

*Economics: Canada in the Global Environment, 7e (Parkin)*  
Chapter 18 Markets for Factors of Production

18.1 The Anatomy of Factor Markets

1) The four factors of production are

- A) productive factors, neutral factors, entrepreneurial factors, and nonproductive factors.
- B) men, women, animals, and children.
- C) labour, capital, entrepreneurship, and land.
- D) machines, factories, buildings, and farms.
- E) labour, money, profits, and land.

Answer: C

Diff: 1

Topic: The Anatomy of Factor Markets

2) Profit is the factor price for

- A) capital.
- B) land.
- C) entrepreneurship.
- D) labour.
- E) capital services.

Answer: C

Topic: The Anatomy of Factor Markets

Skill: Recognition

AACSB: Reflective Thinking

3) Coal is an example of

- A) a nonrenewable natural resource.
- B) a renewable natural resource.
- C) capital.
- D) a casual resource.
- E) capital.

Answer: A

Topic: The Anatomy of Factor Markets

Skill: Conceptual

AACSB: Reflective Thinking

4) Water from the Mackenzie River is an example of

- A) a nonrenewable natural resource.
- B) a natural resource that can be used repeatedly.
- C) capital.
- D) a static resource.
- E) a capital service.

Answer: B

Topic: The Anatomy of Factor Markets

Skill: Conceptual

AACSB: Reflective Thinking

## 18.2 The Demand for a Factor of Production

1) Firms hire labour

- A) to minimize the average cost of the employment of labour.
- B) to exploit workers.
- C) to maximize profit.
- D) because capital is more expensive.
- E) to minimize costs.

Answer: C

Diff: 1

Topic: The Demand for a Factor of Production

2) To maximize profit, a firm hires labour until

- A) there is no more labour available at the market wage rate.
- B) they can sell that labour for no more than what they paid for it.
- C) the wage rate paid to the labour equals the marginal cost of production.
- D) the additional benefit of hiring the labour is equal to the additional revenue the labour generates.
- E) the value of marginal product equals the wage rate.

Answer: E

Diff: 2

Topic: The Demand for a Factor of Production

3) To maximize profit, the firm must equate the

- A) wage rate to the price of the good.
- B) wage rate to the marginal product of labour.
- C) value of marginal product to the factor price.
- D) marginal factor cost to the price of the output.
- E) marginal cost of the factor to the marginal product of the factor.

Answer: C

Diff: 1

Topic: The Demand for a Factor of Production

4) The value of marginal product of labour is the revenue

- A) generated by selling an additional unit of output.
- B) needed to hire an additional unit of labour.
- C) generated by the employment of an additional unit of labour.
- D) needed to cover the cost of producing an additional unit of output.
- E) generated to cover the cost of hiring an extra unit of labour.

Answer: C

Diff: 1

Topic: The Demand for a Factor of Production

5) If marginal product of a restaurant employee is 10 customers per hour, and the price of a meal is \$15, the restaurant employee's value of marginal product is

- A) \$15.
- B) \$7.5.
- C) \$12.5.
- D) \$10.
- E) \$150.

Answer: E

Diff: 2

Topic: The Demand for a Factor of Production

6) Suppose a gift shop in Corner Brook Newfoundland hires workers to personalize ornaments for Christmas. The store sells the personalized ornaments for \$6 each. The value of marginal product of this store's fourth worker is \$60. The marginal product of the fourth worker is

- A) 6 ornaments.
- B) 10 ornaments.
- C) 60 ornaments.
- D) 360 ornaments.
- E) 90 ornaments.

Answer: B

Diff: 2

Topic: The Demand for a Factor of Production

7) If the marginal product of a baker is 10 loaves of bread, and the price of a loaf of bread is \$2, the baker's value of marginal product is

- A) \$2.00.
- B) \$20.00.
- C) \$0.20.
- D) \$5.00.
- E) \$12.00.

Answer: B

Diff: 2

Topic: The Demand for a Factor of Production

8) The Brown's Egg store in Lethbridge Alberta hires workers to paint eggs. The price of an egg is \$2.50. The value of marginal product of this store's fifth worker is \$25. The marginal product of the fifth worker is

- A) 62.5 eggs.
- B) 25 eggs.
- C) 2 eggs.
- D) 10 eggs.
- E) 0.1 eggs.

Answer: D

Diff: 2

Topic: The Demand for a Factor of Production

Use the table below to answer the following questions.

Table 18.2.1

Labour (workers)	Output (units)
0	0
1	5
2	11
3	18
4	26
5	32
6	37
7	41
8	44
9	46
10	47

9) Refer to Table 18.2.1. If the firm can sell all the output it wants for the price of \$5 a unit, what is the value of marginal product of the 6th worker?

- A) \$20
- B) \$0
- C) \$25
- D) \$40
- E) \$185

Answer: C

Diff: 2

Topic: The Demand for a Factor of Production

10) Refer to Table 18.2.1. If the firm can sell all the output it wants for the price of \$4 a unit, what is the profit-maximizing number of workers if the wage rate is \$12?

- A) zero
- B) 10
- C) 4
- D) 8
- E) 6

Answer: D

Diff: 2

Topic: The Demand for a Factor of Production

11) Refer to Table 18.2.1. If the firm can sell all the output it wants for the price of \$5 a unit, what is the profit-maximizing number of workers if the wage rate is \$30?

- A) 1
- B) 3
- C) 5
- D) 6
- E) 7

Answer: C

Diff: 2

Topic: The Demand for a Factor of Production

12) Refer to Table 18.2.1. If the firm can sell all the output it wants for the price of \$10 a unit, what is the profit-maximizing number of workers if the wage rate is \$30?

- A) 1
- B) 5
- C) 6
- D) 8
- E) 9

Answer: D

Diff: 2

Topic: The Demand for a Factor of Production

13) If the price of the firm's output decreases, the value of marginal product curve

- A) remains unchanged.
- B) becomes more elastic.
- C) becomes more inelastic.
- D) shifts to the left.
- E) shifts to the right.

Answer: D

Diff: 1

Topic: The Demand for a Factor of Production

14) Mr. Shaw has a small factory in Estevan Saskatchewan. He will continue hiring labour as long as the value of marginal product of labour \_\_\_\_\_ the wage rate.

- A) is greater than
- B) is less than
- C) is less than or equal to
- D) determines
- E) maximizes

Answer: A

Diff: 2

Topic: The Demand for a Factor of Production

- 15) A profit-maximizing firm will continue to hire labour until the
- A) wage rate equals the last worker's marginal product.
  - B) last worker's value of marginal product is maximized.
  - C) last worker's value of marginal product is negative.
  - D) wage rate equals the last worker's value of marginal product.
  - E) last worker's value of marginal product equals zero.

Answer: D

Diff: 2

Topic: The Demand for a Factor of Production

Source: Study Guide

- 16) A shift in a firm's demand curve for labour occurs when there is a change in the
- A) wage rate.
  - B) opportunity cost of labour.
  - C) price of the output.
  - D) working-age population.
  - E) marginal cost of labour.

Answer: C

Diff: 2

Topic: The Demand for a Factor of Production

- 17) A shift in a firm's demand curve for labour occurs for all of the following reasons except a change in
- A) the prices of other factors of production.
  - B) technology.
  - C) the price of the firm's output.
  - D) wage rate.
  - E) marginal product of labour.

Answer: D

Diff: 2

Topic: The Demand for a Factor of Production

- 18) Suppose a profit-maximizing firm hires labour in a competitive labour market. If the value of marginal product of labour is greater than the wage rate, the firm should
- A) increase the wage rate.
  - B) decrease the wage rate.
  - C) increase the quantity of labour it hires.
  - D) decrease the quantity of labour it hires.
  - E) shift to a more labour-intensive production process.

Answer: C

Diff: 2

Topic: The Demand for a Factor of Production

- 19) When the price of a firm's output increases
- A) the supply of labour increases.
  - B) the firm hires less labour.
  - C) the marginal product of labour increases.
  - D) the firm's demand for labour curve shifts leftward.
  - E) the value of marginal product of labour increases.

Answer: E

Diff: 2

Topic: The Demand for a Factor of Production

- 20) A technological change that increases the value of marginal product of labour shifts the labour
- A) demand curve leftward.
  - B) demand curve rightward.
  - C) supply curve leftward.
  - D) supply curve rightward.
  - E) B and D.

Answer: B

Diff: 2

Topic: The Demand for a Factor of Production

Source: Study Guide

- 21) A decrease in the price of factors of production that are substitutes for labour shifts the labour
- A) demand curve leftward.
  - B) demand curve rightward.
  - C) supply curve leftward.
  - D) supply curve rightward.
  - E) B and D.

Answer: A

Diff: 2

Topic: The Demand for a Factor of Production

- 22) Mr. Smith's firm is currently hiring 30 workers. The value of marginal product of the last worker is \$7.00 per hour. The wage rate is \$8.00 per hour. To increase profit, Mr. Smith should
- A) continue hiring 30 workers because the firm earns a surplus of \$1.00 on each worker hired.
  - B) increase the price of the firm's product so that the value of marginal product increases to \$8.00 per hour.
  - C) decrease the price of the firm's product so that the value of marginal product increases to \$8.00 per hour.
  - D) decrease the number of workers until the value of marginal product of labour equals \$8.00.
  - E) increase the number of workers until the value of marginal product of labour equals \$8.00.

Answer: D

Diff: 2

Topic: The Demand for a Factor of Production

23) Suppose a profit-maximizing firm hires labour in a competitive labour market. If the value of marginal product of labour is less than the wage rate, the firm should

- A) increase the wage rate.
- B) decrease the wage rate.
- C) increase the quantity of labour it hires.
- D) decrease the quantity of labour it hires.
- E) shut down.

Answer: D

Diff: 2

Topic: The Demand for a Factor of Production

24) A decrease in the price of a firm's output

- A) decreases the supply of labour.
- B) increases the supply of labour.
- C) increases the value of marginal product of labour.
- D) decreases the quantity of labour demanded.
- E) decreases the value of marginal product of labour.

Answer: E

Diff: 2

Topic: The Demand for a Factor of Production



Use the table below to answer the following questions.

Table 18.2.2

Wendy owns an apple orchard and she employs students to pick the apples. In an hour they can pick the following amounts:

Number of Students	Quantity of Apples (kilograms per hour)
1	20
2	50
3	90
4	120
5	145
6	165
7	180
8	190

25) Refer to Table 18.2.2. If the price of apples is \$0.50 per kilogram, the value of marginal product of the 5th student is

- A) \$0.50 an hour.
- B) \$72.50 an hour.
- C) \$14.50 an hour.
- D) \$12.50 an hour.
- E) \$10 an hour.

Answer: D

Diff: 2

Topic: The Demand for a Factor of Production

26) Consider Table 18.2.2. If the price of apples is \$0.50 per kilogram, and the wage rate for apple pickers is \$7.50 per hour, then the number of pickers that Wendy will hire is

- A) 1.
- B) 3.
- C) 5.
- D) 7.
- E) 8.

Answer: D

Diff: 2

Topic: The Demand for a Factor of Production

- 27) A firm's value of marginal product of labour curve is also its
- A) marginal cost curve of labour.
  - B) demand curve for labour.
  - C) supply curve of labour.
  - D) supply curve of output.
  - E) marginal product curve.

Answer: B

Diff: 1

Topic: The Demand for a Factor of Production

Source: Study Guide

- 28) The demand curve for labour will shift rightward as a result of
- A) a decrease in the price of the firm's output.
  - B) an increase in the wage rate.
  - C) a decrease in the price of a substitute factor of production.
  - D) an increase in the price of a substitute factor of production.
  - E) a decrease in the wage rate.

Answer: D

Diff: 2

Topic: The Demand for a Factor of Production

- 29) The demand curve for labour will shift leftward as a result of
- A) a decrease in the wage rate.
  - B) an increase in the wage rate.
  - C) a decrease in the price of a substitute factor of production.
  - D) an increase in the price of a substitute factor of production.
  - E) an increase in the price of the firm's output.

Answer: C

Diff: 2

Topic: The Demand for a Factor of Production

- 30) The demand for a factor of production is
- A) a determined demand.
  - B) a derived demand.
  - C) a kinked demand.
  - D) an insatiable demand.
  - E) a desperate demand.

Answer: B

Diff: 1

Topic: The Demand for a Factor of Production

31) The idea that the demand for tire workers stems from the demand for automobiles is

- A) the value of the marginal product of labour.
- B) the value of the marginal product of tire workers.
- C) the value of the marginal product of auto workers.
- D) an output demand.
- E) a derived demand.

Answer: E

Diff: 1

Topic: The Demand for a Factor of Production

### 18.3 Labour Markets

1) If the supply of labour decreases, which of the following events will occur?

- A) The wage rate will decrease and firms will increase the number of workers to the point at which the value of marginal product equals the new wage rate.
- B) The wage rate will decrease and firms will decrease the number of workers to the point at which the value of marginal product equals the new wage rate.
- C) The wage rate will increase and firms will decrease the number of workers to the point at which the value of marginal product equals the new wage rate.
- D) The wage rate will increase and firms will decrease the number of workers to the point at which the value of marginal product is greater than the new wage rate.
- E) The wage rate will increase and firms will decrease the number of workers to the point at which the value of marginal product is less than the new wage rate.

Answer: C

Diff: 2

Topic: Labour Markets

2) The reservation wage of labour is

- A) the wage below which the labourer will be willing to work.
- B) the wage above which the worker would be willing to retire.
- C) the wage rate at which the firm would find it profitable to hire labour.
- D) the wage rate that makes it necessary for the firm to shut down rather than pay this wage to labour.
- E) the wage rate above which the worker would be willing to supply labour to the market.

Answer: E

Diff: 1

Topic: Labour Markets

3) The substitution effect on labour supply refers to the degree to which

- A) the firm can substitute other factors of production for labour.
- B) buyers can substitute other products for the products that are made by organized labour.
- C) labour is willing to substitute nonlabour income for wages.
- D) labour prefers to substitute nonmonetary payments for money wages.
- E) labour is willing to substitute work for leisure.

Answer: E

Diff: 3

Topic: Labour Markets

- 4) The income effect on labour supply refers to
- A) the fact that at higher wages the worker earns more income.
  - B) the fact that as the wage rate increases and income increases, labourers demand more of all normal goods, including leisure activities.
  - C) the increase in the income of firms that is necessary to pay higher wages.
  - D) the fact that as workers become more productive, they earn more income.
  - E) the fact that as the wage rate increases and income increases, labourers demand more of all normal goods, including labour.

Answer: B

Diff: 3

Topic: Labour Markets

- 5) The labour supply curve may eventually become "backward bending" at high wages because
- A) the income effect of the higher wage is dominated by the substitution effect.
  - B) the income effect of the higher wage dominates the substitution effect of the higher wage.
  - C) firms will demand added productivity from the workers as the wage reaches very high levels.
  - D) firms will demand longer hours in trade for the higher wages.
  - E) people get tired of working so many hours and refuse to increase their labour supply.

Answer: B

Diff: 3

Topic: Labour Markets

- 6) If the wage rate increases, the substitution effect gives a household the incentive to
- A) raise its reservation wage.
  - B) increase leisure and decrease work.
  - C) increase work and decrease leisure.
  - D) increase both work and leisure.
  - E) decrease both work and leisure.

Answer: C

Diff: 3

Topic: Labour Markets

Source: Study Guide

- 7) If the wage rate decreases, the substitution effect gives a household the incentive to
- A) raise its reservation wage.
  - B) increase leisure and decrease work
  - C) increase work and decrease work.
  - D) increase both work and leisure.
  - E) decrease both work and leisure.

Answer: B

Diff: 3

Topic: Labour Markets

- 8) If the wage rate increases, the income effect gives a household the incentive to
- A) raise its reservation wage.
  - B) increase leisure and decrease work.
  - C) increase work and decrease leisure.
  - D) increase both work and leisure.
  - E) decrease both work and leisure.

Answer: B

Diff: 3

Topic: Labour Markets

Source: Study Guide

- 9) If the wage rate decreases, the income effect gives a household the incentive to
- A) raise its reservation wage.
  - B) increase leisure and decrease work
  - C) increase work and decrease leisure
  - D) increase both work and leisure.
  - E) decrease both work and leisure.

Answer: C

Diff: 3

Topic: Labour Markets

- 10) As the wage rate rises, a household will have a backward-bending supply of labour curve if
- A) the income effect reinforces the substitution effect.
  - B) the wage rate rises above the reservation wage.
  - C) the substitution effect dominates the income effect.
  - D) the income effect dominates the substitution effect.
  - E) leisure is an inferior good.

Answer: D

Diff: 3

Topic: Labour Markets

Source: Study Guide

- 11) If the desire for leisure increased, the wage rate would
- A) rise and employment would fall.
  - B) rise and employment would rise.
  - C) fall and employment would fall.
  - D) fall and employment would rise.
  - E) fall and employment would rise or fall.

Answer: A

Diff: 2

Topic: Labour Markets

Source: Study Guide

- 12) The income effect of a higher wage is defined as
- A) the increased income workers must be paid to be willing to work more.
  - B) the increased prices of consumer goods that result from increased worker incomes.
  - C) the increased demand for leisure that results from increased worker incomes.
  - D) the increased workers' purchasing power that results from increased worker incomes.
  - E) all of the above.

Answer: C

Diff: 3

Topic: Labour Markets

- 13) Complete the following sentence. A labour union is
- A) an illegal conspiracy of workers formed to strike against employers.
  - B) a legal organization of workers with a goal to overthrow the capitalist class.
  - C) an organized group of workers that attempts to increase wages and influence other job conditions.
  - D) an organized group of crime syndicates.
  - E) a union with members working in the same industry, but in different jobs.

Answer: C

Diff: 1

Topic: Labour Markets

- 14) A union is formed to restrict labour supply in a previously perfectly competitive labour market. If the union succeeds in raising the wage,
- A) employment will fall.
  - B) employment will rise.
  - C) employment will not change.
  - D) the total wage bill will rise.
  - E) the total wage bill will fall.

Answer: A

Diff: 2

Topic: Labour Markets

Source: Study Guide

- 15) For a monopsonist facing an upward-sloping supply curve of labour, the marginal cost of labour curve
- A) intersects the value of marginal product curve of labour at the equilibrium wage rate.
  - B) is below and parallel to the supply of labour curve.
  - C) is identical to the supply of labour curve.
  - D) is above and parallel to the supply of labour curve.
  - E) is above the supply curve of labour.

Answer: E

Diff: 3

Topic: Labour Markets

- 16) Unions try to raise the demand for their labour by
- A) raising wages.
  - B) encouraging imports.
  - C) supporting less restrictive immigration laws.
  - D) sponsoring training for union members.
  - E) lobbying against minimum wage laws.

Answer: D

Diff: 2

Topic: Labour Markets

- 17) A constraint on union effectiveness is
- A) the downward-sloping labour demand curve.
  - B) the minimum wage law.
  - C) the Fair Labour Standards Practices Act.
  - D) increasing export competitiveness.
  - E) the competition of other unions.

Answer: A

Diff: 2

Topic: Labour Markets

- 18) To increase the demand for union labour, unions do all of the following except support
- A) increases in the minimum wage.
  - B) increases in import restrictions.
  - C) immigration restrictions.
  - D) an increase in the supply of foreign workers.
  - E) training schemes and apprenticeship programs.

Answer: D

Diff: 2

Topic: Labour Markets

- 19) Which of the following would unions be least likely to support?
- A) An increase in the minimum wage.
  - B) Immigration restrictions.
  - C) Increasing the value of marginal product of their workers.
  - D) Increasing demand for the goods their workers produce.
  - E) Reducing barriers to imports.

Answer: E

Diff: 2

Topic: Labour Markets

Source: Study Guide

- 20) Unions try to raise minimum wages because
- A) they wish to encourage employment among the poor.
  - B) they wish to help those on minimum wages.
  - C) this will decrease the supply of labour in their industry.
  - D) this will increase the demand for labour in their industry.
  - E) none of the above.

Answer: D

Diff: 2

Topic: Labour Markets

- 21) When compared to a monopsony labour market with the same value of marginal product curve and labour supply curve, a perfectly competitive labour market will pay a
- A) lower wage and employ fewer workers.
  - B) lower wage and employ more workers.
  - C) higher wage and employ fewer workers.
  - D) higher wage and employ more workers.
  - E) higher wage and employ the same amount of workers.

Answer: D

Diff: 3

Topic: Labour Markets

- 22) A monopsony exists when there is
- A) a single buyer in a market.
  - B) a single seller in a market.
  - C) a small number of large buyers in a market.
  - D) a small number of large sellers in a market.
  - E) an agreement amongst sellers in a market to set prices.

Answer: A

Diff: 1

Topic: Labour Markets

- 23) If a strike or lockout occurs in a bilateral monopoly situation, it is usually because
- A) the demand for labour is relatively inelastic.
  - B) the demand for labour is relatively elastic.
  - C) the supply of labour is relatively inelastic.
  - D) the supply of labour is relatively elastic.
  - E) one party has misjudged the costs each party can inflict on the other.

Answer: E

Diff: 2

Topic: Labour Markets

Source: Study Guide



- 24) Which one of the following would unions be most likely to support?
- A) increased barriers to imports
  - B) eased immigration restrictions
  - C) a decrease in the minimum wage
  - D) decreasing demand for the goods their workers produce
  - E) decreasing the marginal product of its workers

Answer: A

Diff: 2

Topic: Labour Markets

Use the figure below to answer the following questions.

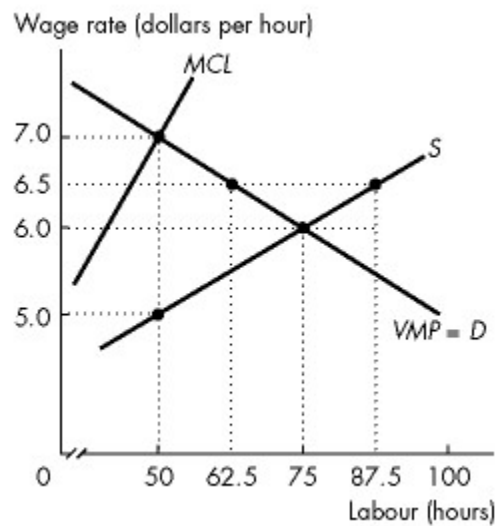


Figure 18.3.1

- 25) Refer to Figure 18.3.1. This figure shows the value of marginal product of labour curve, the labour supply curve, and the marginal cost of labour curve. If this labour market is competitive, the wage rate is
- A) \$3 an hour.
  - B) \$5 an hour.
  - C) \$6 an hour.
  - D) \$7 an hour.
  - E) greater than \$7 an hour.

Answer: C

Diff: 2

Topic: Labour Markets

26) Refer to Figure 18.3.1. This figure shows the value of marginal product of labour curve, the labour supply curve, and the marginal cost of labour curve. If this labour market is competitive, the quantity of labour employed is

- A) zero hours.
- B) 50 hours.
- C) 75 hours.
- D) 100 hours.
- E) greater than 100 hours.

Answer: C

Diff: 2

Topic: Labour Markets

27) Refer to Figure 18.3.1. This figure shows the value of marginal product of labour curve, the labour supply curve, and the marginal cost of labour curve. If this labour market is controlled by a monopsony, the wage rate is

- A) \$7 an hour.
- B) \$6 an hour.
- C) \$3 an hour.
- D) \$5 an hour.
- E) zero, because the market would shut down.

Answer: D

Diff: 3

Topic: Labour Markets

28) Refer to Figure 18.3.1. This figure shows the value of marginal product of labour curve, the labour supply curve, and the marginal cost of labour curve. If this labour market is controlled by a monopsony, then the monopsonist hires

- A) zero hours.
- B) 50 hours.
- C) 75 hours.
- D) 100 hours.
- E) greater than 100 hours.

Answer: B

Diff: 3

Topic: Labour Markets

29) Refer to Figure 18.3.1. This figure shows the value of marginal product of labour curve, the labour supply curve, and the marginal cost of labour curve. If a union and the monopsonist in Figure 18.3.1 are equally strong, the outcome will be an hourly wage

- A) of \$7.
- B) between \$5 and \$6.
- C) between \$5 and \$7.
- D) between \$6 and \$7.
- E) of \$6

Answer: C

Diff: 3

Topic: Labour Markets

30) Refer to Figure 18.3.1. This figure shows the value of marginal product of labour curve, the labour supply curve, and the marginal cost of labour curve. Suppose the government passes a minimum wage law that prohibits anyone from hiring labour at less than \$6.50 per hour. The new marginal cost of labour (MCL) for the monopsonist

- A) is not affected.
- B) equals \$6.50 only from zero to 50 hours of labour.
- C) equals \$6.50 only from zero to 75 hours of labour.
- D) equals \$6.50 only from zero to 100 hours of labour.
- E) none of the above.

Answer: E

Diff: 3

Topic: Labour Markets

31) Refer to Figure 18.3.1. This figure shows the value of marginal product of labour curve, the labour supply curve, and the marginal cost of labour curve. Suppose the government passes a minimum wage law that prohibits anyone from hiring labour at less than \$6.50 per hour. The monopsonist will hire

- A) 50 hours of labour.
- B) 75 hours of labour.
- C) 62.5 hours of labour.
- D) 100 hours of labour.
- E) 125 hours of labour.

Answer: C

Diff: 3

Topic: Labour Markets

32) Refer to Figure 18.3.1. This figure shows the value of marginal product of labour curve, the labour supply curve, and the marginal cost of labour curve. If this labour market is controlled by a monopsony, then the monopsonist

- A) pays a wage rate that is greater than the value of marginal product of labour.
- B) pays a wage rate exactly equal to the value of marginal product of labour.
- C) pays a wage rate that is less than the value of marginal product of labour.
- D) employs more labour hours per week than in a competitive labour market.
- E) pays a wage equal to the marginal cost of labour.

Answer: C

Diff: 3

Topic: Labour Markets

Use the figure below to answer the following questions.

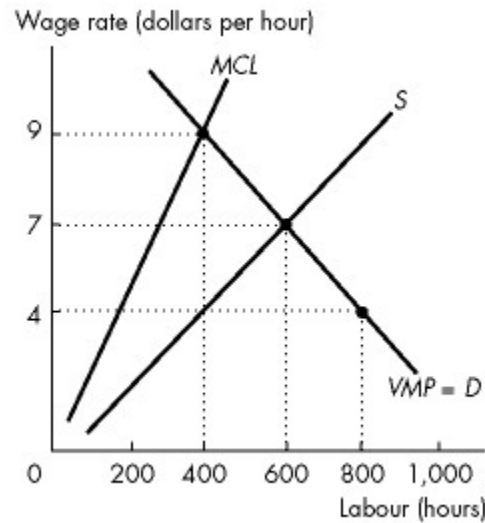


Figure 18.3.2

33) Refer to Figure 18.3.2. This figure illustrates a monopsonist in the labour market. The profit-maximizing wage rate is \_\_\_\_\_ and the quantity of labour hired is \_\_\_\_\_.

- A) \$4 per hour; 800 hours
- B) \$4 per hour; 400 hours
- C) \$7 per hour; 600 hours
- D) \$9 per hour; 400 hours
- E) none of the above.

Answer: B

Diff: 3

Topic: Labour Markets

Source: Study Guide

34) Refer to Figure 18.3.2. If the labour market illustrated in this figure becomes competitive, the equilibrium wage rate is \_\_\_\_\_ and the quantity of labour hired is \_\_\_\_\_.

- A) \$4 per hour; 800 hours
- B) \$4 per hour; 400 hours
- C) \$7 per hour; 600 hours
- D) \$9 per hour; 400 hours
- E) none of the above.

Answer: C

Diff: 2

Topic: Labour Markets

Source: Study Guide

35) Refer to Figure 18.3.2. Suppose this industry is initially in a monopsony situation and then the government introduces a minimum wage of \$8 per hour. Choose the correct statement.

- A) The wage rate rises, but employment decreases.
- B) The wage rate rises, but employment stays the same.
- C) The wage rate rises to \$8 per hour, and employment increases to 800 hours.
- D) The wage rate rises to \$8 per hour, and employment increases to 600 hours.
- E) The wage rate rises to \$8 per hour, and employment increases to 500 hours.

Answer: E

Diff: 3

Topic: Labour Markets

36) If a union forms to face the monopsonist in Figure 18.3.2, the situation is one of

- A) binding arbitration.
- B) derived demand.
- C) duopoly.
- D) collusive oligopoly.
- E) bilateral monopoly.

Answer: E

Diff: 2

Topic: Labour Markets

Source: Study Guide

37) If a union and the monopsonist in Figure 18.3.2 agree to bargaining, the outcome is an hourly wage rate

- A) of \$7.
- B) between \$4 and \$7.
- C) between \$4 and \$9.
- D) between \$7 and \$9.
- E) of \$9.

Answer: C

Diff: 3

Topic: Labour Markets

Source: Study Guide

Use the figure below to answer the following questions.

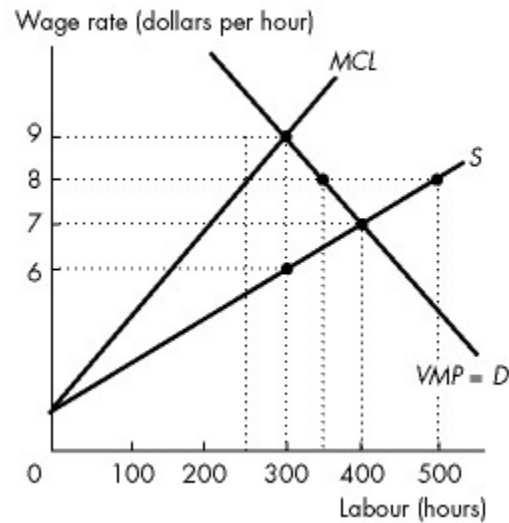


Figure 18.3.3

38) Refer to Figure 18.3.3. For the monopsonist employer illustrated in this figure, the profit-maximizing wage rate is \_\_\_\_\_ and the quantity of labour hired is \_\_\_\_\_.

- A) \$9 per hour; 300 hours
- B) \$8 per hour; 350 hours
- C) \$8 per hour; 500 hours
- D) \$7 per hour; 400 hours
- E) \$6 per hour; 300 hours

Answer: E

Diff: 3

Topic: Labour Markets

Source: Study Guide

39) Refer to Figure 18.3.3. Suppose the government passes a minimum wage law that prohibits anyone from hiring labour at less than \$8 per hour. The monopsonist will hire

- A) 250 hours of labour.
- B) 300 hours of labour.
- C) 350 hours of labour.
- D) 400 hours of labour.
- E) 450 hours of labour.

Answer: C

Diff: 3

Topic: Labour Markets

## 18.4 Capital and Natural Resource Markets

- 1) If the value of marginal product of capital decreases as more capital is employed, then the
- A) supply curve of capital is upward sloping.
  - B) supply curve of capital is downward sloping.
  - C) demand curve for capital is horizontal.
  - D) demand curve for capital is downward sloping.
  - E) demand curve for capital is upward sloping.

Answer: D

Diff: 2

Topic: Capital and Natural Resource Markets

- 2) Natural resources that are depleted as they are used
- A) should not be used.
  - B) are called nonrenewable natural resources.
  - C) should be used for only highly valued purposes.
  - D) should be conserved for future generations.
  - E) are called renewable natural resources.

Answer: B

Diff: 1

Topic: Capital and Natural Resource Markets

- 3) An example of a nonrenewable natural resource is
- A) oil.
  - B) Lake Erie.
  - C) rain.
  - D) sunshine.
  - E) the St. Lawrence River.

Answer: A

Diff: 1

Topic: Capital and Natural Resource Markets

- 4) If the market for a nonrenewable natural resource is currently in equilibrium, the price of the resource
- A) is equal to the value of marginal product of the resource.
  - B) is expected to rise at a rate equal to the interest rate.
  - C) is expected to fall at a rate equal to the interest rate.
  - D) will actually rise at a rate equal to the interest rate.
  - E) will actually fall at a rate equal to the interest rate.

Answer: B

Diff: 2

Topic: Capital and Natural Resource Markets

Source: Study Guide

- 5) Equilibrium occurs in the market for oil when the
- A) price of the oil equals the interest rate.
  - B) increase in the price of oil equals the expected increase in the interest rate.
  - C) expected increase in the price of oil over time is equal to the interest rate.
  - D) stock of oil is eventually depleted.
  - E) price of oil today equals the expected future price.

Answer: C

Diff: 3

Topic: Capital and Natural Resource Markets

- 6) The Hotelling Principle states that
- A) hotels will tend to be built next to major highways.
  - B) equilibrium in natural resource markets occurs when the expected increase in the price of the resource over time is equal to the interest rate.
  - C) the resource will be depleted at a rate equal to the rate of interest.
  - D) natural resources should be depleted only for the production of goods that would help maintain environmental quality.
  - E) we should conserve nonrenewable natural resources.

Answer: B

Diff: 3

Topic: Capital and Natural Resource Markets

- 7) Which of the following is a nonrenewable natural resource?
- A) coal
  - B) land
  - C) water
  - D) trees
  - E) rain

Answer: A

Diff: 1

Topic: Capital and Natural Resource Markets

Source: Study Guide

- 8) In the short run, the market supply of land is
- A) relatively elastic.
  - B) relatively inelastic.
  - C) perfectly elastic.
  - D) perfectly inelastic.
  - E) either elastic or inelastic depending on the productivity of the land.

Answer: D

Diff: 2

Topic: Capital and Natural Resource Markets



9) The demand for capital is determined by \_\_\_\_\_. The demand for land is determined by \_\_\_\_\_. The supply of \_\_\_\_\_ is perfectly \_\_\_\_\_.

- A) how much capital is renewable and how much is nonrenewable; how much land is renewable and how much is nonrenewable; land; elastic
- B) the value of marginal product of capital; the value of marginal product of land; land; inelastic
- C) how much capital is renewable and how much is nonrenewable; how much land is renewable and how much is nonrenewable; capital; elastic
- D) the value of marginal product of capital; the value of marginal product of land; capital; inelastic
- E) the value of marginal product of capital; the value of marginal product of land; land; elastic

Answer: B

Topic: Capital and Natural Resource Markets

Source: MyEconLab

10) The supply of a nonrenewable natural resource is determined by all of the following factors except

- A) the value of marginal product.
- B) the known reserves of the natural resource.
- C) the scale of current production facilities.
- D) the expected future price.
- E) all of the above determine supply of a nonrenewable resource.

Answer: A

Topic: Capital and Natural Resource Markets

Source: MyEconLab

11) The Hotelling Principle is the idea that the price of a \_\_\_\_\_ is expected to rise at a rate equal to the \_\_\_\_\_.

- A) nonrenewable natural resource; inflation rate
- B) unit of capital; interest rate
- C) nonrenewable natural resource; interest rate
- D) unit of capital; inflation rate
- E) nonrenewable natural resource; percentage increase in demand

Answer: C

Topic: Capital and Natural Resource Markets

Source: MyEconLab

12) If the price of a natural resource is expected to rise at a rate that exceeds the interest rate, demand \_\_\_\_\_, supply \_\_\_\_\_, and the price \_\_\_\_\_.

- A) decreases; increases; falls
- B) increases; decreases; rises
- C) increases; increases; rises, falls, or remains unchanged
- D) decreases; decreases; rises, falls, or remains unchanged
- E) increases; does not change; rises

Answer: B

Topic: Capital and Natural Resource Markets

Source: MyEconLab

13) The Internet is \_\_\_\_\_ natural resource. Power generated by wind turbines is \_\_\_\_\_ natural resource.

- A) not a; a nonrenewable
- B) a renewable; a renewable
- C) a renewable; a nonrenewable
- D) not a; a renewable
- E) not a; not a

Answer: D

Topic: Capital and Natural Resource Markets

Source: MyEconLab

14) Coal in an Alberta coal mine is \_\_\_\_\_ natural resource. Algonquin Park is \_\_\_\_\_ natural resource.

- A) a nonrenewable; a nonrenewable
- B) a renewable; a renewable
- C) a nonrenewable; a renewable
- D) a renewable; a nonrenewable
- E) a nonrenewable; not a

Answer: C

Topic: Capital and Natural Resource Markets

Source: MyEconLab

15) All of the following statements are correct except

- A) the supply of capital is derived from the value of marginal product of capital.
- B) the lower the rental rate of capital, other things remaining the same, the greater is the quantity of capital demanded.
- C) the higher the rental rate, other things remaining the same, the greater is the quantity of capital supplied.
- D) profit-maximizing firms hire the quantity of capital services that makes the value of marginal product of capital equal to the rental rate of capital.
- E) if the present value of the future rental payments of an item of capital equipment is less than the cost of buying the capital, the firm will rent or lease the equipment.

Answer: A

Topic: Capital and Natural Resource Markets

Source: MyEconLab

16) Choose the correct statement.

- A) The quantity of land demanded cannot be changed by people's decisions.
- B) The supply of each particular block of land is perfectly inelastic.
- C) The lower the rental rate, other things remaining the same, the smaller is the quantity of land demanded.
- D) Profit-maximizing firms rent the quantity of land at which the value of marginal product of land is equal to the quantity of land demanded.
- E) None of the above statements are correct.

Answer: B

Topic: Capital and Natural Resource Markets

Source: MyEconLab

17) The value of marginal product of oil is the \_\_\_\_\_ influence on demand. The greater the quantity of oil used, the \_\_\_\_\_ is the value of marginal product of oil.

- A) speculative; greater
- B) fundamental; greater
- C) fundamental; smaller
- D) speculative; smaller
- E) none of the above

Answer: C

Topic: Capital and Natural Resource Markets

Source: MyEconLab

18) All of the following statements are correct except

- A) if the price of oil is expected to rise at a rate equal to the interest rate, demand increases and supply increases.
- B) the interest rate is the opportunity cost of holding an oil inventory.
- C) if the price of oil is expected to rise at a rate that exceeds the interest rate, demand increases and supply decreases.
- D) according to the Hotelling Principle, the price of a nonrenewable natural resource is expected to rise at a rate equal to the interest rate.
- E) the marginal cost of extraction of oil is the fundamental determinant of supply.

Answer: A

Topic: Capital and Natural Resource Markets

Source: MyEconLab

### 18.5 Mathematical Note: Present Value and Discounting

1) Suppose the interest rate is 5 percent per year. What is the present value of the \$210 that will be received two years from today?

- A) \$210
- B) \$190.48
- C) \$231.53
- D) \$200
- E) \$42

Answer: B

Diff: 2

Topic: Mathematical Note: Present Value and Discounting

2) The present value of the \$50 that will be received next year is \$40. What is the interest rate?

- A) 10 percent
- B) 8 percent
- C) 20 percent
- D) 50 percent
- E) 25 percent

Answer: E

Diff: 2

Topic: Mathematical Note: Present Value and Discounting

3) What will be the value in one year of \$25 invested today at an annual interest rate of 5 percent ?

- A) \$25
- B) \$26.25
- C) \$27.50
- D) \$30
- E) \$23.81

Answer: B

Diff: 2

Topic: Mathematical Note: Present Value and Discounting

4) The \_\_\_\_\_ of a future amount of money is the amount that, if invested today, will grow to be as large as that future amount when the interest it earns is taken into account.

- A) current value
- B) future value
- C) present value
- D) market value
- E) profit value

Answer: C

Diff: 1

Topic: Mathematical Note: Present Value and Discounting

5) What is the most an investor would be willing to pay for a stock that will pay \$210 next year and nothing before or after?

- A) \$200 regardless of the interest rate.
- B) \$200 if the interest rate is 5 percent per year.
- C) \$190.91 if the interest rate is 10 percent per year.
- D) B and C.
- E) None of the above.

Answer: D

Diff: 2

Topic: Mathematical Note: Present Value and Discounting

6) The present value of a future payment of money will be higher the

- A) higher the interest rate or the further in the future the payment.
- B) lower the interest rate or the further in the future the payment.
- C) higher the interest rate or the nearer the date of the future payment.
- D) lower the interest rate or the nearer the date of the future payment.
- E) lower the interest rate, independent of the date of the future payment.

Answer: D

Diff: 2

Topic: Mathematical Note: Present Value and Discounting

- 7) The present value of a future payment of money will be lower the
- A) higher the interest rate or the further in the future the payment.
  - B) lower the interest rate or the further in the future the payment.
  - C) higher the interest rate or the nearer the date of the future payment.
  - D) lower the interest rate or the nearer the date of the future payment.
  - E) lower the interest rate, independent of the date of the future payment.

Answer: A

Diff: 2

Topic: Mathematical Note: Present Value and Discounting

- 8) If the annual rate of interest is 10 percent per year, what is the present value of \$100 received one year from now?
- A) \$90.00
  - B) \$90.91
  - C) \$95.45
  - D) \$100.00
  - E) \$110.00

Answer: B

Diff: 2

Topic: Mathematical Note: Present Value and Discounting

- 9) If the interest rate is 10 percent per year, the present value of \$100 in two years is
- A) \$80.00.
  - B) \$82.64.
  - C) \$90.91.
  - D) \$120.00.
  - E) \$121.00.

Answer: B

Diff: 2

Topic: Mathematical Note: Present Value and Discounting

- 10) If the present value of \$500 to be received in one year is \$463, the interest rate is
- A) 5 percent per year.
  - B) 8 percent per year.
  - C) 10 percent per year.
  - D) 20.8 percent per year.
  - E) 37 percent per year.

Answer: B

Diff: 2

Topic: Mathematical Note: Present Value and Discounting

11) If the rate of interest is 15 percent per year, the present value of the \$200 to be received in two years is

- A) \$170.00.
- B) \$185.00.
- C) \$173.91.
- D) \$264.50.
- E) \$151.23.

Answer: E

Diff: 2

Topic: Mathematical Note: Present Value and Discounting

12) If the present value of the \$1,000 to be received in one year is \$800, the interest rate is

- A) 25 percent per year.
- B) 8 percent per year.
- C) 10 percent per year.
- D) 12 percent per year.
- E) 125 percent per year.

Answer: A

Diff: 2

Topic: Mathematical Note: Present Value and Discounting

13) If the present value of \$100 received one year from now is \$80, what is the annual interest rate?

- A) 8 percent
- B) 10 percent
- C) 20 percent
- D) 25 percent
- E) 50 percent

Answer: D

Diff: 2

Topic: Mathematical Note: Present Value and Discounting

14) The present value of a future sum of money is the amount that, if invested today, will grow

- A) as large as that future sum, given the interest rate.
- B) as large as that future sum.
- C) as large as that future sum, less taxes payable.
- D) as large as that future sum, if the rate of interest is zero.
- E) at a constant rate forever.

Answer: A

Diff: 2

Topic: Mathematical Note: Present Value and Discounting

15) Assuming  $r$  is the rate of interest, to compute the present value of a dollar to be received a year from today, you

- A) multiply the dollar by  $r$ .
- B) divide the dollar by  $(1 - r)$ .
- C) multiply the dollar by  $(1 + r)$ .
- D) divide the dollar by  $r$ .
- E) divide the dollar by  $(1 + r)$ .

Answer: E

Diff: 2

Topic: Mathematical Note: Present Value and Discounting

Use the information below to answer the following questions.

Fact 18.5.1

The Burning Belly Taco Stand is considering buying some new special ovens. Each oven will cost \$1,000, and will last for 2 years before it wears out. The ovens will be used to make the Taco Stands famous "Burning Ring of Fire" tacos, and will generate a value of marginal product of \$600 for the first oven, \$570 for the second oven, and \$530 for the third oven. (Assume all revenues are earned at the end of the year.)

16) Refer to Fact 18.5.1. If the rate of interest is 5 percent, how many ovens will the Burning Belly Taco Stand buy?

- A) zero
- B) 1
- C) 2
- D) 3
- E) insufficient information to answer

Answer: C

Diff: 3

Topic: Mathematical Note: Present Value and Discounting

17) Consider Fact 18.5.1. If the rate of interest is 10 percent, how many ovens will the Burning Belly Taco Stand buy?

- A) zero
- B) 1
- C) 2
- D) 3
- E) insufficient information to answer

Answer: B

Diff: 3

Topic: Mathematical Note: Present Value and Discounting