1. If nominal wages cannot be cut, then the only way to cut real wages is by:
   A) inflation.
   B) unions.
   C) legislation.
   D) productivity increases.

2. The rate of inflation is the:
   A) median level of prices.
   B) average level of prices.
   C) percentage change in the level of prices.
   D) measure of the overall level of prices.

3. Survey evidence indicates that economists worry ______ the general public does about prices increasing more rapidly than their incomes.
   A) more than
   B) less than
   C) about the same as
   D) more intensely than

4. Assume that the demand for real money balance \( \frac{M}{P} \) is \( \frac{M}{P} = 0.6Y - 100i \), where \( Y \) is national income and \( i \) is the nominal interest rate. The real interest rate \( r \) is fixed at 3 percent by the investment and saving functions. The expected inflation rate equals the rate of nominal money growth.
   a. If \( Y \) is 1,000, \( M \) is 100, and the growth rate of nominal money is 1 percent, what must \( i \) and \( P \) be?
   b. If \( Y \) is 1,000, \( M \) is 100, and the growth rate of nominal money is 2 percent, what must \( i \) and \( P \) be?

5. According to the Fisher effect, the nominal interest rate moves one-for-one with changes in the:
   A) inflation rate.
   B) expected inflation rate.
   C) \( \text{ex ante} \) real interest rate.
   D) \( \text{ex post} \) real interest rate.

6. In a country on a gold standard, the quantity of money is determined by the:
   A) government.
   B) central bank.
   C) amount of gold.
   D) buying and selling of government securities.

7. The real return on holding money is:
   A) the real interest rate.
   B) minus the real interest rate.
   C) the inflation rate.
   D) minus the inflation rate.

8. The general demand function for real balances depends on the level of income and the:
   A) real interest rate.
   B) nominal interest rate.
   C) rate of inflation.
   D) price level.
9. The concept of monetary neutrality in the classical model means that an increase in the money supply will increase:
   A) real GDP.
   B) real interest rates.
   C) nominal interest rates.
   D) both saving and investment by the same amount.

10. Percentage change in $P$ is approximately equal to the percentage change in:
    A) $M$.
    B) $M$ minus percentage change in $Y$.
    C) $M$ minus percentage change in $Y$ plus percentage change in velocity.
    D) $M$ minus percentage change in $Y$ minus percentage change in velocity.

11. According to the classical theory of money, inflation does not make workers poorer because wages increase:
    A) faster than the overall price level.
    B) more slowly than the overall price level.
    C) in proportion to the increase in the overall price level.
    D) in real terms during periods of inflation.

12. When a person purchases a 90-day Treasury bill, he or she cannot know the:
    A) ex post real interest rate.
    B) ex ante real interest rate.
    C) nominal interest rate.
    D) expected rate of inflation.

13. The quantity equation, viewed as an identity, is a definition of the:
    A) quantity of money.
    B) quantity of transactions.
    C) price level.
    D) transactions velocity of money.

14. Variable inflation hurts both debtors and creditors because:
    A) inflation makes the money-fixed assets of creditors worth less.
    B) inflation makes the money-fixed liabilities of debtors worth less.
    C) most debtors and creditors are risk averse.
    D) most debtors and creditors are risk neutral.

15. To increase the money supply, the Federal Reserve:
    A) buys government bonds.
    B) sells government bonds.
    C) buys corporate stocks.
    D) sells corporate stocks.

16. The banking system creates:
    A) liquidity.
    B) wealth.
    C) reserves.
    D) currency.

17. If the ratio of reserves to deposits ($rr$) increases, while the ratio of currency to deposits ($cr$) is constant and the monetary base ($B$) is constant, then:
    A) it cannot be determined whether the money supply increases or decreases.
    B) the money supply increases.
    C) the money supply decreases.
    D) the money supply does not change.
18. If many banks fail, this is likely to:
   A) cause surviving banks to lower their ratios of reserves to deposits.
   B) cause surviving banks to raise their ratios of reserves to deposits.
   C) have no effect on the ratio of reserves to deposits in surviving banks.
   D) cause surviving banks to hold less currency.

19. The only tax that those in the underground economy probably cannot evade is the:
   A) personal income tax.
   B) sales tax.
   C) inflation tax.
   D) corporate income tax.

20. Some nonmonetary assets are called near money because they:
   A) are controlled by the Federal Reserve.
   B) earn about the same interest rate as money.
   C) have nearly the same liquidity as money.
   D) generate the same velocity as money.

21. If the proceeds of all loans are deposited somewhere in the banking system and if \( rr \) denotes the reserve-deposit ratio, then the total money supply is:
   A) reserves divided by \( rr \).
   B) \( 1/rr \).
   C) reserves times \( rr \).
   D) reserves divided by \((1 - rr)\).

22. In a system with fractional-reserve banking:
   A) all banks must hold reserves equal to a fraction of their loans.
   B) no banks can make loans.
   C) the banking system completely controls the size of the money supply.
   D) all banks must hold reserves equal to a fraction of their deposits.

23. Liabilities of banks include:
   A) reserves.
   B) currency in the hands of the public.
   C) loans to customers.
   D) demand deposits.

24. In a system with 100-percent-reserve banking:
   A) all banks must hold reserves equal to 100 percent of their loans.
   B) no banks can make loans.
   C) the banking system completely controls the size of the money supply.
   D) no banks can accept deposits.

25. The money supply will increase if the:
   A) currency-deposit ratio increases.
   B) reserve-deposit ratio increases.
   C) monetary base increases.
   D) discount rate increases.

26. High-powered money is another name for:
   A) currency.
   B) demand deposits.
   C) the monetary base.
   D) \( M^3 \).
27. If the monetary base fell and the currency-deposit ratio rose but the reserve-deposit ratio remained the same, then:
   A) the money supply would fall, but not by as much as it would have fallen if the reserve-deposit ratio had risen.
   B) the money supply would fall, but not by as much as it would have fallen if the reserve-deposit ratio had fallen.
   C) the money supply would fall more than it would have fallen if the reserve-deposit ratio had risen.
   D) it is impossible to be certain whether the money supply would fall or rise in this case.

28. Spells of unemployment end when the unemployed person finds a job or:
   A) withdraws from the labor force.
   B) enters the labor force.
   C) runs out of unemployment insurance compensation.
   D) refuses to answer unemployment survey questions.

29. The unemployment rate in the United States since 1948 has:
   A) never been close to zero.
   B) gravitated toward a steady-state rate of zero.
   C) remained constant from year to year.
   D) equaled the natural rate of unemployment in every year.

30. Data on unemployment in the United States show that:
   A) most spells of unemployment are long.
   B) most weeks of unemployment are attributable to the long-term unemployed.
   C) members of the labor force over age 55 have the highest unemployment rates.
   D) the average unemployment rate for the United States was lower in the 1980s than in the 1970s.

31. When insiders have a much greater impact on the wage bargaining process than do outsiders, the negotiated wage is likely to be ______ the equilibrium wage.
   A) much greater than
   B) much less than
   C) almost equal to
   D) about one-half of

32. In 2000 in the United States among labor-force members ages 16-19, the highest unemployment rate was for:
   A) black females.
   B) black males.
   C) white females.
   D) white males.

33. When Henry Ford paid his workers $5 per day when the prevailing wage was between $2 and $3 a day:
   A) it greatly increased his company's costs.
   B) workers reduced their work efforts because they felt they “had it made.”
   C) Ford proved the efficiency-wage theory was wrong.
   D) it raised the efficiency of his workers.

34. All of the following are possible explanations for the trends in the U.S. unemployment rate in the last half of the twentieth century except:
   A) the changing composition of the U.S. work force.
   B) sectoral shifts.
   C) a generally increasing real value of the minimum wage.
   D) the links between unemployment and productivity.
35. If the steady-state rate of unemployment equals 0.125 and the fraction of unemployed workers who find jobs each month (the rate of job findings) is 0.56, then the fraction of employed workers who lose their jobs each month (the rate of job separations) must be:
   A) 0.08.
   B) 0.125.
   C) 0.22.
   D) 0.435.

36. Which of the following is an example of frictional unemployment?
   A) Dave searches for a new job after voluntarily moving to San Diego.
   B) Elaine is willing to work for less than the minimum wage, but employers cannot hire her.
   C) Bill is qualified and would like to be an airline pilot, but airlines do not find it profitable to hire him at the wage established by the airline pilot's union.
   D) Joan is willing to work at the going wage, but there are no jobs available.

37. Entry into and exit from the labor force are important to the determination of the unemployment rate because:
   A) more than one-half of the unemployed have only recently entered the labor force.
   B) most of the unemployed are young workers still looking for their first job.
   C) discouraged workers are counted as part of the labor force.
   D) almost one-half of all spells of unemployment end in the unemployed person's withdrawal from the labor market.

38. Efficiency-wage theories suggest that a firm may pay workers more than the market-clearing wage for all of the following reasons except to:
   A) reduce labor turnover.
   B) improve the quality of the firm's labor force.
   C) increase worker effort.
   D) reduce the firm's wage bill.

39. Sectoral shifts:
   A) lead to wage rigidity.
   B) explain the payment of efficiency wages.
   C) depend on the level of the minimum wage.
   D) make frictional employment inevitable.

40. According to studies of individual unemployed workers, these workers are most likely to find a job:
   A) about three months before their unemployment insurance runs out.
   B) within a few weeks of their unemployment insurance running out.
   C) about three months after their unemployment insurance runs out.
   D) at a time not influenced by the remaining number of weeks of unemployment insurance.

41. If the number of employed workers equals 200 million and the number of unemployed workers equals 20 million, the unemployment rate equals _____ percent (rounded to the nearest percent).
   A) 0
   B) 9
   C) 10
   D) 20

42. The unemployment insurance system may be desirable because unemployment insurance:
   A) raises the natural rate of unemployment.
   B) reduces the rate of job finding.
   C) increases workers' uncertainty about their incomes.
   D) induces workers to reject unattractive job offers.
43. If capital grows at 3 percent per year and labor grows at 1 percent per year, and capital's share is 1/3 while labor's share is 2/3, if there is no technological progress and the neoclassical assumptions hold, the growth rate of output will be:
A) 1-1/3 percent per year.
B) 1-2/3 percent per year.
C) 3 percent per year.
D) 2-1/3 percent per year.

44. Total factor productivity may be measured by:
A) subtracting the rate of growth of capital input and the rate of growth of labor input from the rate of growth of output.
B) subtracting the rate of growth of capital input, multiplied by capital's share of output, plus the rate of growth of labor input, multiplied by labor's share of output, from the rate of growth of output.
C) adding the rate of growth of capital input to the rate of growth of labor input.
D) adding the rate of growth of capital input, multiplied by capital's share of output, to the rate of growth of labor input, multiplied by labor's share of output.

45. In year 1, capital stock was 6, labor input was 3 and output was 12. In year 2, capital was 7, labor was 4, and output was 14. If shares of labor and capital were each 1/2, between the two years, total factor productivity:
A) increased by 1/12.
B) increased by 1/18.
C) decreased by 1/12.
D) decreased by 1/18.

46. Possible explanations for sticky magazine prices include the hypotheses that the costs of charging the wrong price may ______, and perhaps customers ______ frequent price changes inconvenient.
A) be great; do not find
B) be great; find
C) not be great; find
D) not be great; do not find

47. For a fixed money supply, the aggregate demand curve slopes downward because at a lower price level real money balances are ______ generating a ______ quantity of output demanded.
A) higher; greater
B) higher; smaller
C) lower; greater
D) lower; smaller

48. Which of the following is an example of a demand shock?
A) a large oil-price increase
B) the introduction and greater availability of credit cards
C) a drought that destroys agricultural crops
D) unions obtain a substantial wage increase

49. Most economists believe that prices are:
A) flexible in the short run but many are sticky in the long run.
B) flexible in the long run but many are sticky in the short run.
C) sticky in both the short and long runs.
D) flexible in both the short and long runs.

50. In the aggregate demand/aggregate supply model, long-run equilibrium occurs at the combination of output and prices where:
A) aggregate demand equals long-run aggregate supply.
B) aggregate demand equals short-run aggregate supply.
C) aggregate demand equals short-run and long-run aggregate supply.
D) short-run aggregate supply equals long-run aggregate supply.
51. If the short-run aggregate supply curve is horizontal, then changes in aggregate demand affect:
   A) level of output but not prices.
   B) prices but not level of output.
   C) both prices and level of output.
   D) neither prices nor level of output.

52. A 5-percent reduction in the money supply will, according to most economists, reduce prices 5 percent:
   A) in both the short and long runs.
   B) in neither the short nor long run.
   C) in the short run but lead to unemployment in the long run.
   D) in the long run but lead to unemployment in the short run.

53. Starting from long-run equilibrium, if the velocity of money increases (due to, for example, the invention of automatic teller machines) and no action is taken by the government:
   A) prices will rise both in the short run and the long run.
   B) output will rise both in the short run and the long run.
   C) prices will rise in the short run and output will rise in the long run.
   D) output will rise in the short run and prices will rise in the long run.

54. The relationship between the quantity of output demanded and the aggregate price level is called:
   A) aggregate demand.
   B) aggregate supply.
   C) aggregate output.
   D) aggregate consumption.

55. The relationship between the quantity of goods and services supplied and the price level is called:
   A) aggregate demand.
   B) aggregate supply.
   C) aggregate investment.
   D) aggregate production.

56. When the Federal Reserve increases the money supply, at a given price level the amount of output demanded is ______ and the aggregate demand curve shifts ______.
   A) greater; inward
   B) greater; outward
   C) lower; inward
   D) lower; outward

57. If the demand for money increases, this will:
   A) increase velocity.
   B) decrease velocity.
   C) have no effect on velocity.
   D) cause the Fed to increase the money supply.

58. If the short-run aggregate supply curve is horizontal, an increase in union aggressiveness that pushes wages and prices up will result in ______ prices and ______ output in the short run.
   A) higher; lower
   B) lower; higher
   C) higher; higher
   D) lower; lower

59. Starting from long-run equilibrium, without policy intervention, the long-run impact of an adverse supply shock is that prices will:
   A) be permanently higher and output will be restored to the natural rate.
   B) return to the old level and output will be restored to the natural rate.
   C) be permanently higher and output will be permanently lower.
   D) return to the old level, but output will be permanently lower.
Answer Key

1. A
2. C
3. B
4. a. $i = 4$ percent, $P = \frac{1}{2}$  b. $i = 5$ percent, $P = 1$
5. B
6. C
7. D
8. B
9. C
10. C
11. C
12. A
13. D
14. C
15. A
16. A
17. C
18. B
19. C
20. C
21. A
22. D
23. D
24. B
25. C
26. C
27. A
28. A
29. A
30. B
31. A
32. B
33. D
34. C
35. A
36. A
37. D
38. D
39. D
40. B
41. B
42. D
43. B
44. B
45. C
46. C
47. A
48. B
49. B
50. C
51. A
52. D
53. D
54. A
55. B
56. B
57. B
58. A
59. B