

Multiple-choice questions. 2 points each.

1. Which of the following could lead to a **rightward shift** in the investment demand curve (when labeled with the interest rate on the vertical axis and quantity of investment on the horizontal axis)?
  - (a) Expected improvement in future productivity
  - (b) Temporary decrease in energy prices which increase business productivity
  - (c) Decrease in interest rate
  - (d) Increase in the interest rate
  
2. Which of the following could lead to an **increase** in interest rates in a general equilibrium model with consumer and producer optimization?
  - (a) Increase in consumers' willingness to work
  - (b) Decrease in government expenditures
  - (c) Destruction of capital stock
  - (d) Temporary decrease in energy prices leading to higher business productivity
  
3. Which of the following government policies will likely have the largest impact on real GDP?
  - (a) Decrease in taxes today funded by an increase in taxes in the future.
  - (b) Decrease in government expenditures to fund a decrease in taxes in the current period.
  - (c) Decrease in taxes in the future, but funded with an increase in taxes in the present.
  - (d) Permanent decrease in taxes funded by a decrease in future government expenditures
  
4. Which of the following will lead to an increase in future capital stock?
  - (a) Destruction of current capital stock
  - (b) Increase in investment demand caused by an expected improvement in productivity
  - (c) Decrease in labor demand
  - (d) Increase in current consumption demand
  
5. Which of the following could lead to a decrease in employment in equilibrium in the labor market?
  - (a) Increased preference for leisure by consumers
  - (b) Increase in the interest rate
  - (c) Increase in labor productivity
  - (d) Improvement in technology

6. How does a decrease in the interest rate affect the market for credit goods versus cash goods?
- (a) Decrease in both the quantity of credit goods and cash goods demanded.
  - (b) Increase in both the quantity of credit goods and cash goods demanded.
  - (c) Decrease in quantity of credit goods demanded and an increase in the quantity of cash goods demanded.
  - (d) Increase in quantity of credit goods demanded and a decrease in the quantity of cash goods demanded.
7. What is the Fisher effect?
- (a) An increase in the inflation rate leads to an increase in the real interest rate
  - (b) An increase in the inflation rate leads to a decrease in the real interest rate
  - (c) An increase in the inflation rate leads to an increase in the real interest rate
  - (d) An increase in the inflation rate leads to an increase in the nominal interest rate
8. If the Fed increased the money supply, what would be the impact on the market for money with fully flexible wages and prices?
- (a) Decrease in real wages
  - (b) Decrease in the price level
  - (c) Increase in real wages
  - (d) Increase in the price level
9. Consider a model of money demand with price level on the vertical axis and quantity of money on the horizontal axis. Which of the following leads to a leftward shift in nominal money demand?
- (a) Improvement in financial technology
  - (b) Increase in the price level
  - (c) Increase in real GDP
  - (d) Decrease in the interest rate
10. What would be the impact of a decrease in money demand on the market for money with fully flexible wages and prices?
- (a) Increase in real interest rate
  - (b) Decrease in real interest rate
  - (c) Decrease in price level
  - (d) Increase in price level

11. During the COVID-19 pandemic in early 2020, many people switched to using credit services instead of using cash. What would be the impact on the market for money and the aggregate price level?
- (a) Money supply shifts right and price level decreases..
  - (b) Money demand shifts right and price level decreases.
  - (c) Money supply shifts right and price level increases.
  - (d) Money demand shifts left and price level increases.
12. Suppose to protect consumers, financial regulations prohibit commercial banks from offering many financial investments beyond low-interest-rate certificates of deposits and savings accounts. What is the impact on the market for money?
- (a) Increase in money demand and an increase in the aggregate price level.
  - (b) Decrease in money supply and a decrease in the aggregate price level.
  - (c) Increase in money demand and a decrease in the aggregate price level.
  - (d) Decrease in money demand and a decrease in the aggregate price level.
13. Which monetary policy leads to an increase in the aggregate price level?
- (a) Increase in money demand
  - (b) Decrease in money supply
  - (c) Increase in money supply
  - (d) Decrease in money demand
14. Which monetary policy increases employment in a model with sticky wages?
- (a) No policy. Changes in money supply only affect price level.
  - (b) Decrease in taxes.
  - (c) Increase in money supply
  - (d) Decrease in money supply
15. Which monetary policy causes an increase in real interest rates in a model with sticky wages?
- (a) Decrease in money supply
  - (b) Increase in taxes.
  - (c) None. A change in money supply affects only the aggregate price level.
  - (d) Increase in money supply

16. If labor supply is equal to labor demand, which of the following is true?
- (a) Real GDP is equal to potential GDP.
  - (b) The real wage is above the equilibrium wage.
  - (c) Real GDP is below potential GDP.
  - (d) Real GDP is above potential GDP.
17. If the real wage is below the equilibrium level, which of the following is true?
- (a) There is a labor market surplus
  - (b) There is excess employment, above the full employment level.
  - (c) Real GDP is below potential GDP.
  - (d) There is unemployment.
18. If real GDP is below potential GDP, which of the following is true?
- (a) The real wage is above the equilibrium wage.
  - (b) The production function shifts downward.
  - (c) There is excess employment, above the full employment level.
  - (d) The real wage is below the equilibrium wage.
19. What is stabilization policy?
- (a) Tax policy to limit the amount of government debt
  - (b) Tax policy to balance the government budget constraint.
  - (c) Government spending and tax policy to balance the intertemporal government budget constraint.
  - (d) Tax policy or government spending policy aimed at increasing real GDP when it is below its full-employment level.
20. Monetary policy will have real effects on employment and production if which of the following is true?
- (a) The wage is at a level where the quantity of labor supplied is equal to the quantity of labor demand.
  - (b) Wages and prices are fully flexible
  - (c) The labor market is always in equilibrium
  - (d) There are sticky wages
21. Which of the following would cause a decrease in real wages with sticky nominal wages?
- (a) Decrease in the interest rate
  - (b) Increase in nominal wage
  - (c) Increase in the price level
  - (d) Decrease in the price level

22. Which of the following is true regarding fixed versus flexible wage models and increases in money supply?
- (a) Increases in money supply have no real effects in sticky wage models and lead to increases in real GDP under flexible wages.
  - (b) Increases in money supply have no real effects in flexible wage models and lead to increases in real GDP under sticky wages.
  - (c) Increases in money supply lead to increases in real GDP in both flexible wage and sticky wage models
  - (d) Increases in money supply have no effect on real GDP in neither flexible wage nor sticky wage models
23. Which of the following is true regarding fixed versus flexible wage models and increases in government expenditures funded with an increase in taxes?
- (a) An increase in both government expenditures and taxes have no effect on real GDP.
  - (b) An increase in government expenditures leads to an equal increase in real GDP under both flexible and sticky wage models.
  - (c) An increase in government expenditures and taxes leads to a decrease in real GDP under flexible wages and an increase in real GDP in sticky wage models.
  - (d) An increase in government expenditures and taxes leads to a bigger increase in real GDP with sticky wages than with flexible wages.
24. Which of the following policies will lead to the largest increase in real GDP?
- (a) Decrease in current taxes funded with an increase in future taxes in a model with flexible wages.
  - (b) Decrease in current taxes funded with a decrease in future government expenditures in a model with sticky wages.
  - (c) Decrease in current taxes funded with a decrease in future government expenditures in a model with flexible wages.
  - (d) Decrease in current taxes funded with an increase in future taxes in a model with sticky wages.
25. Suppose the economy is currently experiencing unemployment and real GDP is below potential. Which of the following monetary policy and modeling framework result in a decrease in unemployment and an increase in real GDP?
- (a) Decrease in money supply in a framework with sticky wages.
  - (b) Increase in money supply in a framework with sticky wages.
  - (c) Increase in money supply in a framework with flexible wages.
  - (d) Decrease in money supply in a framework with flexible wages.

**Short-answer problem-solving questions.**

26. (5 points) Suppose there is a decrease in the price of credit services. Describe and illustrate the impact on utility maximizing choices for money demand and credit services. Assume substitution effects dominate.

27. (5 points) Suppose there is an increase in income. Describe and illustrate the impact on utility maximizing choices for money demand and credit services.

28. (10 points) Suppose there is an announced *increase in future government spending*, which will be financed with an *increase in future taxes*. Describe and illustrate the consequences on (a) consumption, (b) investment, (c) real GDP, (d) employment, (e) real wage, and (f) real interest rate in a framework with **perfectly flexible wages and prices**.

29. (10 points) Suppose the Fed *increases* the money supply. Describe and illustrate the impact on the macroeconomy under **both perfectly flexible prices and wages and in a framework with sticky wages**. Describe and illustrate the consequences on (a) consumption, (b) investment, (c) real GDP, (d) employment, (e) real wage, (f) real interest rate, and (g) the price level.

30. (10 points) Suppose there is financial market deregulation that allows commercial banks to offer a variety of financial investment services in addition to checking and savings accounts. Describe and illustrate the impact on the macroeconomy under **both perfectly flexible prices and wages and in a framework with sticky wages**. Describe and illustrate the consequences on (a) consumption, (b) investment, (c) real GDP, (d) employment, (e) real wage, (f) real interest rate, and (g) the price level.