

Name: _____ Date: _____

1. A production function is a technological relationship between:
 - A) factor prices and the marginal product of factors.
 - B) factors of production and factor prices.
 - C) factors of production and the quantity of output produced.
 - D) factor prices and the quantity of output produced.

2. The production function feature called “constant returns to scale” means that if we:
 - A) multiply capital by z_1 and labor by z_2 , we multiply output by z_3 .
 - B) increase capital and labor by 10 percent each, we increase output by 10 percent.
 - C) increase capital and labor by 5 percent each, we increase output by 10 percent.
 - D) increase capital by 10 percent and increase labor by 5 percent, we increase output by 7.5 percent.

3. A competitive, profit-maximizing firm hires labor until the:
 - A) marginal product of labor equals the wage.
 - B) price of output multiplied by the marginal product of labor equals the wage.
 - C) real wage equals the real rental price of capital.
 - D) wage equals the rental price of capital.

4. If output is described by the production function $Y = AK^{0.2}L^{0.8}$, then the production function has:
 - A) constant returns to scale.
 - B) diminishing returns to scale.
 - C) increasing returns to scale.
 - D) a degree of returns to scale that cannot be determined from the information given.

5. If $Y = AK^{0.5}L^{0.5}$ and A , K , and L are all 100, the marginal product of capital is:
 - A) 50.
 - B) 100.
 - C) 200.
 - D) 1000.

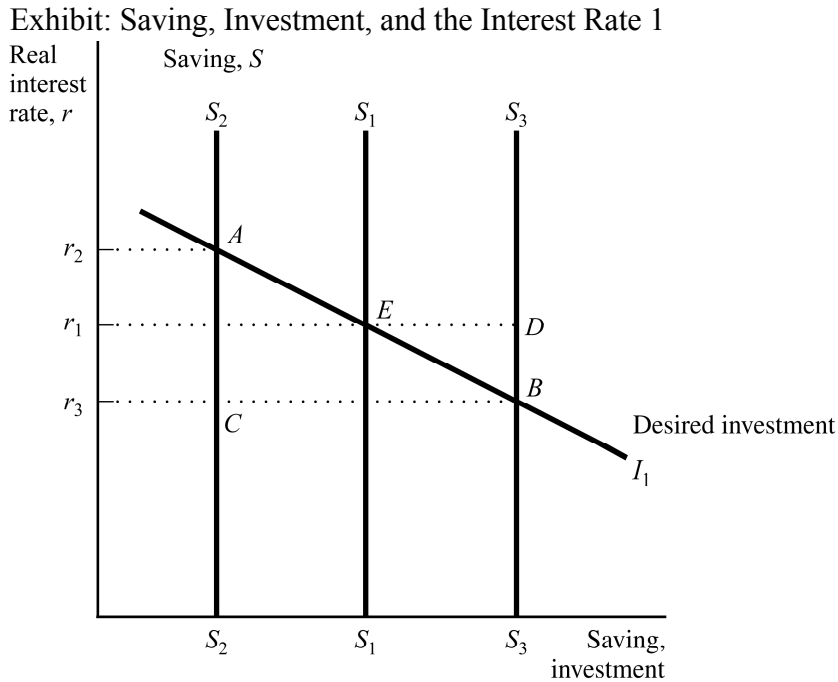
6. If the production function describing an economy is $Y = 100 K^{.25}L^{.75}$, then the share of output going to labor:
- A) is 25 percent.
 - B) is 75 percent.
 - C) depends on the quantities of labor and capital.
 - D) depends on the state of technology.
7. The marginal product of labor is:
- A) output divided by labor input.
 - B) additional output produced when one additional unit of labor is added.
 - C) additional output produced when one additional unit of labor and one additional unit of capital are added.
 - D) value of additional output when one dollar's worth of additional labor is added.
8. In a closed economy, the components of GDP are:
- A) consumption, investment, government purchases, and exports.
 - B) consumption, investment, government purchases, and net exports.
 - C) consumption, investment, and government purchases.
 - D) consumption and investment.
9. Disposable personal income is defined as income after the payment of all:
- A) taxes.
 - B) interest.
 - C) loans.
 - D) social insurance contributions.
10. Consumption depends _____ on disposable income, and investment depends _____ on the real interest rate.
- A) positively; positively
 - B) positively; negatively
 - C) negatively; negatively
 - D) negatively; positively

11. If the consumption function is given by $C = 150 + 0.85Y$ and Y increases by 1 unit, then C increases by:
- A) 0.15 units.
 - B) 0.5 units.
 - C) 0.85 units.
 - D) 1 unit.
12. When economists speak of “the” interest rate, they mean:
- A) the rate on 90-day Treasury bills.
 - B) the rate on 30-year government bonds.
 - C) the “prime” rate on loans.
 - D) no particular interest rate, since it is assumed that various interest rates tend to move up and down together.
13. The *real* interest rate is the:
- A) rate of interest actually paid by consumers.
 - B) rate of interest actually paid by banks.
 - C) rate of inflation minus the nominal interest rate.
 - D) nominal interest rate minus the rate of inflation.
14. Assume that the investment function is given by $I = 1,000 - 30r$, where r is the real rate of interest (in percent). Assume further that the nominal rate of interest is 10 percent and the inflation rate is 2 percent. According to the investment function, investment will be:
- A) 240.
 - B) 700.
 - C) 760.
 - D) 970.
15. *All* of the following actions increase government purchases of goods and services *except* the:
- A) federal government's sending a Social Security check to Betty Jones.
 - B) federal governments sending a paycheck to the president of the United States.
 - C) federal government's buying a Patriot missile.
 - D) city of Boston's buying a library book.

16. The equation $\bar{Y} = C(\bar{Y} - \bar{T}) + I(r) + \bar{G}$ may be solved for the equilibrium level of:
- A) income.
 - B) consumption.
 - C) government purchases.
 - D) the interest rate.
17. In the classical model with fixed income, if the demand for goods and services is greater than the supply, the interest rate will:
- A) increase.
 - B) decrease.
 - C) remain unchanged.
 - D) either increase or decrease, depending on whether consumption is greater or less than investment.
18. In the classical model with fixed income, if the interest rate is too low, then investment is too _____ and the demand for output _____ the supply.
- A) high; exceeds
 - B) high; falls short of
 - C) low; exceeds
 - D) low; falls short of
19. In a closed economy, $Y - C - G$ equals:
- A) national saving.
 - B) private saving.
 - C) public saving.
 - D) financial saving.
20. If income is 4,800, consumption is 3,500, government spending is 1,000, and taxes minus transfers are 800, private saving is:
- A) 300.
 - B) 500.
 - C) 1,000.
 - D) 1,300.

21. According to the model developed in Chapter 3, when taxes decrease without a change in government spending:
- A) consumption and investment both increase.
 - B) consumption and investment both decrease.
 - C) consumption increases and investment decreases.
 - D) consumption decreases and investment increases.
22. In the neoclassical model with fixed income, if there is a decrease in government spending with no change in taxes, then public saving _____ and private saving _____.
- A) increases; increases.
 - B) increases; does not change
 - C) decreases; increases
 - D) decreases; does not change
23. In the classical model with fixed income, an increase in the real interest rate could be the result of a(n):
- A) increase in government spending.
 - B) decrease in government spending.
 - C) decrease in desired investment.
 - D) increase in taxes.

Use the following to answer question 24.



24. (Exhibit: Saving, Investment, and the Interest Rate 1) The economy begins in equilibrium at Point E, representing the real interest rate, r_1 , at which saving, S_1 , equals desired investment, I_1 . What will be the new equilibrium combination of real interest rate, saving, and investment if the government cuts spending, holding other factors constant?
- A) Point A
 - B) Point B
 - C) Point C
 - D) Point D
25. Use the model developed in Chapter 3, but assume that consumption decreases, other things being equal, when the interest rate rises. If there is a technological advance that leads to an increase in investment demand:
- A) investment increases and the interest rate rises.
 - B) investment is unchanged and the interest rate rises.
 - C) investment and the interest rate are both unchanged.
 - D) investment decreases and the interest rate rises.

26. If an earthquake destroys some of the capital stock, the neoclassical theory of distribution predicts:
- A) the real wage will rise and the real rental price of capital will fall.
 - B) both the real wage and the real rental price of capital will fall.
 - C) both the real wage and the real rental price of capital will rise.
 - D) the real wage will fall and the real rental price of capital will rise.
27. The economy of Miniland has an income of \$400, consumption is \$200, government expenditure is \$200, and the tax earnings of government is \$150.
- a. Calculate private saving.
 - b. Calculate public saving.
 - c. Calculate national saving.
28. The closed economy of Moneyland has total income of \$5000, consumption function is $C = 2000 - 30r$, investment function $I = 1500 - 20r$, government spending is \$2000, r is nominal interest rate. Inflation is 6 percent. Find the real rate of interest.
29. Suppose people in an economy reduce their saving. What will be the effect on real interest rate and investment?

Textbook question (page 78-79, problems and application): Question #2 and 10