Chapter 12 End of Chapter Quiz

1. Suppose potential output grows 2 percent per year and the natural rate of unemployment is constant at 6 percent. In 2020, the unemployment rate is 7 percent. Assuming Okun's law holds true, what is the output gap in 2020 and what is the unemployment rate in 2021 if output grows 5 percent from 2020 to 2021?

   A. output gap 2020: 2 percent; unemployment rate 2021: 5 percent
   B. output gap 2020: −2 percent; unemployment rate 2021: 5 percent
   C. output gap 2020: −2 percent; unemployment rate 2021: 5.5 percent
   D. output gap 2020: −1 percent; unemployment rate 2021: 5.5 percent

Answer: C

2. Suppose the growth rate of potential output rises. The behavior of the output gap (the fluctuations of output around potential) does not change. Do NBER recessions become more or less common?

   A. NBER recessions become neither more nor less common because the output gap is the same for each growth rate of potential output.
   B. NBER recessions become neither more nor less common because the turning points of the recession will not change.
   C. NBER recessions will become less common.
   D. NBER recessions will become more common.

Answer: C

3. Suppose a country bans trade with other countries, so net exports are always zero. How would this affect the slope of the *AE* curve?

   A. The*AE* curve becomes steeper because expenditures become more sensitive to the interest rate.
   B. The *AE* curve becomes steeper because expenditures become less sensitive to the interest rate.
   C. The*AE* curve becomes flatter because expenditures become more sensitive to the interest rate.
   D. The*AE* curve becomes flatter because expenditures become less sensitive to the interest rate.

Answer: B

4. Suppose the Fed raises the real interest rate and consumer confidence falls around the same time (as occurred in 1990). How do these two events affect the *AE* curve?

   A. The*AE* curve shifts to the left and there is a movement along the *AE* curve to the right.
   B. The*AE* curve shifts to the left and there is no movement along the *AE* curve.
   C. The *AE* curve shifts to the left and there is a movement along the *AE* curve to the left.
   D. The*AE* curve shifts to the right and there is a movement along the *AE* curve to the left.

Answer: C

5. Suppose the economy starts with output at potential. Then a supply shock occurs: oil prices rise sharply. The Fed is *partly* accommodative: it raises the real interest rate, but not by enough to keep inflation from rising. What happens to inflation?

   A. The inflation rate will be permanently higher, but by less than the supply shock.
   B. The inflation rate will be temporarily higher, but by less than the supply shock.
   C. The inflation rate will be permanently higher, but by more than the supply shock.
   D. The inflation rate will be temporarily higher, but by more than the supply shock.

Answer: A

6. Suppose oil prices jump up and the Fed is completely accommodative: it keeps the real interest rate constant. How must the Fed adjust the nominalinterest rate? How must it adjust the money supply?

- **A.** The Fed will increase the nominal interest rate by reducing the money supply.
- **B.** The Fed will decrease the nominal interest rate by increasing the money supply.
- **C.** The Fed will keep the nominal interest rate constant by leaving the money supply unchanged.
- **D.** The Fed will keep the nominal interest rate constant by increasing the money supply.

Answer: D

7. Suppose again that oil prices increase. This has two effects: (a) firms' costs jump up and (b) since more of consumers' income goes to pay for oil imports, there is less to spend on U.S. goods. (We emphasized (a) but ignored (b) in the chapter.) Assume the Fed holds the real interest rate constant. What happens to output and inflation?

- **A.** Output will stay constant and inflation will increase by as much as the firms' costs.
- **B.** Output will stay constant and inflation will increase by less than the firms' costs.
- **C.** Output will decrease and inflation will increase by less than the firms' costs.
- **D.** Output will decrease and inflation will increase by as much as the firms' costs.

Answer: C

8. Suppose the economy starts with output at potential and constant inflation. In 2020, oil prices jump up. Initially, the Fed is accommodative. In 2023, a new Fed chair is appointed and resolves to return inflation to the level before 2020. What are the long-run effects on output, inflation and the real interest rate?

- **A.** output declines, inflation falls to levels observed in 2019, and the real interest rate increases
- **B.** output declines, inflation falls to levels observed in 2019, and the real interest rate decreases
- **C.** output is at potential, inflation falls to levels observed in 2019, and the real interest rate decreases
- **D.** output is at potential, inflation falls to levels observed in 2019, and the real interest rate is at levels observed in 2019

Answer: D

9. Suppose that expected inflation is always zero: $\pi^e = 0$and the real interest rate rises temporarily, as in Figure 12.21. Compare the effects on inflation under adaptive expectations and under the alternative assumption that $\pi^e = 0$.

- **A.** Under adaptive expectations inflation is reduced permanently; with $\pi^e = 0$ inflation is reduced temporarily and returns to its initial level.
- **B.** Under adaptive expectations inflation is reduced temporarily; with$\pi^e = 0$ inflation is reduced temporarily as well and returns to its initial level.
- **C.** Under adaptive expectations inflation is reduced permanently; with$\pi^e = 0$ inflation is reduced permanently as well.
- **D.** Under adaptive expectations inflation is reduced permanently; with$\pi^e = 0$ inflation stays at its initial level.

Answer: A

10. The data in Figure 12.14 suggest an unemployment coefficient of −1.0 in the Phillips curve. That is, the Phillips curve is $\pi - \pi(-1) = (-(-1.0)(U - U^*)$. Assume the natural rate, U^*, is 5 percent. Actual unemployment is 5 percent in 2020, 7 percent in 2021, 6 percent in 2022, and 5 percent in

2023. Inflation is 5 percent in 2020. What is inflation in 2023? (Assume there are no supply shocks.)

- **A.** 1 percent
- **B.** 2 percent
- **C.** 3 percent
- **D.** 5 percent

Answer: B

11. Short-run fluctuations in an economy's output are called:

- **A.** growth bursts.
- **B.** business cycles.
- **C.** output gaps.
- **D.** recessions.

Answer: B

12. The normal rate of output is called (the) _____, and the corresponding unemployment rate is the _____.

- **A.** full capacity output; normal rate
- **B.** potential output; natural rate
- **C.** normal rate; potential rate
- **D.** natural rate; potential rate

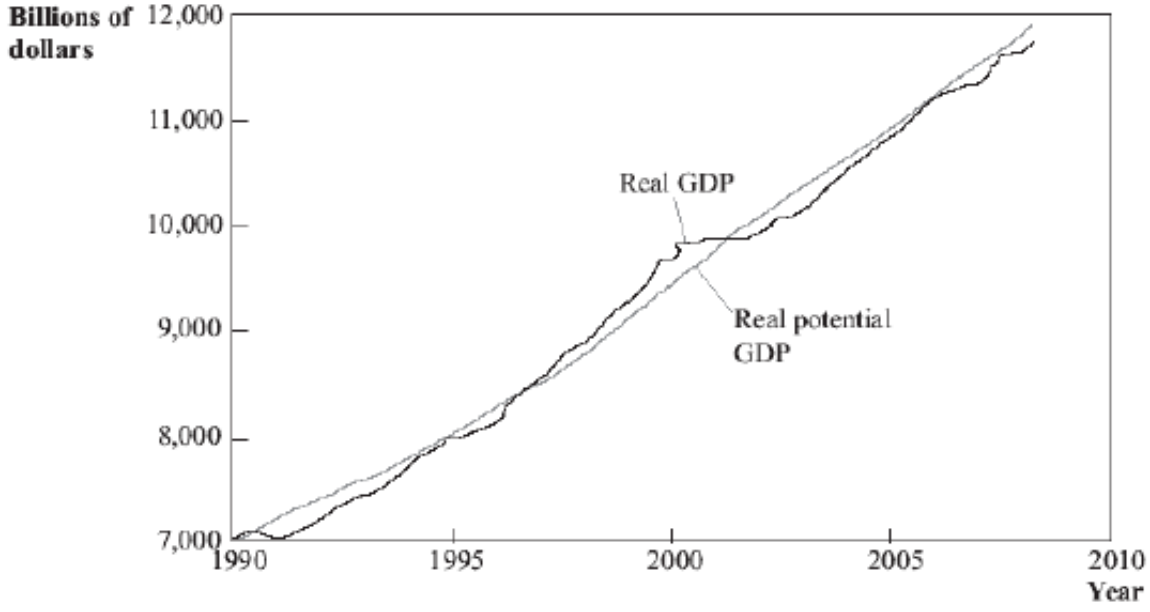
Answer: B

13. The unemployment rate is at its natural rate when:

- **A.** the economy is producing at potential output.
- **B.** the unemployment rate is 4 percent.
- **C.** the economy is producing at its maximum output.
- **D.** labor is working a 40-hour workweek.

Answer: A

14. **Figure 12.2: Real GDP**



Reference: Ref 12-1

(Figure 12.2: Real GDP) According to the data, economic booms occurred in approximately which periods?

- **A.** 1990–1991
- **B.** 1996–2001
- **C.** 1991–1996
- **D.** 1990–1991 and 1996–2001

Answer: B

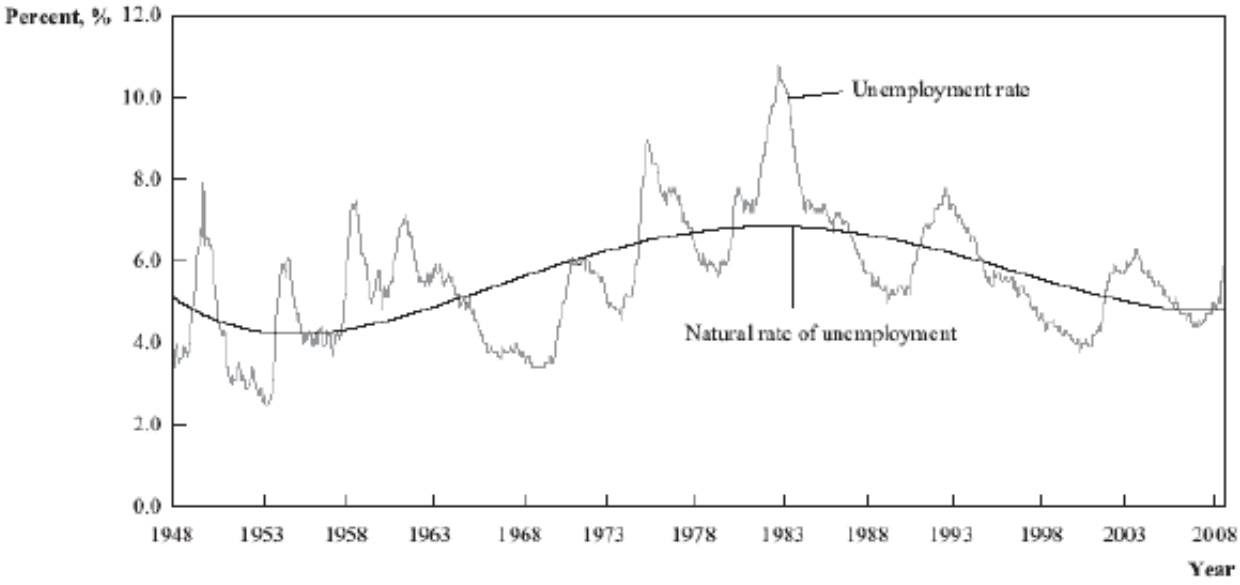
15. If the economy is experiencing an economic boom, which of the following is true about the output gap?

- **A.** $Y - Y^* > 0$
- **B.** $\frac{Y - Y^*}{Y^*} > 0$
- **C.** $\frac{Y - Y^*}{Y^*} < 0$
- **D.** $\frac{Y^*}{Y} > 0$

Answer: B

16.

Figure 12.3: Unemployment



Reference: Ref 12-2

(Figure 12.3: Unemployment) During approximately which period(s) was the economy in an economic boom?

- **A.** 1986–1991
- **B.** 1996–2001
- **C.** 1991–1995
- **D.** 1996–2001 and 1986-1991

Answer: D

17. The Great Depression was the result of:

- **A.** high inflation.

B. a fall in potential output.

C. a fall in aggregate expenditure.

D. low unemployment.

Answer: C

18. The NBER defines a recession as:

A. the period when actual output is below potential output.

B. a period when output falls a substantial amount.

C. two consecutive years of 1 percent or less economic growth.

D. a period when the natural rate of unemployment is above 6 percent.

Answer: B

19. Potential output in the United States grew _____ in the mid-1990s than in the 1970s and 1980s due to _____.

A. faster; reduced unemployment

B. faster; the spread of technologies

C. slower; the dot-com bubble

D. slower; higher inflation.

Answer: B

20. Which of the following is/are condition(s) for long-term economic growth?

A. capital accumulation

B. technology innovation

C. labor force growth

D. All of the answers are correct.

Answer: D

21. Okun's law relates changes in the unemployment rate to changes in:

A. investment.

B. the output gap.

C. consumption expenditures.

D. inflation.

Answer: B

22. Aggregate expenditure:

A. is the same thing as aggregate demand.

B. is the amount of spending on goods and services for a given real interest rate.

C. is how much it costs firms to produce the goods and services they sell.

D. is always equal to potential output.

Answer: B

23. The magnification of income changes on aggregate expenditure is called the:

A. interest rate multiplier.

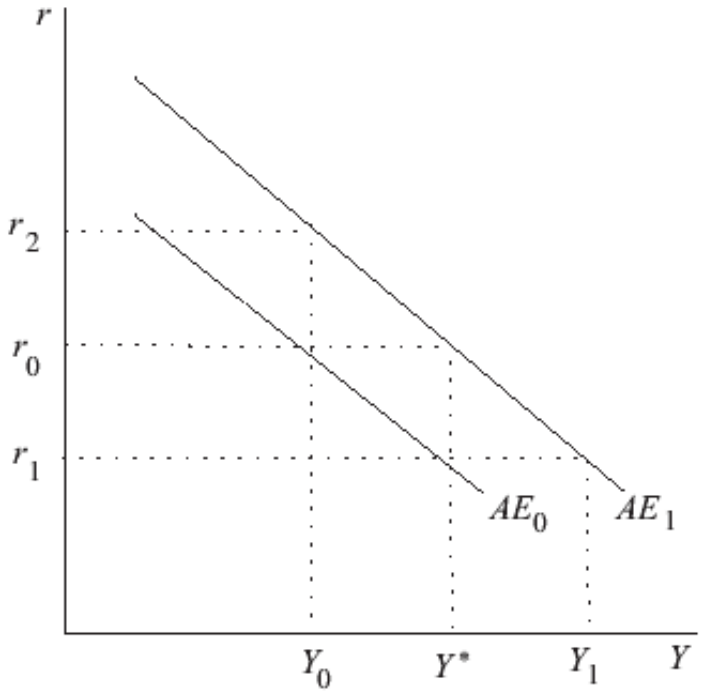
B. real interest rate.

C. consumption multiplier.

D. marginal propensity to consume.

Answer: C

24. **Figure 12.4: Aggregate Expenditure**



Reference: Ref 12-3

(Figure 12.4: Aggregate Expenditure) If you are the Fed and the economy is at Y_0, you would _____, which would move the economy _____ the AE_0 curve to Y^*.

A. reduce tax rates; along
B. reduce interest rates; to shift
C. reduce interest rates; along
D. increase government expenditure; to shift

Answer: C

25. Holding interest rates constant, an increase in government spending would have what effect?

A. cause a movement along the AE curve, decreasing output
B. cause the AE curve to shift out, to the right, increasing output
C. cause a movement along the AE curve, increasing unemployment
D. cause the AE curve to shift back, to the left, increasing unemployment

Answer: B

26. If consumer confidence fell, shifting the AE curve to the _____, it is likely the Fed would _____.

A. left; decrease tax rates to keep output constant
B. right; increase interest rates to keep output constant
C. left; decrease interest rates to keep output constant
D. left; increase tax rates to reduce output

Answer: C

27. In the most recent recession, the Federal Reserve Bank:

A. cut interest rates and made the recession worse than it might otherwise have been.

B. encountered a zero bound problem when it cut interest rates to near zero.

C. failed to raise interest rates quickly enough and inflation rose.

D. did nothing in order to avoid interfering with the business cycle.

Answer: B

28. Which of the following statements about aggregate expenditure is/are true?

A. As the real interest rate falls, aggregate expenditure increases.

B. Central banks control the real interest rate in the short run.

C. The aggregate expenditure curve slopes downward.

D. All of the answers are correct.

Answer: D

29. Which of the following include types of expenditure shocks?

A. an increase in the nominal interest rate engineered by the central bank

B. changes in inflation expectations

C. changes in bank lending

D. a decrease in expected long-term interest rates

Answer: C

30. Which of the following is an example of rational expectations?

A. It rained yesterday, so you will carry an umbrella today.

B. Even though it has not rained all week, the weather forecaster said it will rain tomorrow, so you will carry an umbrella tomorrow.

C. You flip a coin to determine if you should carry an umbrella today.

D. It never rains where you live, but you carry an umbrella anyway.

Answer: B

31. According to the Phillips Curve, during a time when output is above potential output, inflation is:

A. higher than expected inflation.

B. equal to expected inflation.

C. lower than expected inflation.

D. There is not enough information provided to answer the question.

Answer: A

32. The *output* Phillips curve with adaptive expectations relates the:

A. rate of inflation to the output gap.

B. change in inflation to the output gap.

C. unemployment rate to the output gap.

D. real interest rate to the nominal interest rate.

Answer: B

33. Recent energy legislation that dictates increased use of ethanol as automobile fuel might _____ overall inflation because corn prices _____, impacting all downstream industries that use corn _____.

- **A.** increase; will rise; as a final good
- **B.** decrease; will rise; as a final good
- **C.** increase; will rise; as an input
- **D.** There is not enough information provided to answer the question.

Answer: C

34. Consider the Phillips curve equation $\pi = \pi(-1) + \alpha\frac{(Y - Y^*)}{Y^*} + \nu$ where α = 2, and π(−1) = 4%.

Suppose an oil price shock occurs such that ν = 1.5. If policymakers fully accommodate the shock, inflation will be _____ and the output gap will be _____.

- **A.** 1.5 percent; zero
- **B.** 5.5 percent; zero
- **C.** 4 percent; 2 percent
- **D.** 7.5 percent; 2 percent

Answer: B

35. Suppose that the inflation rate last year was 2 percent. According to adaptive expectations, inflation this year is expected to be:

- **A.** 2 percent.
- **B.** 2 percent plus the real interest rate.
- **C.** 2 percent minus the real interest rate.
- **D.** There is not enough information provided to determine expected inflation.

Answer: A

36. According to the output Phillips curve with adaptive expectations, the change in inflation depends on:

- **A.** the unemployment gap.
- **B.** the output gap.
- **C.** the interest rate spread.
- **D.** the investment gap.

Answer: B

37. When the federal government reduces infrastructure expenditures, aggregate expenditure _____, and holding the real interest rate constant, inflation will _____.

- **A.** shifts right; increase by shifting the Phillips curve upward
- **B.** shifts left; remain constant
- **C.** shifts left; decrease by moving downward along the Phillips curve
- **D.** shifts right; increase by moving upward along the Phillips curve

Answer: C

38. The Fed is considering how to stimulate the economy but would like to do so without driving inflation up. What is the best strategy to pursue to achieve this goal?

- **A.** reducing interest rates
- **B.** keeping interest rates constant
- **C.** increasing interest rates
- **D.** It cannot simultaneously stimulate the economy without driving up inflation.

Answer: D

39. The principle that monetary policy cannot permanently impact real variables is called:

- **A.** long-run money neutrality.
- **B.** the-ineffectiveness-of-money principle.
- **C.** the long-run Phillips curve.
- **D.** policy ineffectiveness.

Answer: A

40. According to the principle of long-run monetary neutrality:

- **A.** potential output is independent of monetary policy.
- **B.** the neutral real interest rate is determined by the central bank.
- **C.** most of the effects of monetary policy on the economy are permanent.
- **D.** in the long run, monetary policy affects real GDP only.

Answer: A

41. The natural rate of unemployment is constant.

Answer: False

42. Economic booms are characterized by falling unemployment.

Answer: True

43. To find the output gap we use the following equation: $\text{output gap} = \frac{Y}{Y^*}$.

Answer: False

44. Potential output is the level of output that is produced when resources are being used under normal conditions using technology devised in 1990.

Answer: False

45. The economy produces at its potential output level when people work more hours than their average hours worked and factories produce above normal levels.

Answer: False

46. All countries have a natural unemployment rate of 4 percent.

Answer: False

47. Short-run fluctuations in the growth rate of real GDP and the unemployment rate define the business cycle.

Answer: True

48. A point on the aggregate expenditure curve shows the amount of output produced at a given

inflation rate.

Answer: False

49. Aggregate expenditure = Consumption + Investment + Government purchases + Transfers.

Answer: False

50. If the real interest rate rises, there is an incentive for households to save, which makes it more expensive for firms to finance new capital purchases, which causes aggregate expenditure to fall.

Answer: True

51. A rise in the real interest rate reduces aggregate expenditure.

Answer: True

52. Changes in the real interest rate do not affect the net exports component of aggregate expenditure.

Answer: False

53. In the short run, central banks determine the real interest rate.

Answer: True

54. Booms and recessions in the United States impact other countries.

Answer: True

55. The Fed controls the real interest rate by setting the real interest rate, and allowing the nominal interest rate to adjust to it.

Answer: False

56. Holding interest rates constant, an increase in taxes would cause a movement along the AE curve, decreasing output.

Answer: False

57. If you carry an umbrella today because it rained yesterday, you are using adaptive expectations.

Answer: True

58. According to the Phillips Curve, during a time when output is above potential, inflation is equal to expected inflation.

Answer: False

59. The *unemployment* Phillips curve is given by: $\pi = \pi^e + \alpha \frac{(Y - Y^*)}{Y^*}$

Answer: False

60. The acronym NAIRU stands for the nonaccelerating inflation rate of unemployment.

Answer: True

61. Oil prices are closely watched because they directly and indirectly impact inflation.

Answer: True

62. A decline in oil prices is a beneficial supply shock.

Answer: True

63. In the Phillips curve equation: $\pi = \pi^e + \alpha\frac{(Y - Y^*)}{Y^*} + \nu$, v is a permanent price trend.

Answer: False

64. Recent energy legislation that dictates increased use of ethanol as automotive fuel might increase overall inflation because corn prices will rise, impacting all downstream industries that use corn as an input.

Answer: True

65. When economists refer to the "Phillips curve," they sometimes mean the negative relation between inflation and output.

Answer: False

66. One reason why inflation was high during the 1970s and low during the 1990s is that the economy experienced beneficial supply shocks in the 1970s and adverse supply shocks during the 1990s.

Answer: False

67. Firms consider expected inflation when making their pricing decisions to maintain their relative prices constant.

Answer: True

68. According to the Phillips curve, inflation equals expected inflation when output is above its potential level.

Answer: False

69. The Phillips curve shows the short-run relationship between the real interest rate and consumption spending.

Answer: False

70. According to the output Phillips curve, when the output gap is positive, actual inflation exceeds expected inflation.

Answer: True

71. With an adverse supply shock, an accommodative policy will result in permanently higher inflation.

Answer: True

72. The Volcker disinflation policies of the early 1980s were designed primarily to lower the unemployment rate, with the hope of also lowering the inflation rate.

Answer: False

73. According to the aggregate expenditure/Phillips curve model, a nonaccommodative policy response to an adverse supply shock prevents the shock from raising inflation.

Answer: True

74. According to the aggregate expenditure/Phillips curve model, the cost of disinflation is lower output.

Answer: True

75. According to the aggregate expenditure/Phillips curve model, an accommodative monetary policy prevents an adverse supply shock from raising inflation permanently (i.e., inflation increases only temporarily).

Answer: False

76. The principle that monetary policy cannot permanently impact real variables is called long-run money neutrality.

Answer: True

77. Long-run monetary neutrality implies that changes in the money supply will only affect prices in the long run.

Answer: True

78. According to the principle of long-run monetary neutrality, monetary policy does not affect real variables in the long run.

Answer: True

79. The normal rate of output is called the _____, and the corresponding unemployment rate is the _____.

- **A.** full capacity output; normal rate
- **B.** potential output; natural rate
- **C.** normal rate; potential rate
- **D.** natural rate; potential rate

Answer: B

80. The output gap is

- **A.** the percentage difference between the actual level of output and potential output.
- **B.** the difference between the actual level of output and potential output.
- **C.** the actual level of output divided by the natural rate of output.
- **D.** zero.

Answer: A

81. Along the aggregate expenditure curve, the level of output in the short run is determined by

- **A.** expectations.
- **B.** the inflation rate.
- **C.** the real interest rate.
- **D.** supply shocks.

Answer: C

82. Adaptive expectations is characterized by:

- **A.** $\pi^e = \pi(-1)$
- **B.** knowledge of past levels of inflation.
- **C.** the continuation of current levels of inflation.
- **D.** All of the answers are correct.

Answer: D

83. In the early 1980s, the U.S. economy was dominated by _____ which was designed to _____.

- **A.** high nominal interest rates; fight high unemployment
- **B.** high nominal interest rates; fight inflation
- **C.** rising output; lower unemployment
- **D.** rising income taxes; rise unemployment

Answer: B

84. Household consumption includes

I. purchases of goods.
II. purchases of new real estate.
III. purchases of services.

- **A.** I and III
- **B.** I
- **C.** II
- **D.** I and II

Answer: A

85. Suppose a law is passed that prohibits employees from working more than 35 hours per week. (The current average workweek in the economy is 42.3 hours.) The law prohibits any change in weekly salary. What effect is this likely to have on the economy? (Hint: what happens to per-unit production costs?)

- **A.** Businesses will hire more employees to compensate for the loss of 7.3 hours per employee

per week. This increased employment and income will cause equilibrium GDP to rise.

B. Businesses will hire more employees to offset the higher hourly wage rate. This increased employment and income will cause equilibrium GDP to rise.

C. Businesses will raise prices to cover the higher per-unit labor costs. The average price level in the economy will rise. This will cause unemployment and lower equilibrium GDP.

D. Businesses will take advantage of the higher per-unit labor costs to raise prices much more than their costs increased. This will cause unemployment and lower equilibrium GDP.

Answer: C

86. Faced with an adverse supply shock, the central bank decides to keep the inflation rate constant by reducing output and increasing unemployment. This is called:

A. accomodative monetary policy.

B. nonaccomodative monetary policy.

C. ridiculous monetary policy.

D. irrational monetary policy.

Answer: B

87. Which one of the following does *not* affect long run potential GDP?

A. The amount and growth rate of human capital.

B. The rate of technological improvement.

C. The growth rate of the capital stock (physical capital).

D. The growth rate of the money supply.

Answer: D

88. When actual output equals potential output

A. the rate of unemployment exceeds the natural rate of unemployment.

B. the rate of unemployment equals the natural rate of unemployment.

C. the rate of unemployment is less than the natural rate of unemployment.

D. the rate of unemployment cannot be determined.

Answer: B

89. If the central bank follows an accommodative monetary policy when an adverse supply shock occurs

A. output and inflation increase.

B. output increases and inflation remains constant.

C. inflation increases and output remains constant.

D. output and inflation remain constant.

Answer: C

90. Long–run money neutrality means that in the long run, monetary policy can change only the

A. real interest rate.

B. level of real output.

C. the rate of unemployment.

D. the rate of inflation.

Answer: D

91. The National Bureau of Economic Research defines a recession as a period when

- **A.** output falls by a substantial amount.
- **B.** output is below its trend rate of growth.
- **C.** output equals its trend rate of growth.
- **D.** output is above its trend rate of growth.

Answer: A

92. According to Okun's law, when unemployment increases by 1%

- **A.** output increases by 1%.
- **B.** output increases by 2%.
- **C.** output falls by 1%.
- **D.** output falls by 2%.

Answer: D

93. Inflation will fall when

- **A.** output rises above potential output.
- **B.** actual output and potential output are equal.
- **C.** unemployment falls.
- **D.** unemployment increases.

Answer: D