

**Multiple-Choice:** 2 points each. Choose the response that best answers each question.

1. Which of the following would shift labor demand to the right?
  - (a) Improvement in technology that increases labor productivity
  - (b) An increase in the costs of production
  - (c) An increase in people's willingness to work.
  - (d) Decrease in the unemployment rate
  
2. Suppose a new government rule requires K-12 teachers to have additional qualifications in order to teach in public schools. Which of the following would happen in the labor market for public school teachers?
  - (a) Increase in labor supply
  - (b) Decrease in labor demand
  - (c) Decrease in labor supply
  - (d) Increase in labor demand
  
3. Suppose there is an increase in demand in Europe for U.S. produced automobiles. What would we expect to happen in the market for labor in the U.S. for automotive industry?
  - (a) Decrease in demand for labor
  - (b) Increase in supply of labor
  - (c) Increase in demand for labor
  - (d) Decrease in supply of labor
  
4. Which of the following has the potential to create unemployment?
  - (a) An increase in demand for final goods and services.
  - (b) A decrease in labor supply, but when the wage remains stuck at the original level.
  - (c) A decrease in labor demand, but when the wage remains stuck at the original equilibrium level..
  - (d) An increase in labor demand, but when the wage remains stuck at the original equilibrium level..

5. Which of the following is a TRUE statement about the labor supply curve?
- (a) The labor supply represents the profit-maximizing choices that businesses make for hiring workers.
  - (b) The labor supply represents the working population's decisions for how much they are willing and able to work.
  - (c) An increase in wage leads to a decrease in the quantity of labor supply.
  - (d) A decrease in wage leads to a rightward shift in the labor supply curve.
6. Suppose an increase in stock market values causes an increase in the wealth of people at or near retirement age. Suppose as a result of the new wealth, more workers than usual decide to retire. What would be the impact on the market for labor?
- (a) Decrease in labor supply / Decrease in equilibrium wage
  - (b) Increase in labor supply / Decrease in equilibrium wage
  - (c) Increase in labor supply / Increase in equilibrium wage
  - (d) Decrease in labor supply / Increase in equilibrium wage
7. Suppose recent increases in profitability for firms in the communication technology industry leads to new firms entering the market. What is the equilibrium effect on the market for labor?
- (a) Decrease in employment / Increase in wage
  - (b) Decrease in employment / Decrease in wage
  - (c) Increase in employment / Decrease in wage
  - (d) Increase in employment / Increase in wage
8. Suppose there is an improvement in wireless Internet technology that makes workers more productive. What would be the equilibrium impact on the market for labor?
- (a) Increase in labor supply and a decrease in wage
  - (b) Increase in labor demand and increase in wage
  - (c) Increase in labor supply and increase in wage
  - (d) Increase in both labor demand and labor supply, indeterminate effect on wage
9. From 1950 to 2000, changes in attitudes and culture in the United States led to an increase in the labor force participation rate for females from 34
- (a) An increase in labor demand and increase in equilibrium wage
  - (b) An increase in labor supply and decrease in equilibrium wage
  - (c) An increase in labor demand and decrease in equilibrium wage
  - (d) An increase in labor supply and increase in equilibrium wage

10. If businesses decide to expand their facilities, this is which of the following?
- (a) Increase in savings supply
  - (b) Decrease in savings supply
  - (c) Decrease in investment demand
  - (d) Increase in investment demand
11. Which of the following is true concerning an increase in interest rates and investment demand?
- (a) An increase in interest rates makes capital less productive, leading to a leftward shift in the investment demand.
  - (b) An increase in interest rates makes capital more productive, leading to a rightward shift in investment demand.
  - (c) An increase in interest rates causes an increase in return for financial investments, leading to an increase in the quantity of investment purchases.
  - (d) An increase in interest rates increases the cost or opportunity cost to make investment purchases, leading to a decrease in the quantity of investment purchases.
12. Which of the following is a component of saving supply?
- (a) Consumer spending
  - (b) Purchases of capital goods by a firm
  - (c) Real GDP
  - (d) Government saving
13. Suppose the government decreases expenditures and makes no changes to taxes. Which of the following would happen in the market for loanable funds?
- (a) Increase in saving supply and an increase in equilibrium investment.
  - (b) Increase in investment demand and an increase in equilibrium investment.
  - (c) Decrease in saving supply and a decrease in equilibrium investment.
  - (d) Decrease in investment demand and a decrease in equilibrium investment.
14. Which of the following causes the saving supply to shift to the right?
- (a) Decrease in exports with no change in imports.
  - (b) Decrease in imports with no change in exports
  - (c) Decrease in private saving
  - (d) Increase in government expenditures with no change in taxes

15. Suppose an improvement in technology makes capital more productive. What would be the impact on the equilibrium in the loanable funds market?
- (a) Decrease in investment and increase in interest rates
  - (b) Decrease in investment and decrease in interest rates
  - (c) Increase in investment and increase in interest rates
  - (d) Increase in investment and decrease in interest rates
16. Suppose a hurricane destroys capital stock. Which of the following is TRUE?
- (a) Marginal product of capital will increase
  - (b) Marginal product of labor will increase
  - (c) Investment demand will shift to the left
  - (d) Technology will increase
17. Suppose businesses' economic outlook worsens and businesses decide now is not the right time for expansion or maintenance projects on their facilities. What is the impact on the equilibrium in the market for loanable funds?
- (a) Decrease in interest rate and a decrease in equilibrium investment
  - (b) Decrease in interest rate and increase in equilibrium investment
  - (c) Increase in interest rate and increase in equilibrium investment
  - (d) Increase in interest rate and a decrease in equilibrium investment
18. Which measure can be used to compare the level of economic development across countries that may have different population sizes?
- (a) Population growth rate
  - (b) Capital per worker
  - (c) Inflation
  - (d) Real GDP
19. Which of the following best describes China's economic status and growth during the last two decades?
- (a) A lesser-developed country with a low rate of economic growth.
  - (b) A lesser-developed country with a high rate of economic growth.
  - (c) A highly-developed country with a high rate of economic growth.
  - (d) A highly-developed country with a low rate of economic growth.

20. Which of the following is NOT a potential source of productivity growth?
- (a) Growth in human capital
  - (b) Growth in interest rates
  - (c) Growth in physical capital
  - (d) Growth in technological possibilities
21. Which of the following is the definition of human capital?
- (a) Increase in capital stock per worker
  - (b) Improvement in technology
  - (c) Workers time and effort used in the production of goods and services
  - (d) Skills and knowledge of a workforce obtained through education and training.
22. As you move rightward along the productivity curve, what happens to the marginal product of capital?
- (a) Marginal product of capital neither increases nor decreases
  - (b) Marginal product of capital decreases
  - (c) Marginal product of capital becomes equal to the quantity of capital
  - (d) Marginal product of capital increases
23. Which of the following causes an upward pivot of the productivity curve?
- (a) An increase in capital stock per worker
  - (b) An increase in the number of workers
  - (c) An improvement of the health of workers
  - (d) An increase in the interest rate.
24. Which of the following can lead to an increase in output per worker in the long-run?
- (a) A leftward shift in the supply of labor
  - (b) A rightward shift in the supply of labor
  - (c) An improvement in businesses' economic outlook
  - (d) A leftward shift in the savings supply curve

25. Which of the following can lead to a decrease in output per worker in the long-run?

- (a) A decrease in investment demand
- (b) A decrease in interest rates
- (c) An increase in savings supply
- (d) An increase in savings demand

**Short-Answer Problem-Solving Questions:** 5 points each. Write your answer in the space provided. The instruction to "illustrate" means use a graphical economics model. The instruction to "describe" means to give a short explanation for any changes in the model (i.e. a shifting curve), and describe the final result.

26. Suppose there is an improvement in computer technology that makes workers more productive. Describe and illustrate the impact on the equilibrium wage and employment.

27. Suppose there is an increase in immigration leads to both new workers entering the labor force and an increase in demand for final goods and services. Describe and illustrate the impact on the equilibrium wage and employment.

28. Suppose there is an increase in stock market values results in an increase of wealth for consumers, leading to an increase in demand for final goods and services. Describe and illustrate the impact on the equilibrium wage and employment.
29. Suppose a country reduces legal international trade barriers and it results in more imports but no change in exports. Describe and illustrate the impact on the equilibrium interest rate and level of investment.
30. Suppose a government increases its spending on infrastructure such as roads, electrical lines, and communications infrastructure, all of which make business more productive. Suppose the government does this while keeping tax revenues the same. Describe and illustrate the impact on the equilibrium interest rate and level of investment.

31. Suppose consumers permanently increase in the fraction of income that they spend, leading to higher demand for final goods and services and lower personal savings. Describe and illustrate the impact on the equilibrium interest rate and level of investment.

32. Suppose while keeping government budget deficits the same, federal and state governments increase spending on job training programs. Describe and illustrate the impact on the long-run output per worker for a country.

33. Suppose new management strategies cause workers to be more motivated and more productive. Describe and illustrate the impact on the long-run output per worker for a country.