1. Some firms do not instantly adjust the prices they charge in response to changes in demand for all of the following reasons except:
A) it is costly to alter prices.
B) they do not want to annoy their frequent customers.
C) prices do not adjust when there is perfect competition.
D) some prices are set by long-term contracts between firms and customers.

2. In the sticky-price model, the relationship between output and the price level depends on:
A) the proportion of firms with flexible prices.
B) the target real wage rate.
C) the target nominal wage rate.
D) the implicit agreements between workers and firms.

3. The imperfect-information model assumes that producers find it difficult to distinguish between changes in:
A) real wages and nominal wages.
B) the overall level of prices and relative prices.
C) the overall level of prices and the expected level of prices.
D) cost-push inflation and demand-pull inflation.

4. The higher the average rate of inflation, the more frequently firms must adjust their prices, which implies that a high rate of inflation:
A) has no effect on the slope of the short-run aggregate supply curve.
B) should make the short-run aggregate supply curve flatter.
C) makes the short-run aggregate supply curve steeper.
D) causes prices to be sticky.

5. The model of aggregate demand and aggregate supply is consistent with short-run monetary ______ and long-run monetary ______.
A) neutrality; neutrality
B) nonneutrality; nonneutrality
C) neutrality; nonneutrality
D) nonneutrality; neutrality

6. If the short-run aggregate supply curve is steep, the Phillips curve will be:
A) flat.
B) steep.
C) backward-bending.
D) unrelated to the slope of the short-run aggregate supply curve.

7. If the equation for a country's Phillips curve is \( \pi = 0.02 - 0.8(u - 0.05) \), where \( \pi \) is the rate of inflation and \( u \) is the unemployment rate, what is the short-run inflation rate when unemployment is 4 percent (0.04)?
A) above 2 percent (0.02)
B) below 2 percent (0.02)
C) 2 percent (0.02)
D) –2 percent (–0.02)

8. In the case of cost-push inflation, other things being equal:
A) both the inflation rate and the unemployment rate rise at the same time.
B) the unemployment rate rises but the inflation rate falls.
C) the inflation rate rises but the unemployment rate falls.
D) both the inflation rate and the unemployment rate fall.
9. The most prominent feature of the U.S. economy in the 1980s was:
   A) cost-push inflation.
   B) cost-push deflation.
   C) demand-pull inflation.
   D) demand-pull deflation.

Use the following to answer question 10:

10. (Exhibit: Short-run Phillips Curve) As the short-run Phillips curve shifts from A to B to C to D, policymakers face:
   A) the same tradeoff between inflation and unemployment.
   B) a lower rate of inflation for any level of unemployment.
   C) a higher rate of inflation for any level of unemployment.
   D) higher than expected inflation rates and lower unemployment rates.

11. Economists are able to estimate the natural rate of unemployment in the United States:
   A) very precisely.
   B) in a 95 percent confidence interval of 2 to 3 percentage points.
   C) in a 95 percent confidence interval of 10 to 20 percentage points.
   D) only in years when there are no supply shocks.

12. An economy must sacrifice 12 percent of GDP to reduce inflation. Which of the following plans represents the “cold turkey” solution to inflation?
   A) Reduce output by 1 percent for 12 years.
   B) Reduce output by 2 percent for 6 years.
   C) Reduce output by 4 percent for 3 years.
   D) Reduce output by 12 percent for 1 year.

13. The estimate of the sacrifice ratio from the Volcker disinflation is approximately:
   A) 5–6.
   B) 2.5–3.
   C) 1–1.5.
   D) 0–0.5.

14. If the hypothesis of hysteresis is correct and output is lost even after a period of disinflation, the sacrifice ratio for an economy will:
   A) increase.
   B) decrease.
   C) remain unchanged.
   D) be zero.
1. At long-run equilibrium in the dynamic model of aggregate demand and aggregate supply, which variables will equal the central bank's target rate of inflation?
   A) the current inflation rate, but not the expected inflation rate
   B) the expected inflation rate, but not the current inflation rate
   C) both the current and expected rates of inflation
   D) neither the current nor the expected rates of inflation

2. Beginning at long-run equilibrium in the dynamic model of aggregate demand and aggregate supply, in the first period of a four-period positive demand shock, output ______ and inflation ______.
   A) increases; increases
   B) increases; decreases
   C) decreases; decreases
   D) decreases; increases

3. The natural rate of interest is the real interest rate:
   A) at which the demand for goods and services equals the natural level of output.
   B) that most people anticipate based on their expectations of inflation.
   C) at which the natural rate of unemployment equals the natural rate of output.
   D) equal to the nominal interest rate minus the natural rate of inflation.

4. The dynamic aggregate demand curve is drawn for a given:
   A) money supply.
   B) real interest rate.
   C) monetary policy rule.
   D) inflation rate.

5. Starting from long-run equilibrium in the dynamic model of aggregate demand and aggregate supply, a one-period positive supply shock causes output to:
   A) remain above the natural level for only one period.
   B) remain above the natural level for more than one period.
   C) remain below the natural level for only one period.
   D) remain below the natural level for more than one period.

6. Of the five endogenous variables in the dynamic model of aggregate demand and aggregate supply, which are the nominal variables that will change in long-run equilibrium if the central bank changes its inflation target?
   A) \( Y_t, r_t, \) and \( i_t \)
   B) \( Y_t, i_t, \) and \( E_t \pi_{t+1} \)
   C) \( \pi_t, i_t, \) and \( E_t \pi_{t+1} \)
   D) \( r_t, \pi_t, \) and \( i_t \)

7. In the dynamic model of aggregate demand and aggregate supply, holding other factors constant, increases in the natural level of output that yield long-run growth can be experienced:
   A) with rising inflation.
   B) with falling inflation.
   C) with stable inflation.
   D) with no inflation.

8. Predetermined variables in a model are treated as if they are essentially:
   A) endogenous variables.
   B) exogenous variables.
   C) parameters.
   D) equilibrium conditions.
9. Which of the following is not held constant along a dynamic aggregate demand curve?
   A) the inflation target
   B) the natural level of output
   C) the demand shock
   D) the money supply

10. The short-run equilibrium in the dynamic model of aggregate demand and aggregate supply is determined by the intersection of the:
   A) $DAD_t$ and $DAS_{t-1}$.
   B) $DAD_t$ and $DAS_t$.
   C) $Y_t$ and $DAS_t$.
   D) $DAD_{t-1}$ and $Y_t$.

11. Which of the following is an endogenous variable in the dynamic model of aggregate demand and aggregate supply?
   A) $\pi_t$, inflation
   B) $\pi^*_t$, central bank's inflation target
   C) $\nu_t$, supply shock
   D) $\pi_{t-1}$, previous period's inflation

12. According to the Fisher equation the real interest, $r_t$, equals the nominal interest rate, $i_t$, minus the expected inflation rate, which is written as:
   A) $E_t \pi_t$.
   B) $E_t \pi_{t+1}$.
   C) $E_{t+1} \pi_t$.
   D) $E_{t+1} \pi_{t+1}$.

13. The dynamic aggregate supply curve shows the short-run relation between:
   A) the natural level of output and inflation.
   B) the natural level of output and expected rate of inflation.
   C) output and inflation.
   D) output and the natural rate of interest.

14. In the dynamic model of aggregate demand and aggregate supply, increases in the natural level of output lead to ______ in output and ______ in inflation.
   A) increases; increases
   B) increases; no change
   C) no change; increases
   D) no change; no change

15. Increases in the natural level of output allow the economy to produce ______ goods and services, and makes people want to buy ______ goods and services.
   A) fewer; fewer
   B) fewer; more
   C) more; more
   D) more; fewer

16. Which of the following would be represented by a negative value of the random demand shock, $\Sigma_t$?
   A) an irrational wave of optimism among investors
   B) a decrease in government spending
   C) an aggressive increase in oil prices by a cartel
   D) a decrease in the central bank's inflation target
17. At long-run equilibrium in the dynamic model of aggregate demand and aggregate supply, which variables will be at their natural levels?

A) inflation and output
B) real and nominal interest rates
C) inflation and the nominal interest rate
D) output and the real interest rate

Chapter 15

1. Economic science has provided convincing evidence in favor of the:
   A) rule favoring a constant rate of growth of the money supply.
   B) rule favoring use of the money supply to hit a nominal GDP target.
   C) rule requiring a constantly balanced budget for the federal government.
   D) fact that there is no simple and compelling case for any particular view of macroeconomic policy.

2. Inflation targeting is a monetary policy rule that requires the central bank to adjust _____ in order to attain the desired inflation rate.
   A) a price index
   B) the velocity of money
   C) nominal GDP
   D) the money supply

3. Arguments in favor of passive economic policy include all of the following except:
   A) monetary and fiscal policies work with long and variable lags, which can produce destabilizing results.
   B) economic forecasts have too large a margin of error to be useful in formulating stabilization policy.
   C) recessions do not reduce economic well-being, so using monetary and fiscal policy for stabilization is unnecessary.
   D) the Great Depression could have been avoided if the Federal Reserve had pursued a policy of steady money growth.

4. According to the Lucas critique, when economists evaluate alternative policies they must take into consideration:
   A) how the policies will affect expectations and behavior.
   B) whether the policy will offset the impact of automatic stabilizers.
   C) the stage of the political business cycle in which the policy is to be implemented.
   D) the length of the inside lags associated with the policies.

5. Arguments in favor of active economic policy include all of the following except:
   A) failing to use monetary and fiscal policy leads to inefficient fluctuations in output and employment.
   B) the Great Depression could have been avoided if the Federal Reserve had pursued a policy of steady money growth.
   C) fluctuations in real GDP have been less severe following World War II than prior to World War I.
   D) failure of policymakers to respond to large contractionary shocks to private spending caused the Great Depression.

6. The outside lag is the time:
   A) before automatic stabilizers respond to economic activity.
   B) when automatic stabilizers are not effective.
   C) between a shock to the economy and the policy action responding to the shock.
   D) between a policy action and its influence on the economy.
7. The Lucas critique argues that because the way people form expectations is based _____ on government policies, economists ______ predict the effect of a change in policy without taking changing expectations into account.
A) partly; cannot
B) only partly; can
C) in no way; can
D) in no way; cannot

8. If the velocity of money varies a great deal, steady growth of the money supply is a(n):
A) ineffective way to stabilize aggregate demand.
B) example of discretionary monetary policy.
C) automatic stabilizer.
D) active policy rule.

9. A central bank operating with discretion can achieve the same outcome as the central bank committed to a fixed rule of zero inflation if:
A) there are no inside lags.
B) there are no outside lags.
C) the central bank dislikes unemployment much more than inflation.
D) the central bank dislikes inflation much more than unemployment.

10. Economic forecasters did:
A) well in forecasting the Great Depression but did poorly in forecasting the recession of 1982.
B) poorly in forecasting both the Great Depression and the recession of 1982.
C) well in forecasting both the Great Depression and the recession of 1982.
D) poorly in forecasting the Great Depression but did well in forecasting the recession of 1982.

Chapter 16

1. Hyperinflations typically occur when governments:
A) attempt to keep the unemployment rate below the natural rate.
B) finance spending with the inflation tax.
C) set inflation targets too high.
D) use discretionary monetary policy to stabilize output.

2. A deficit adjusted for inflation should include only government spending to pay _____ interest payments.
A) real
B) nominal
C) foreign
D) domestic

3. Monetary policy is linked to fiscal policy when government spending is financed by:
A) taxes.
B) borrowing from banks.
C) borrowing from foreigners.
D) printing money.

4. Suppose a household considers only current income in making consumption decisions. This is an example of:
A) Ricardian equivalence.
B) the permanent-income hypothesis.
C) myopia.
D) the life-cycle model.
5. A strict balanced-budget rule would:
   A) permit the use of fiscal policy for stabilization.
   B) allow the use of tax smoothing to reduce tax distortions.
   C) redistribute tax burdens across generations.
   D) restrain political incompetence and opportunism.

6. Inflation-indexed government bonds have all of the following benefits except:
   A) eliminating inflation.
   B) reducing the government's incentive to produce surprise inflation.
   C) encouraging financial innovation.
   D) eliminating inflation risk.

7. One item that is considered part of the federal debt is:
   A) Treasury bills.
   B) future Social Security benefits.
   C) student loans, which may go into default.
   D) potential liabilities of savings and loan associations.

8. Given a reduction in income tax withheld, but no change in income tax owed, households that act according to Ricardian equivalence would ______ the extra take-home pay, while those facing binding borrowing constraints would ______ the extra take-home pay.
   A) spend; spend
   B) spend; save
   C) save; save
   D) save; spend

9. The international impacts of a debt-financed tax cut, according to the traditional view, are a(n) ______ in net exports and a domestic currency ______.
   A) increase; appreciation
   B) increase; depreciation
   C) decrease; depreciation
   D) decrease; appreciation

10. Historically, the primary cause of increases in government debt is:
    A) printing too much money.
    B) cutting taxes.
    C) increasing interest rates.
    D) financing wars.

11. If capital budgeting procedures were employed, then a budget deficit would be measured as:
    A) the sum of government debt.
    B) the change in government debt.
    C) the change in government debt minus the change in government capital assets.
    D) the change in government capital assets.

12. The debt of the U.S. government is underreported in the view of many economists because all of the following liabilities are excluded except:
    A) future pensions of government employees.
    B) debt owed to foreigners.
    C) future Social Security benefits.
    D) government guarantees of student loans.
13. Indexed bonds produce all of the following benefits except:
   A) less inflation risk.
   B) more financial innovation.
   C) better government incentives.
   D) lower rates of inflation.

14. The experience of the 1980s:
   A) clearly contradicted the Ricardian equivalence view because national saving was very low.
   B) clearly supported the Ricardian equivalence view, for people saved little only because they were optimistic, as confirmed by the stock market.
   C) will provide a clear answer on the validity of Ricardian equivalence as soon as economists are able to analyze it with their computers.
   D) may be used to argue both in favor of and against the Ricardian equivalence view of the tax cuts.

15. Under capital budgeting, all of the following transactions would affect the federal budget deficit except the federal government's:
   A) sending a check to a welfare recipient.
   B) sending a check to the state of Massachusetts.
   C) selling a highway to the state of New York and using the proceeds to retire federal debt.
   D) selling an office building.

Chapter 17

1. Examination of data from households shows that households with high current income ______ than do households with low current income.
   A) consume less
   B) save less
   C) save a smaller fraction of current income
   D) save a larger fraction of current income

2. The determination of consumption as a function of current disposable income is most strongly associated with:
   A) John Maynard Keynes.
   B) Irving Fisher.
   C) Franco Modigliani.
   D) Milton Friedman.

3. Empirical studies of Franco Modigliani's life-cycle hypothesis show that:
   A) most elderly individuals try to exhaust all their savings by the time they die.
   B) the elderly do not seem to run down their wealth in old age, as a simple version of the theory would predict.
   C) elderly individuals generally do not want to leave bequests for their children.
   D) precautionary saving is not an important saving motive for the elderly.

4. In Irving Fisher's two-period model, if the consumer is initially saving in period one and the real interest rate rises, then:
   A) both the income and substitution effects will make the consumer want to consume less in period one.
   B) both the income and substitution effects will make the consumer want to consume more in period one.
   C) the substitution effect will make the consumer want to consume less in period one, but the income effect will make him or her want to consume more.
   D) the income effect will make the consumer want to consume less in period one, but the substitution effect will make him or her want to consume more.
5. In Irving Fisher's two-period consumption model, if \( Y_1 = 15,000, \ Y_2 = 20,000, \) the interest rate \( r \) is 0.50 (50 percent), and there is a constraint on borrowing that is binding, then \( C_1 \) equals:
   A) 15,000.
   B) 20,000.
   C) 28,333.
   D) 35,000.

6. In Irving Fisher's two-period model, if the consumer is initially a saver and the interest rate increases, and first-period consumption decreases, then we can conclude that the income effect:
   A) was greater than the substitution effect.
   B) was less than the substitution effect.
   C) exactly offset the substitution effect.
   D) and the substitution effect both decreased consumption.

7. A consumption function based on the Fisher two-period model is consistent with the Keynesian consumption function for consumers who:
   A) would like to borrow, but cannot.
   B) are initially borrowers when future income increases.
   C) are initially savers when future income increases.
   D) are initially borrowers when the interest rate increases.

8. Milton Friedman argued that, over long periods of time, the average propensity to consume is constant because, over these long periods of time:
   A) the variation in income is dominated by the transitory component.
   B) the variation in income is dominated by the permanent component.
   C) it is the behavior of the average consumer that dominates.
   D) income averages out to a constant.

9. Empirical evidence finds that the average propensity to consume is falling:
   A) for only the short-run consumption function.
   B) for only the long-run consumption function.
   C) for both the short-run and the long-run consumption functions.
   D) for neither the short-run nor the long-run consumption functions.

10. In Irving Fisher's two-period model, if consumption in both periods is a normal good, then an increase in income in period two:
   A) increases consumption in period one only.
   B) increases consumption in period two only.
   C) increases consumption in both periods.
   D) does not increase consumption in either period.

11. Every indifference curve shows combinations of first-period and second-period consumption that:
   A) are tangent to the intertemporal budget constraint.
   B) have equal income and substitution effects.
   C) are available to the consumer.
   D) make the consumer equally happy.

12. According to Modigliani's life-cycle hypothesis, if a consumer wants equal consumption in every year, and the interest rate is zero, there are 40 years until retirement, and 60 years of life remaining, then the marginal propensity to consume out of income equals:
   A) 0.016.
   B) 0.40.
   C) 0.60.
   D) 0.67.
13. According to the permanent-income hypothesis, if consumers receive a one-time income bonus, then they will:
   A) save most of it in the current year.
   B) spend most of it in the current year.
   C) spend one-half of it and save one-half of it in the current year.
   D) not alter their consumption or saving in the current year.