

Chapter 18—The Markets for the Factors of Production

MULTIPLE CHOICE

1. For a retail gasoline station, which of the following would qualify as capital?

- (i) the gas tanks and pumps
- (ii) the service attendants' time
- (iii) the plot of land on which the station sits

- a. (i) only
- b. (iii) only
- c. (i) and (iii)
- d. (ii) and (iii)

ANS: A DIF: Easy REF: 402

2. Which of the following best illustrates the concept of "derived demand?"

- a. An increase in the wages of autoworkers will lead to an increase in the demand for robots in automobile factories.
- b. An automobile producer's decision to supply more cars will lead to an increase in the demand for automobile production workers.
- c. An automobile producer's decision to supply more minivans results from a decrease in the demand for station wagons.
- d. An increase in the price of gasoline will lead to an increase in the demand for small cars.

ANS: B DIF: Average REF: 402

3. Factor markets are different from product markets in an important way, because

- a. equilibrium is the exception, and not the rule, in factor markets.
- b. the demand for a factor of production is a derived demand.
- c. the demand for a factor of production is likely to be upward sloping, in violation of the law of demand.
- d. All of the above are correct.

ANS: B DIF: Average REF: 402

Use the following information to answer the following questions.

Scenario 18-1

Gertrude Kelp owns three boats, which participate in commercial fishing for fresh Pacific salmon off the coast of Alaska. As part of her business, she hires a captain and several crewmembers for each boat. In the market for fresh Pacific salmon, there are thousands of firms like Gertrude's. While Gertrude usually catches a significant number of fish each year, her contribution to the entire harvest of salmon is negligible relative to the size of the market.

4. **Refer to Scenario 18-1.** Based on the given information, it is likely that Gertrude's firm has

- a. some influence over the wages paid to crewmembers, but no influence over the price of salmon.
- b. some influence over the price of salmon, but no influence over the wages paid to crewmembers.
- c. some influence over both the price of salmon and over the wages paid to crewmembers.
- d. no influence over either the price of salmon or over the wages paid to crewmembers.

ANS: D DIF: Average REF: 403

5. **Refer to Scenario 18-1.** When Gertrude participates in the labour market to hire crewmembers for her boats, she is most likely considered a
- demanders of labour services.
 - supplier of labour services.
 - buyer of capital.
 - demanders of capital.

ANS: A DIF: Easy REF: 403

6. **Refer to Scenario 18-1.** If the price of fresh Pacific salmon were to decrease significantly, it is most likely that Gertrude would
- reduce her demand for crewmembers.
 - try to increase her catch to make up for lost revenue.
 - become a seller in at least one factor market.
 - hire more crewmembers.

ANS: A DIF: Average REF: 403

7. **Refer to Scenario 18-1.** If Gertrude is a competitor in both the fresh Pacific salmon market and in the market for crewmembers she is called a price
- taker in the salmon market and a wage setter in the crew market.
 - taker in the crew market and a price setter in the salmon market.
 - taker in both markets.
 - setter in both markets.

ANS: C DIF: Average REF: 403

8. **Refer to Scenario 18-1.** In the fresh Pacific salmon product market Gertrude has control over
- the price she charges for her fresh salmon.
 - the quantity of fresh salmon that she catches and supplies to the market.
 - the competitive environment of the market.
 - All of the above are correct.

ANS: B DIF: Easy REF: 403

9. **Refer to Scenario 18-1.** If Gertrude is a price taker in the labour market, she decides
- the price for which she will sell the fish she catches.
 - how many crewmembers she will hire.
 - the wages that she will pay to her crewmembers.
 - All of the above are correct.

ANS: B DIF: Easy REF: 403

10. **Refer to Scenario 18-1.** Labor market theory assumes that Gertrude's demand for crewmembers and her supply of fresh Pacific salmon results from her
- intrinsic desire to hire crewmembers.
 - primary goal of maximizing profit.
 - altruistic motives to provide fresh salmon to consumers.
 - desire to strike a balance between environmental concerns and maximum profit.

ANS: B DIF: Easy REF: 403

11. The contribution to profit from an additional worker can be measured by the change in
- profit B marginal product.
 - cost B wage.

- c. revenue B wage.
- d. profit B wage.

ANS: C DIF: Average REF: 404

12. What is the shape of the curve that represents the value of the marginal product of labour?
- a. U-shaped
 - b. flat
 - c. downward sloping
 - d. upward sloping

ANS: C DIF: Average REF: 405

13. To maximize profit, a competitive firm hires workers up to the point of intersection of the
- a. marginal-product curve and the marginal-cost curve.
 - b. value-of-marginal-product curve and the wage line.
 - c. value-of-marginal-product curve and the marginal-revenue curve.
 - d. total-revenue curve and the wage line.

ANS: B DIF: Average REF: 405

14. If the wage exceeds the value of the marginal product of labour, then hiring another worker
- a. decreases the firm's total revenue.
 - b. increases the firm's profit.
 - c. increases the firm's total cost.
 - d. All of the above are correct.

ANS: C DIF: Average REF: 405

15. A profit-maximizing competitive firm for which the marginal product of labour is diminishing also experiences
- a. a perfectly inelastic supply of labour.
 - b. a perfectly elastic supply of labour.
 - c. a downward-sloping demand for labour.
 - d. an upward-sloping demand for labour.

ANS: C DIF: Average REF: 407

16. Letting Δ denote change, a competitive firm will hire an additional worker only if the result of hiring that worker is that
- a. $\Delta \text{ revenue} > \Delta \text{ cost}$.
 - b. $\Delta \text{ revenue} > \Delta \text{ profit}$.
 - c. $\Delta \text{ profit} > \Delta \text{ cost}$.
 - d. $\Delta \text{ marginal product} > \Delta \text{ cost}$.

ANS: A DIF: Average REF: 407

17. What causes the labour demand curve to shift?
- (i) changes in productivity
 - (ii) changes in wages
 - (iii) changes in output prices
- a. (i) and (ii)
 - b. (ii) and (iii)
 - c. (i) and (iii)

d. All of the above are correct.

ANS: C DIF: Average REF: 408

Use the following table to answer the following questions.

Table 18-1

Number of Workers	Output	Marginal Product of Labor	Value of Marginal Product of Labor	Wage	Marginal Profit
0	0				
1	100		\$1,000	\$500	\$500
2		80	\$ 800	\$500	
3		60		\$500	\$100
4	280		\$ 400	\$500	
5		20		\$500	

18. **Refer to Table 18-1.** What is the market price of the final good?

- a. \$5
- b. \$6
- c. \$8
- d. \$10

ANS: D DIF: Average REF: 404

19. **Refer to Table 18-1.** It is apparent from this table that increasing marginal product

- a. occurs only after the first worker is hired.
- b. occurs only after the second worker is hired.
- c. occurs only after the third worker is hired.
- d. never occurs.

ANS: D DIF: Average REF: 404

20. **Refer to Table 18-1.** If the firm hires two workers, the two workers together produce

- a. 80 units.
- b. 100 units.
- c. 180 units.
- d. 200 units.

ANS: C DIF: Average REF: 404

21. **Refer to Table 18-1.** What is the marginal product of the fourth worker?

- a. 30
- b. 40
- c. 60
- d. 100

ANS: B DIF: Average REF: 404

22. **Refer to Table 18-1.** The fact that the marginal product changes as the number of workers increases exemplifies a property called

- a. diminishing marginal product.
- b. utility maximization.
- c. supply and demand.
- d. labour theory.

ANS: A DIF: Easy REF: 404

23. **Refer to Table 18-1.** What is the marginal profit of the fourth worker?
- a. \$400
 - b. \$200
 - c. \$0
 - d. \$-100

ANS: D DIF: Easy REF: 404

24. **Refer to Table 18-1.** What is the fourth worker's contribution to total revenue?
- a. \$-100
 - b. \$200
 - c. \$400
 - d. \$500

ANS: C DIF: Average REF: 404

25. **Refer to Table 18-1.** To maximize its profit, how many workers will the firm hire?
- a. 2
 - b. 3
 - c. 4
 - d. 5

ANS: B DIF: Average REF: 404

26. **Refer to Table 18-1.** To maximize its profit, the firm will hire workers as long as the value of the marginal product of labour equals or exceeds
- a. \$200.
 - b. \$300.
 - c. \$400.
 - d. \$500.

ANS: D DIF: Average REF: 405

27. Dan owns one of the many bakeries in New York City. Which of the following events will lead to an increase in Dan's demand for the services of bakers?
- (i) The price of muffins increases. (Muffins are Dan's specialty.)
 - (ii) Dan adds three new ovens to the kitchen area to help the bakers work faster.
 - (iii) Local bakers form a union to protect themselves from low wages.
- a. (i) and (ii)
 - b. (ii) and (iii)
 - c. (i) and (iii)
 - d. All of the above are correct.

ANS: A DIF: Average REF: 407

28. Charles owns one of many bakeries in New York City. Which of the following events will lead to a decrease in Charles's demand for the services of bakers?
- a. Hollywood glamorization of a new movie about a baker leads hundreds of high-school students in New York City to apply for a job at Dan's.
 - b. The price of baked goods falls.
 - c. The local bakers form a union.
 - d. All of the above are correct.

ANS: B DIF: Average REF: 407

29. Aurora Custom Cabinets produces and sells custom kitchen cabinets. The firm has determined that if it hires 10 workers, it can produce 4 sets of cabinets per day. Alternatively, if it hires 11 workers, it can produce 4.2 sets of cabinets per day. It sells each set of cabinets for \$2,000, and it pays each of its workers \$200 per day.
- For the 11th worker, the value of the marginal product of labour is \$500.
 - For the 11th worker, the marginal revenue product is \$400.
 - The firm is maximizing its profit.
 - If the firm is employing 11 workers, then its profit would increase if it cut back to 10 workers.

ANS: B DIF: Challenging REF: 407

30. The labour supply curve shifts when
- employers need to hire more people.
 - employers develop new technology.
 - workers change the amount they want to work at any given wage.
 - workers become more productive.

ANS: C DIF: Average REF: 409

31. The labour supply curve is fundamentally a representation of the trade-off people face between which of the following?
- work and wage
 - work and leisure
 - wage and productivity
 - technology and wage

ANS: B DIF: Average REF: 409

32. If workers respond to an increase in the opportunity cost of leisure by taking less leisure, then their labour supply curve is
- horizontal.
 - vertical.
 - downward sloping.
 - upward sloping.

ANS: D DIF: Average REF: 408

33. The opportunity cost of an hour of leisure is
- 60 minutes.
 - an hour of sleep.
 - an hour's worth of wear and tear on your TV, exercise equipment, etc.
 - your hourly wage.

ANS: D DIF: Easy REF: 409

34. Among the people who are characterized below, who has the highest opportunity cost of leisure?
- an attorney who earns \$200 per hour and who plays golf during her leisure time
 - a medical doctor who earns \$210 per hour and who sleeps during his leisure time
 - a retail clerk who earns \$15 per hour and who watches TV during her leisure time
 - a waiter who earns \$12 per hour and who reads poetry during his leisure time

ANS: B DIF: Average REF: 409

35. Which of the following statements is correct? An individual worker's labour supply curve
- can never slope downward.
 - slopes downward if that person responds to a higher wage by taking fewer hours of leisure per week.
 - slopes downward if that person responds to a higher opportunity cost of leisure by working fewer hours per week.
 - is horizontal if that person works the same number of hours per week, regardless of the opportunity cost of leisure.

ANS: C DIF: Challenging REF: 409

Use the following information to answer the following questions.

Scenario 18-4

Rocchetta Industries manufactures and supplies bottled water in Mexico. As a result of a contamination of water supplies at many of Mexico's resort communities, the demand for bottled water has increased.

36. **Refer to Scenario 18-4.** We would expect that, as a result of the contamination, the value of the marginal product for Rocchetta Industries workers would
- be offset by a decrease in wages.
 - be unaffected by a rise in demand for bottled water.
 - rise.
 - fall.

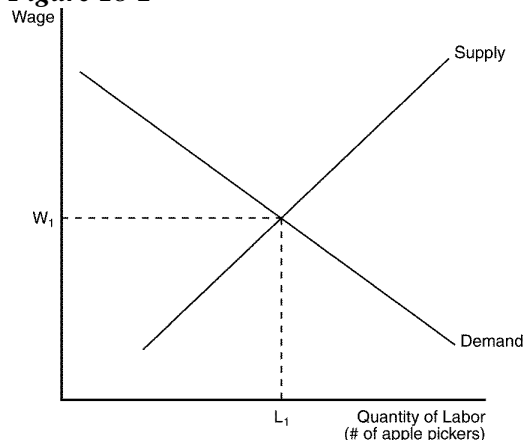
ANS: C DIF: Average REF: 409

37. **Refer to Scenario 18-4.** When the labour market adjusts to its new equilibrium we would expect the
- marginal product of labour to be higher than it was before the increase in demand for bottled water.
 - value of the marginal product of labour to be higher than it was before the increase in demand for bottled water.
 - price of bottled water to be lower than it was before the increase in demand for bottled water.
 - wages of Rocchetta workers to be lower than they were before the increase in demand for bottled water.

ANS: B DIF: Average REF: 410

Use the following figure to answer the following questions.

Figure 18-2



38. **Refer to Figure 18-2.** If the apple pickers start working fewer hours (by taking more vacation time), the equilibrium wage will
- fall below w_1 due to a shift in demand.
 - fall below w_1 due to a shift in supply.
 - rise above w_1 due to a shift in demand.
 - rise above w_1 due to a shift in supply.

ANS: D DIF: Average REF: 410

39. **Refer to Figure 18-2.** If the marginal product of labour falls and the price of apples remains unchanged,
- the value of the marginal product of labour will fall.
 - the quantity of labour demanded will increase above L_1 .
 - the labour supply curve will remain unchanged.
- (i) and (ii)
 - (ii) and (iii)
 - (i) and (iii)
 - All of the above are correct.

ANS: C DIF: Average REF: 410

40. **Refer to Figure 18-2.** If the price of apples increases, the
- demand for apple pickers will shift to the left.
 - demand for apple pickers will shift to the right.
 - supply of apple pickers will shift to the left.
 - supply of apple pickers will shift to the right.

ANS: B DIF: Average REF: 412

41. **Refer to Figure 18-2.** If the price of apples increases, the wage will
- increase and more apple pickers will be hired.
 - decrease and more apple pickers will be hired.
 - increase and fewer apple pickers will be hired.
 - decrease and fewer apple pickers will be hired.

ANS: A DIF: Average REF: 410

42. **Refer to Figure 18-2.** What happens to the profit earned by apple producers and the wage earned by apple pickers when the price of apples falls?
- Both profit and the wage will fall.
 - Both profit and the wage will rise.
 - Profit will rise and the wage will fall.
 - Profit will fall and the wage will rise.

ANS: A DIF: Average REF: 410

43. Suppose medical research provides evidence that eating bananas provides far greater health benefits than was previously thought. The resulting increase in the demand for bananas
- increases the marginal product of banana pickers for any given number of banana pickers.
 - increases the value of the marginal product of banana pickers for any given number of banana pickers.
 - increases the supply of banana pickers.
 - All of the above are correct.

ANS: B DIF: Challenging REF: 413

44. Which of the following statements is correct?
- a. The term "monopoly" refers to either a market with one buyer or to a market with one seller.
 - b. The term "monopoly" refers to a market with one buyer, while the term "monopsony" refers to a market with one seller.
 - c. The term "monopsony" refers to a market with one buyer, while the term "monopoly" refers to a market with one seller.
 - d. The term "monopsony" refers to either a market with one buyer or to a market with one seller.

ANS: C DIF: Easy REF: 415

45. The accumulation of machinery and buildings used in the production of new goods and services is referred to as
- a. production factors.
 - b. output factors.
 - c. capital.
 - d. equity.

ANS: C DIF: Easy REF: 418

46. The rental price of capital is
- a. determined outside the realm of factor markets.
 - b. the price paid to use capital for a limited time period.
 - c. the price paid for ownership of the capital.
 - d. always more than the purchase price.

ANS: B DIF: Average REF: 416

47. Because of diminishing returns, a factor in scarce supply has
- a. a low marginal product and a low rental price.
 - b. a low marginal product and a high rental price.
 - c. a high marginal product and a low rental price.
 - d. a high marginal product and a high rental price.

ANS: D DIF: Average REF: 404

48. As a result of a severe flooding, a farmer loses one half of his productive farmland. He should expect to see the marginal productivity of his remaining land
- a. increase.
 - b. remain unchanged.
 - c. decrease, but remain positive.
 - d. decrease and become negative.

ANS: A DIF: Average REF: 416

49. Who receives income from capital in Canada?
- a. bank depositors
 - b. bondholders
 - c. stockholders
 - d. All of the above are correct.

ANS: D DIF: Average REF: 416

50. Capital is paid according to the value of its marginal product
- a. only if earnings from capital are paid to households in the form of dividends.
 - b. only if earnings from capital are kept within firms as retained earnings.
 - c. regardless of whether earnings from capital are paid to households in the form of dividends or whether those earnings are kept within firms as retained earnings.
 - d. None of the above are correct; capital is a factor of production for which earnings are unrelated to the value of marginal product.

ANS: C

DIF: Challenging REF: 417