, real income has decreased.

4. C Answer (A) explains the horizontal section of the AS curve. Answer (B) explains the vertical section of the AS curve. *Inaccurate* information within firms about how their prices compare to the overall price level can fool firms into producing more at higher prices if they don't realize that the prices for everything else are going up at the same time. Higher price levels will not allow sellers to purchase more output from other sellers because an increase in the price level means that, on the average, prices for output in general have increased. Thus, just as sellers are receiving more for their goods, they must also pay more for goods that they purchase. Wages and other input prices that adjust more slowly than output prices can provide a profit incentive for firms to produce more at higher price levels because their revenues increase by more than their costs. When output and price level increase at the same time, this results in an upward sloping section of the AS.

5. Which of the following is a direct, accurate link within the circular flow?
- (A) Goods and services are exchanged for inputs via the factor markets.
  - (B) Wages and rents are exchanged for income via the product markets.
  - (C) Household expenditures result in revenues for firms via the product markets.
  - (D) Household income results in revenues via the factor markets.
  - (E) Firms exchange revenues for land, labor, and capital via the product markets.
6. Which of the following would be an example of fiat money?
- (A) Cigarettes used as money in prisons
  - (B) Dollar bills
  - (C) Gold coins
  - (D) Arrowheads used as a medium of exchange
  - (E) Chickens used for bartering
7. Economics is most accurately described as the study of
- (A) money
  - (B) how to make choices given limited resources with unlimited desires
  - (C) financial institutions
  - (D) how to eliminate scarcity
  - (E) how firms maximize profit
8. Expansionary fiscal policy would best be prescribed to
- (A) eliminate a recessionary gap
  - (B) reduce inflation
  - (C) reduce the interest rate
  - (D) eliminate an inflationary gap
  - (E) avoid crowding out
5. C As illustrated in the circular flow diagram, goods and services are exchanged for dollars in the product markets. Wages and rents are exchanged for inputs in the factor markets. Household income funds expenditures, which result in revenues via the product markets. And firms exchange revenues for goods and services. The correct answer is that household expenditures do result in revenues for firms via the product markets.
6. B Fiat money has no intrinsic value, and its value in exchange comes as the result of government order or "fiat." Cigarettes, gold, arrowheads, and chickens all have value beyond their usefulness as money, so they cannot be considered fiat money. A dollar bill, on the other hand, is a piece of paper that has value as money because the government says it does.
7. B Although economics is commonly misunderstood to mean (A), (C), or (E), these sub-topics of economics do not describe economics as well as (B), which gives the big picture. Economics is the study of scarcity and choice, and scarcity results from the combination of unlimited desires and limited resources with which to appease them. (D) is incorrect because although we can find ways to better contend with scarcity, we cannot eliminate it.
8. A Expansionary fiscal policy will increase aggregate demand and aggregate expenditure. It is thus likely to increase the price level and the interest rate, and cause crowding out. It will cause an inflationary gap to get bigger, but will help to eliminate a recessionary gap.



9. The figure above illustrates a
- (A) demand curve
  - (B) Phillips curve
  - (C) production possibilities frontier
  - (D) aggregate supply curve
  - (E) Lorenz curve
10. The aggregate demand curve is
- (A) a horizontal summation of market demand curves
  - (B) a horizontal summation of firm demand curves
  - (C) a simple aggregation of demand curves for individual goods
  - (D) a vertical summation of firm demand curves
  - (E) not found by adding product demand curves horizontally or vertically
11. Assuming there is no statistical discrepancy, a trade surplus must be offset elsewhere in the
- (A) current-account balance only
  - (B) capital-account balance only
  - (C) merchandise balance of trade only
  - (D) current-account or capital-account only
  - (E) merchandise balance of trade or current-account only
9. B The curve describing the relationship between inflation and unemployment is called a Phillips curve. A demand curve would have price or dollars on the vertical axis and quantity on the horizontal axis. The other curves listed will have different shapes and different axes.
10. E The aggregate demand curve is not a simple aggregation of individual demand curves for goods or firms. These demand curves indicate what happens when the price of one good changes *relative to the price of other goods*. The AD curve reflects changes in demand when the average price level for all goods increases or decreases.
11. D A trade surplus occurs in the merchandise balance of trade, which is part of the current-account balance. It must be offset elsewhere in the current-account or capital-account balances.

12. Kevin wants shoes and grows turnips. Lisa wants turnips and makes sheet metal. Bob wants sheet metal and makes shoes. Which function of money will cater most directly to the situation at hand?

- (A) Store of value
- (B) Unit of account
- (C) Medium of exchange
- (D) Means of deferred payment
- (E) Standard measure

13. Classical economists believe

- (A) in the quantity theory of money—that both the velocity and the quantity of goods and services sold per period are fairly stable
- (B) there is a serious risk of a liquidity trap because the demand curve for money is relatively flat
- (C) that the government should make every effort to fine-tune the economy
- (D) that the aggregate supply curve is L-shaped
- (E) that an increase in the money supply has a small and indirect effect on total spending

14. The aggregate supply curve will shift to the right in response to

- (A) a decrease in the labor supply
- (B) an increase in investment in capital
- (C) an increase in corporate taxes
- (D) a decrease in the availability of education and training
- (E) natural disasters

12. C The difficulty of this situation is that there is not a double coincidence of wants. That is, no one can get what he or she wants by simply exchanging his or her product for another's product. Although money serves all of the functions listed, their problem will be solved directly by the use of money as a medium of exchange. They can each purchase what they want from one person and sell what they have to another person using money without concern for the mismatched product interests of the people they are dealing with.

13. A The liquidity trap concept is a concern of Keynesian economists. Classical economists worry that efforts by the government to fine-tune the economy will backfire. They believe that aggregate supply is vertical, and that an increase in the money supply has a significant and direct effect on total spending. Classical economists do indeed believe in the quantity theory of money.

14. B The aggregate supply curve will shift to the right when inputs become cheaper, more productive, or more plentiful. This would result from an increase in the labor force, an increase in education and training, or an increase in investment. With more investment in capital, workers have more equipment to work with and more output can be produced, shifting the AS curve to the right. Natural disasters and government policies that increase production costs will shift AS to the left.

15. A fixed output level in the long run at full employment output corresponds with which of the following shapes of the long-run Phillips curve?

- (A) Horizontal
- (B) Convex to the origin
- (C) Concave to the origin
- (D) Vertical
- (E) Linear with a slope of 1

16. Every choice results in a foregone best alternative, which economists call the

- (A) accounting cost
- (B) switching cost
- (C) inferior cost
- (D) average cost
- (E) opportunity cost

17. The aggregate demand curve has a negative slope in part because when the price level increases

- (A) the value of cash increases
- (B) imports become relatively more expensive
- (C) the real quantity of money increases
- (D) the interest rate increases
- (E) exports increase

18. When the value of the U.S. dollar appreciates relative to other currencies, which of the following is the most likely to occur?

- (A) Imports into the U.S. will decrease.
- (B) Exports from the U.S. will increase.
- (C) U.S. residents will take more vacations in foreign countries.
- (D) More foreign visitors will travel to the U.S.
- (E) Investments in U.S. securities will increase.

15. **D** If output is stationary in the long run at full employment output, this implies that the unemployment rate is the same regardless of the price level. Thus, the Phillips curve is vertical.

16. **E** The value of the next-best alternative foregone when a choice is made is called the opportunity cost. Accounting costs do not include opportunity costs. Switching and inferior costs are not common terms in economics, and the average cost is the total cost of producing a number of goods or services divided by that number.

17. **D** When the price level increases, the value of cash decreases and imports become relatively less expensive. Exports decrease because they become relatively more expensive. The real quantity of money decreases, thus increasing the interest rate and decreasing investment and real GDP.

18. **C** When the U.S. dollar appreciates relative to other currencies, this means that each dollar will purchase more of other currencies and it takes more of other currencies to purchase a dollar. Thus, imports into the U.S. are less expensive and will increase. Exports from the U.S. become more expensive and will decrease. Trips to the U.S. and U.S. securities also become relatively more expensive. On the other hand, since dollars buy relatively more in other countries, U.S. residents will take more vacations in foreign lands.

19. Among those hurt by inflation are

- I. borrowers at fixed interest rates
- II. individuals on fixed incomes
- III. those with savings earning fixed interest rates
- IV. restaurant owners

- (A) I and II only
- (B) II and III only
- (C) II and IV only
- (D) II only
- (E) II, III, and IV only

20. A difference between M1 and M2 is that

- (A) M1 is a first mortgage and M2 is a second mortgage
- (B) M2 is M1 plus assets that are more liquid
- (C) M2 includes savings deposits
- (D) M1 is larger than M2
- (E) M2 is always double M1

21. Which of the following will cause the aggregate demand curve to shift to the left?

- (A) Expectations of surpluses of goods in the future
- (B) A decrease in income taxes
- (C) An increase in government spending
- (D) An increase in foreign income
- (E) Expectations of inflation in the future

22. According to Keynesian economists,

- (A) the investment demand curve is relatively elastic
- (B) fiscal policy is more effective than monetary policy
- (C) the economy is inherently stable
- (D) inadequate supply is largely to blame for periods of stagnation
- (E) real GDP will naturally adjust to the full-employment level

19. E Borrowers with fixed interest rates are actually helped by inflation because the value of what they must pay back goes down. Individuals on fixed incomes are hurt by inflation, because the purchasing power of their income decreases. Savers earning fixed interest rates are hurt because the value of their holdings and interest income goes down. Finally, restaurant owners are hurt, because they must pay for the creation of new menus.

20. C M1 and M2 are different but overlapping measures of the money supply. M1 is the sum of currency, checking deposits, and travelers' checks. M2 is M1 plus savings deposits and some other less-liquid assets. Since M1 is part of M2, M1 cannot be larger than M2. At the same time, there is no reason why M2 would always be double M1.

21. A Decreases in taxes, increases in government spending or foreign income, or expectations of future inflation will shift the AD curve to the right. If consumers expect surpluses of goods in the future, they will purchase less now—shifting AD to the left—and purchase more in the future when the surpluses are expected to lead to lower price levels.

22. B Keynesian economists believe that investment demand is relatively inelastic, and thus unresponsive to changes in interest rates. They believe the economy is inherently unstable, that inadequate demand is largely to blame for periods of stagnation, and that real GDP needs a boost to reach the full-employment level. They also believe that the money supply has little effect on interest rates due to a relatively flat money demand curve, and that changes in interest rates have little effect on investment due to a relatively inelastic investment demand curve. For these reasons they see little use for monetary policy and prefer fiscal policy instead.

23. Which of the following results from stagflation?

- (A) Unemployment decreases
- (B) The price level decreases
- (C) The aggregate supply curve shifts to the right
- (D) The Phillips curve shifts to the right
- (E) Real GDP increases

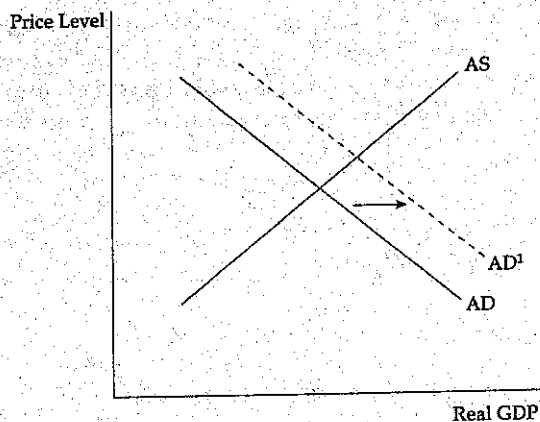
24. Which of the following will shift the demand curve for the Mexican peso to the left?

- (A) Speculation that the peso will increase in value
- (B) An increase in interest rates in Mexico relative to other countries
- (C) A lower rate of inflation in Mexico relative to other countries
- (D) An increase in incomes elsewhere relative to in Mexico
- (E) A decrease in the international demand for Mexican-made textiles

23. D Stagflation results from the aggregate supply curve shifting to the left, which increases unemployment and the price level and decreases real GDP. Since unemployment increases for a given inflation rate, the Phillips curve shifts to the right.

24. E Speculation that the peso will increase in value will increase the demand for the peso, shifting the demand curve to the right. If Mexico offers higher interest rates, investors will demand more pesos in order to put their funds in Mexican financial institutions. A lower rate of inflation in Mexico will draw additional consumption of Mexican goods, thus increasing peso demand. An increase in incomes elsewhere will lead foreign consumers to spend more and demand pesos. But a decrease in the international demand for Mexican-made textiles will decrease the demand for pesos used to purchase those textiles.





25. Which of the following is illustrated in the figure above?

- I. Stagflation
- II. Cost-push inflation
- III. Supply-side inflation
- IV. Demand-pull inflation

- (A) I and II only
- (B) II and III only
- (C) II and IV only
- (D) IV only
- (E) I and IV only

26. The long-run classical aggregate supply curve is

- (A) horizontal at market price
- (B) vertical at full-employment output
- (C) positively sloped
- (D) vertical at the physical limit for output
- (E) negatively sloped

25. **D** Stagflation is the combination of a rising price level and falling real GDP. This results from cost-push inflation, which is also called supply-side inflation because it results from a shift in the AS curve to the left. The figure in the question illustrates demand-pull inflation, which does not result in stagflation.

26. **B** The long-run classical AS curve is vertical because eventually any increases in the price level will be met with equivalent increases in input prices and the purchasing power of revenues will be unchanged. Thus, there is no incentive to produce more at higher price levels in the long run. Output levels in excess of the full-employment output (such as the physical limit for output) cannot be sustained in the long run because they put upward pressure on wages that shifts the short-run AS curve to the left and decreases equilibrium output. Full-employment output is the highest output level that can be attained without placing upward pressure on wages and resulting in long-run decrease in output.

27. Having a fractional reserve banking system means that
- (A) no single loan can be larger than 20 percent of the bank's holdings
  - (B) the central bank reserves the right to audit any bank at any time
  - (C) the central bank holds a certain fraction of GDP on reserve at all times
  - (D) the central bank must approve loans over \$1 million
  - (E) a bank cannot lend out all of its deposits
28. If technology makes production less expensive and at the same time exports decrease, which of the following will result with certainty?
- (A) Real GDP will increase
  - (B) Real GDP will decrease
  - (C) The price level will increase
  - (D) The price level will decrease
  - (E) Real output will remain the same
29. Which of the following must exist to allow for mutual benefit from specialization and trade between two countries?
- (A) comparative advantage in the production of a good or service
  - (B) absolute advantage in the production of a good or service
  - (C) increasing marginal returns in production
  - (D) absolute and comparative advantage in the production of a good or service
  - (E) absolute advantage and increasing marginal returns in production
30. The GDP Deflator differs from the CPI in that the GDP Deflator
- (A) is thought to slightly overestimate the inflation rate
  - (B) uses base year quantities in its calculations
  - (C) incorporates both current year prices and base year prices
  - (D) incorporates current year quantities in its calculations
  - (E) is the favored price index of the U.S. government
27. E Under a fractional reserve banking system, a fraction of total deposits must be held on reserve and the rest can be lent out. This prevents a bank from lending out all of its deposits.
28. D The improvement in technology will shift the AS curve to the right, which decreases the price level and increases real GDP. The decrease in exports will shift the AD curve to the left, decreasing the price level and decreasing real GDP. Since the two events have opposing influences on real GDP, the net result is uncertain. However, both events decrease the price level, so it is certain that the price level drops.
29. A Neither an absolute advantage nor increasing marginal returns in the production of a good is necessary to allow mutual benefit from specialization and trade. The opportunity for two countries to benefit from specialization and trade rests only on the existence of a comparative advantage in the production of a good or service.
30. D It is the CPI that uses base year quantities, is favored by the U.S. government, and is thought to slightly overestimate the inflation rate. Both indexes incorporate both current year and base year prices. The GDP Deflator differs from the CPI in its use of current year quantities in its calculations.

31. It is a monetarist point of view that
- (A) monetary policy should be used to fine-tune the economy
  - (B) crowding out is not a problem
  - (C) the money supply should be increased steadily
  - (D) the velocity of money is unstable
  - (E) the economy is inherently unstable

32. Inflation in excess of 50 percent per year is called
- (A) super inflation
  - (B) hyperinflation
  - (C) galloping inflation
  - (D) creeping inflation
  - (E) stealth inflation

33. Droughts, technical glitches, and restrictions on the use of resources can all result in
- (A) a vertical Phillips curve
  - (B) supply shocks
  - (C) structural shocks
  - (D) demand-pull inflation
  - (E) deflation

34. On a bank's balance sheet, which of the following is considered a liability?
- (A) Required reserves
  - (B) Excess reserves
  - (C) Loans
  - (D) Deposits
  - (E) Reserve ratio

31. **C** Monetarists suggest that the use of monetary policy to fine-tune the economy could be destabilizing. They also believe that the crowding out of private investment due to increased interest rates substantially weakens fiscal policy. They see velocity and the economy in general to be relatively stable. Rather than active fiscal or monetary policy, they favor a steady increase in the money supply at a rate equal to the growth in real output.

32. **B** Galloping inflation is unsteady inflation that exceeds 10 percent per year. Creeping inflation is steady inflation at a low rate. Super and stealth inflation are not terms commonly used by economists. Hyperinflation is inflation in excess of 50 percent per year.

33. **B** Each of these events would shift the AS curve to the left, increasing inflation and unemployment. A vertical Phillips curve implies that unemployment is constant, so that is ruled out, as is deflation. Demand-pull inflation is caused by an increase in aggregate demand, not a decrease in aggregate supply. Structural shocks result from changes in the structure of aggregate demand. These events described are all sources of supply shocks.

34. **D** Reserves are assets of the bank, as are loans, which must be repaid to the bank. Since depositors and not the bank own deposits, deposits are liabilities that must eventually be returned to the owners.

35. The primary functions of an economic system are to answer the questions
- (A) what, how, and for whom to produce
  - (B) when, where, and why to produce
  - (C) how to maximize profits and minimize time spent making things
  - (D) how fast, how much, and how often to produce
  - (E) where does the money go and how can those in society get some
36. In order to reduce or eliminate crowding out, expansionary fiscal policy can be accompanied by
- (A) an increase in government spending
  - (B) a decrease in investment
  - (C) expansionary monetary policy
  - (D) contractionary monetary policy
  - (E) an increase in the interest rate
37. In order to go from national income to GDP, one must
- (A) add depreciation expenses
  - (B) add indirect taxes
  - (C) subtract subsidies
  - (D) add the net income of foreigners
  - (E) all of the above
35. A The primary functions of an economic system are to answer the questions of what, how, and for whom to produce. When an economic system works optimally, the answers to these questions lead to allocative, productive, and distributive efficiency, respectively. The other questions listed may be important, but they are secondary to these three fundamental questions.
36. C Crowding out occurs when an increase in government spending (which constitutes expansionary fiscal policy) increases the interest rate and decreases investment. Thus, an increase in government spending, a decrease in investment, or an increase in the interest rate would all make the problem continue. Contractionary monetary policy would only increase the interest rate more, but expansionary monetary policy could relieve upward pressures on the interest rate and diminish the crowding out effect.
37. E Depreciation expenses are subtracted from corporate profits before the NI calculation, so they must be added to capture the value of output needed to replace or repair worn-out buildings and machinery. Indirect taxes are part of the expenditure on goods and services (GDP) but they do not become income for suppliers of productive services (NI) so they must be added to NI to find GDP. Subsidy payments are part of NI but are not made in exchange for goods and services so they must be subtracted from NI to find GDP. Finally, GDP includes the income of foreigners working within the country whose GDP is being calculated but not the income of citizens working abroad. Thus, the net income of foreigners must be added to NI to obtain GDP.

38. Which of the following creates the tradeoff depicted by the Phillips curve?
- (A) A rightward shift in the aggregate supply curve
  - (B) An increase in input costs that corresponds with an increase in unemployment
  - (C) An increase in output that corresponds with a decrease in the price level
  - (D) A leftward shift in the aggregate supply curve
  - (E) A rightward shift in the aggregate demand curve
39. In the aggregate expenditure/Keynesian Cross model, saying that some components are autonomous means that they
- (A) do not depend on income
  - (B) do not depend on the price level
  - (C) are determined entirely by the price level
  - (D) do not depend on the interest rate
  - (E) are determined entirely by income
40. According to Say's Law,
- (A) when price goes up, supply goes up
  - (B) it is better to give than receive
  - (C) demand creates its own supply
  - (D) supply creates its own demand
  - (E) demand and supply are mutually independent
41. A budget deficit exists when
- (A) the total amount that the government owes at a given time is positive
  - (B) government spending exceeds tax collections for a given period
  - (C) exports exceed imports in a given year
  - (D) imports exceed exports in a given year
  - (E) the total amount that the government owes at a given time is negative

38. E The Phillips curve depicts a tradeoff between inflation and unemployment—when one increases, the other decreases. Shifts in the aggregate supply curve result in inflation and unemployment both increasing or both decreasing. An increase in input costs will shift AS to the left and increase the price level; the corresponding increase in unemployment creates a positive relationship between inflation and unemployment, not a tradeoff. An increase in output decreases unemployment, and when this is accompanied by a decrease in the price level, again no tradeoff between inflation and unemployment results. It is a shift in the AD curve that causes inflation to increase and unemployment to decrease or vice versa.
39. A In the aggregate expenditure/Keynesian Cross model, investment, government spending, and net exports are typically assumed to be autonomous. This means they do not depend on income. Interest rates and prices effect some of these items but are not their sole determinants.
40. D Classical economists believe in Say's Law, which suggests that when supplying goods, workers earn money to spend or save, and savings end up being borrowed and spent. Thus, they say that supply creates its own demand.
41. B The total amount that the government owes at a given time has to do with the national debt, not the balance of the budget. Exports compared with imports have to do with the trade surplus or deficit. It is the comparison of government spending and tax collections for a given period (usually a year) that determines whether or not a budget deficit exists.

42. The money supply will increase as a result of which of the following?
- (A) A decrease in the required reserve ratio
  - (B) An increase in the discount rate
  - (C) The selling of bonds by the Federal Reserve
  - (D) An increase in the fraction of deposits that must be held by banks
  - (E) Open market operations involving the sale of government securities
43. Marginal propensity to consume is
- (A) the change in consumption divided by the change in prices
  - (B) the cost of consuming one more item
  - (C) the change in consumption divided by the change in income
  - (D) the percentage change in consumption divided by the percentage change in prices
  - (E) the concept that it is more satisfying to consume than save
44. A professional singer who loses his voice may have a hard time finding employment, because he or she has no marketable skills. This is an example of which of the following?
- (A) Frictional unemployment
  - (B) Structural unemployment
  - (C) Cyclical unemployment
  - (D) Seasonal unemployment
  - (E) Discouraged workers
42. A A decrease in the required reserve ratio will allow banks to loan out more of their deposits and increase the money multiplier, thus increasing the money supply. Each of the other actions will decrease the money supply.
43. C The marginal propensity to consume is the change in consumption divided by the change in income. In other words, the portion of each additional dollar that is spent on consumption. Only income, not prices, is varied to determine the MPC.
44. B Structural unemployment is the result of a skills mismatch, as would occur if a singer could no longer sing and had no other marketable skills.

45. The practice of buying at a low price and selling at a high price for a certain profit is called

- (A) arbitrage
- (B) skimming
- (C) price fixing
- (D) price discrimination
- (E) predatory pricing

46. Which of the following is the most likely to be a deterrent to growth in the economy?

- (A) Spending on education and training
- (B) Increases in capital
- (C) Increases in the interest rate
- (D) Expenditures on research and development
- (E) Increased capacity utilization

47. According to Thomas Malthus and his followers,

- (A) technological snafus will be the parasite of the twenty-first century
- (B) technology will replace human labor inputs
- (C) population will grow geometrically and food production will grow more slowly
- (D) increases in efficiency will outpace population growth and lead to unsold output
- (E) by the year 2050, there will be virtually no worthwhile new inventions to be made

45. A Skimming could mean charging a high price to those who will pay it, and subsequently lowering it to draw the highest possible price from each income group. Price fixing is when groups of firms collude to set a high price. Price discrimination is the practice of simultaneously charging different consumers different prices for the same good or service. Predatory pricing occurs when firms charge a price below average cost in order to deter competitors. Arbitrage is the practice of gaining a certain profit with the ability to buy at a low price and sell at a high price. The key difference here is the certainty of the profit. Anyone can try to skim or fix prices or price discriminate, but when there is a certainty of profits, arbitrage is the name of the game.

46. C Spending on education and training leads to skilled and productive workers that help the economy grow. Increases in capital give workers more equipment to work with and enable them to expand output. Research and development leads to improvements in technology that assist in the production process. Increased capacity utilization brings production levels from within the production possibility frontier to points closer to the frontier itself, increasing output and growth. Increases in the interest rate, however, deter investment in capital among other sources of growth.

47. C Thomas Malthus and his followers argued that population would grow geometrically while food production would grow arithmetically. Thus, the population would outgrow the availability of food and famine would result.

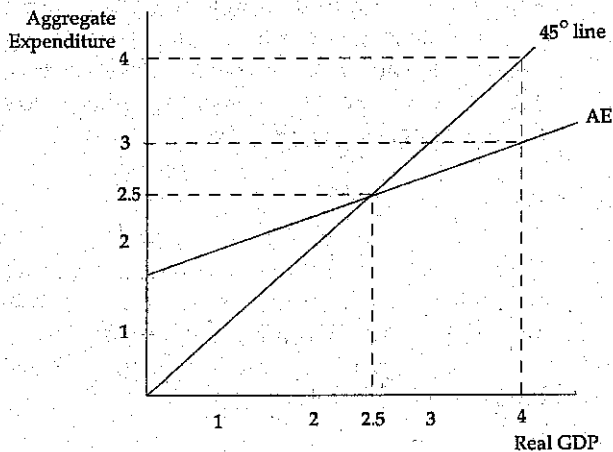
48. Julia would spend \$30 per week even if she made no income. Her weekly income is \$1,000 and her marginal propensity to consume is 0.5. How much does Julia save per week?

- (A) \$500
- (B) \$35
- (C) \$530
- (D) \$80
- (E) \$470

49. Classical economists generally believe that

- I. wages fluctuate quickly
- II. Say's Law does not hold
- III. input and output prices will stay in line with each other
- IV. the government should not worry about maintaining aggregate demand at an adequate level

- (A) II and IV only
- (B) I, III, and IV only
- (C) I and IV only
- (D) II and III only
- (E) I, II, and III only



50. In the figure above, when real GDP is \$4 trillion, unplanned investment is

- (A) zero
- (B) \$1 trillion
- (C) \$1.5 trillion
- (D) \$2.5 trillion
- (E) \$3 trillion

48. E Julia's autonomous consumption is \$30 and she spends half of each additional dollar she earns, so she spends a total of  $\$30 + \$500 = \$530$ . This leaves  $\$1,000 - \$530 = \$470$  for her savings.

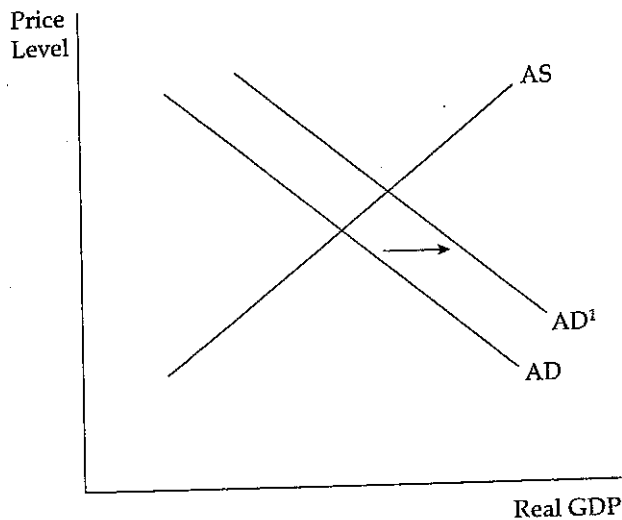
49. B Classical economists believe in Say's Law. They also believe that wages and other input prices fluctuate quickly to stay in line with output prices. For both of these reasons, they feel that the economy is inherently stable and the government does not need to intervene in order to influence aggregate demand.

50. B When real GDP is \$4 trillion, planned aggregate expenditures are \$3 trillion, \$1 trillion less than real GDP. The \$1 trillion worth of goods that are produced but not purchased become unplanned investment in the form of an unintended increase in firm inventories.



51. The real interest rate is
- (A) what one sees when looking at bank literature
  - (B) the nominal interest rate divided by the inflation rate
  - (C) the nominal interest rate plus the anticipated inflation rate
  - (D) the nominal interest rate plus the compound interest rate
  - (E) the nominal interest rate minus anticipated inflation
52. The formula for the money multiplier is
- (A)  $\frac{1}{(1-MPC)}$
  - (B)  $\frac{1}{(1-\text{Required reserve ratio})}$
  - (C)  $\frac{MPC}{\text{Required reserve ratio}}$
  - (D)  $\frac{1}{\text{Required reserve ratio}}$
  - (E)  $\frac{(1-MPC)}{MPC}$
53. When full-employment output exceeds equilibrium output in the aggregate expenditure/Keynesian Cross model,
- (A) injections exceed leakages
  - (B) a recessionary gap exists
  - (C) an inflationary gap exists
  - (D) leakages equal injections
  - (E) Keynes would call for a decrease in government spending
54. If oil supplies are fixed, which of the following is the least likely to happen?
- (A) Substitutes will replace oil as the primary source of automobile fuel.
  - (B) There will be structural unemployment in the oil industry.
  - (C) Increasing oil prices will spur the development of alternative energy sources.
  - (D) We will use up all of the oil.
  - (E) As oil becomes in very short supply, its price will become prohibitively high.
51. E What one sees in bank literature is the nominal interest rate. The effective annual yield, which accounts for compound interest, is also a nominal rate. The real interest rate is the nominal interest rate minus anticipated inflation.
52. D The money multiplier does not involve the marginal propensity to consume, which rules out (A), (C), and (E). The correct answer is  $\frac{1}{\text{Required reserve ratio}}$ .
53. B When full-employment output exceeds equilibrium output, a recessionary gap exists. This means that leakages (taxes, imports, and savings) exceed injections (investment, government spending, exports). Keynes would call for an increase in government spending to help bring the equilibrium output level up to full-employment output.
54. D As pointed out by Harold Hotelling among others, the price mechanism allocates non-renewable resources in such a way that they are unlikely to be completely depleted. As oil supplies dwindle, the price will become prohibitively high for any form of common use. At the same time, increasing oil prices will encourage the development of alternative energies and more efficient energy use.

55. The Keynesian AS curve is
- (A) horizontal at low levels of output
  - (B) vertical at all price levels
  - (C) positively sloped at low price levels
  - (D) negatively sloped at high price levels
  - (E) positively sloped at all output levels
56. Suppose that Tiger Woods buys a golf ball in England for \$1 and the marginal propensity to consume in England is 0.75. What is the total increase in England's real GDP resulting from Mr. Woods' purchase?
- (A) \$1
  - (B) \$1.25
  - (C) \$1.75
  - (D) \$4
  - (E) \$7.50
57. If prices are expected to rise more slowly in the future,
- (A) the Phillips curve will shift to the right
  - (B) the actual rate of inflation will increase
  - (C) the actual inflation rate will remain steady unless supply shocks set in
  - (D) the government will carry out contractionary fiscal policy to prevent this occurrence
  - (E) these expectations will become reality
58. A decrease in real investment stemming from higher interest rates due to government purchases is most commonly called
- (A) crowding out
  - (B) zero policy effectiveness
  - (C) the Limbaugh effect
  - (D) fiscal defeat
  - (E) empty policy
55. A The Keynesian AS curve is horizontal at low levels of output because Keynesians believe that excess capacity at these levels of output will allow output to increase without placing upward pressure on the price level.
56. D The autonomous spending multiplier is the number by which an initial amount of new autonomous spending (spending that does not depend on income) should be multiplied to find the resulting increase in real GDP. The autonomous spending multiplier is  $\frac{1}{(1-MPC)}$  which in this case is  $\frac{1}{(1-0.75)} = \frac{1}{0.25} = 4$ . Thus, Tiger Woods's \$1 purchase will result in an increase in England's real GDP of  $4 \times \$1 = \$4$ .
57. E Expectations about inflation are self-fulfilling. If individuals expect price levels to rise more slowly, they will build these expectations into their wage and price demands and thereby cause prices to rise more slowly. Since inflation will decrease for any given unemployment rate, the Phillips curve will shift to the left. If the government were to carry out contractionary fiscal policy, price levels would increase even more slowly.
58. A Crowding out occurs when the demand for funds to finance government purchases increases the interest rate and thereby decreases real investment. The resulting decrease in aggregate demand is typically smaller than the increase due to the government spending, so the intended fiscal policy is not fruitless.



59. According to the theory of rational expectations, an increase in government spending to increase AD as illustrated in the figure above will be met with which of the following?

- (A) A sustainable increase in real GDP
- (B) An increase in AS
- (C) A countervailing decrease in AD
- (D) A decrease in AS
- (E) Apathy and inaction

60. The balanced budget multiplier is

- (A) -0.5
- (B) 0
- (C) 1
- (D) 2
- (E) 10

59. **D** According to the theory of rational expectations, people learn to anticipate government policies designed to influence the economy, and build the policies' effects into their wage and price demands. Thus, anticipating the AD shift and the subsequent increase in the price level, they will demand higher prices and wages and shift AS back to the left. The net result of the government policy is thus inflation with no increase in real GDP.

60. **C** When an increase in government spending is accompanied by an equivalent increase in taxes in order to balance the budget, the government spending multiplier and the tax multiplier are combined to form the balanced budget multiplier:

$$\frac{1}{1-MPC} + \left( -\frac{MPC}{1-MPC} \right) = \frac{1-MPC}{1-MPC} = 1$$