Chapter 18
Demand and Supply in Factor Markets

18.1 The Anatomy of Factor Markets

1) Factors of production
   A) consist of finished products produced by inputs.
   B) are different factors, internal and external, that affect production.
   C) are the goods and services that move from firms to the households.
   D) are the inputs used to produce goods and services.
   E) are things such as wages, interest, and rent.

Answer: D
Topic: Factors of production
Skill: Level 1: Definition
Objective: Checkpoint 18.1
Author: SA

2) The four factors of production that produce goods and services are
   A) labor, money, machinery, and land.
   B) labor, capital, money, and entrepreneurship.
   C) labor, capital, land, and entrepreneurship.
   D) labor, investment capital, machinery, and land.
   E) labor, stocks, money, and bonds.

Answer: C
Topic: Factors of production
Skill: Level 1: Definition
Objective: Checkpoint 18.1
Author: WM
3) Which of the following is NOT a factor of production?
   A) labor
   B) capital
   C) entrepreneurship
   D) bonds.
   E) land.
   Answer: D
   Topic: Factors of production
   Skill: Level 1: Definition
   Objective: Checkpoint 18.1
   Author: JC

4) An entrepreneur
   A) creates firms and hires the factors of production.
   B) has no human capital, only financial capital.
   C) must have a patent on the product or service that he or she sells.
   D) owns the land upon which the business operates.
   E) None of the above answers is correct.
   Answer: A
   Topic: Entrepreneurship
   Skill: Level 1: Definition
   Objective: Checkpoint 18.1
   Author: SA

5) The income of an entrepreneur is called
   A) profit or loss.
   B) rent.
   C) wages.
   D) interest.
   E) capital.
   Answer: A
   Topic: Entrepreneurship
   Skill: Level 1: Definition
   Objective: Checkpoint 18.1
   Author: PH
6) Entrepreneurship differs from the other factors of production because it
   A) is not real.
   B) is the most important.
   C) has only existed since the new economy of the 1990s.
   D) is not traded in a factor market.
   E) is not paid.
   Answer: D
   Topic: Entrepreneurship
   Skill: Level 2: Using definitions
   Objective: Checkpoint 18.1
   Author: WM

7) The knowledge, skills, education and training an individual possesses is known as
   A) physical capital.
   B) human capital.
   C) labor capital.
   D) resource capital.
   E) entrepreneurial capital.
   Answer: B
   Topic: Human capital
   Skill: Level 1: Definition
   Objective: Checkpoint 18.1
   Author: JC

8) People's education and skills are
   A) called entrepreneurship.
   B) not tradable.
   C) called human capital.
   D) part of financial capital.
   E) called entrepreneurial capital.
   Answer: C
   Topic: Human capital
   Skill: Level 1: Definition
   Objective: Checkpoint 18.1
   Author: SA
9) Labor consists of the

A) financial contribution to the production of goods and services made by individuals.
B) mental and physical contribution made to the production of goods and services by individuals.
C) entrepreneurial contribution to the production process of goods and services made by individuals.
D) contribution of capital goods made by individuals to the production process for goods and services.
E) None of the above answers is correct.

Answer: B

Topic: Labor markets
Skill: Level 1: Definition
Objective: Checkpoint 18.1
Author: PH

10) Which of the following is NOT classified as physical capital?

A) a grain warehouse
B) a dump truck
C) metal ore
D) a computer used by an airline
E) a car owned and rented by Enterprise Rentals

Answer: C

Topic: Capital
Skill: Level 2: Using definitions
Objective: Checkpoint 18.1
Author: SA

11) Financial capital is defined as

A) machinery used to produce goods and services.
B) specific machinery used to make money.
C) funds used to buy and operate capital such as machinery.
D) the funds produced by the work of capital.
E) the skills and talents possessed by people.

Answer: C

Topic: Financial capital
Skill: Level 1: Definition
Objective: Checkpoint 18.1
Author: WM
12) Stocks and bonds are
   A) traded in financial markets.
   B) types of entrepreneurship.
   C) the same as physical capital.
   D) traded in commodity markets.
   E) traded in physical capital markets.

   Answer: A

   Topic: Financial capital
   Skill: Level 1: Definition
   Objective: Checkpoint 18.1
   Author: SA

13) Shares of ownership in Microsoft and other corporations are traded in the ____ market.
   A) soft capital
   B) hard capital
   C) stock
   D) bond
   E) commodity

   Answer: C

   Topic: Stock market
   Skill: Level 1: Definition
   Objective: Checkpoint 18.1
   Author: JC

14) As a factor of production, any of the gifts of nature are called
   A) land.
   B) labor.
   C) capital.
   D) entrepreneurial ability.
   E) physical capital.

   Answer: A

   Topic: Land markets
   Skill: Level 1: Definition
   Objective: Checkpoint 18.1
   Author: PH
15) Commodity markets are where
   A) labor is bought and sold.
   B) shares of ownership of a corporation are traded.
   C) raw materials are bought and sold.
   D) promises to pay specified sums of money are exchanged.
   E) the actual physical capital is bought and sold.

   Answer: C

   Topic: Land markets
   Skill: Level 1: Definition
   Objective: Checkpoint 18.1
   Author: WM

16) The markets for raw materials are called ____ markets.
   A) stock
   B) resource
   C) land
   D) commodity
   E) raw

   Answer: D

   Topic: Commodity markets
   Skill: Level 1: Definition
   Objective: Checkpoint 18.1
   Author: JC

18.2 The Demand for a Factor of Production

1) The demand for a factor of production is called a derived demand because it is derived from
   A) the demand for goods and services produced by the factor of production.
   B) a table of specific prices and quantities.
   C) the ideas of an entrepreneur.
   D) a financial market.
   E) the supply of the factor of production.

   Answer: A

   Topic: Derived demand
   Skill: Level 2: Using definitions
   Objective: Checkpoint 18.2
   Author: WM
2) Derived demand means that the demand for a factor of production is derived from the
   A) supply of that factor of production.
   B) price of that factor of production.
   C) demand for the goods and services the factor of production is used to produce.
   D) costs of production.
   E) government, which forces large firms to hire at least some minimum number of
different resources.

   Answer: C
   Topic: Derived demand
   Skill: Level 2: Using definitions
   Objective: Checkpoint 18.2
   Author: JC

3) The demand for a resource is derived from the
   A) price of the resource.
   B) supply of the resource.
   C) supply of substitute resources.
   D) demand for the good or service that the resource is used to produce.
   E) supply of complement resources.

   Answer: D
   Topic: Derived demand
   Skill: Level 2: Using definitions
   Objective: Checkpoint 18.2
   Author: PH

4) In the labor market,
   A) households demand labor.
   B) firms demand labor.
   C) firms supply labor.
   D) wage are determined only by firms alone.
   E) None of the above answers is correct.

   Answer: B
   Topic: Derived demand
   Skill: Level 1: Definition
   Objective: Checkpoint 18.2
   Author: SA
5) Which of the following represents a derived demand? Demand for
   A) a taco by Sam when she is hungry.
   B) golf balls by Jose who is planning on going golfing with his boss.
   C) a grocery clerk by the local Safeway.
   D) an automobile by Jack who wants a car to get to school.
   E) new clothing by Shiniq who is starting a new job.

   Answer: C
   Topic: Derived demand
   Skill: Level 2: Using definitions
   Objective: Checkpoint 18.2
   Author: SA

6) The demand for carpenters needed to build houses represents a
   A) direct demand.
   B) derived demand.
   C) marginal demand / cost for input.
   D) supplied demand.
   E) directed supply.

   Answer: B
   Topic: Derived demand
   Skill: Level 2: Using definitions
   Objective: Checkpoint 18.2
   Author: SA

7) The value of the marginal product is equal to
   A) marginal product \times marginal cost.
   B) marginal product \times product price.
   C) marginal revenue \times marginal cost.
   D) marginal cost \times product price.
   E) marginal product + product price.

   Answer: B
   Topic: Value of marginal product
   Skill: Level 2: Using definitions
   Objective: Checkpoint 18.2
   Author: PH
8) If UPS hires another worker, UPS will be able to deliver an additional 20 packages an hour. The price of each package is $5. The value of this worker's marginal product is equal to
   A) $5.
   B) $100.
   C) $4.
   D) 20 packages.
   E) $20.
   Answer: B
   Topic: Value of marginal product
   Skill: Level 2: Using definitions
   Objective: Checkpoint 18.2
   Author: MR

9) The value of marginal product is equal to the
   A) additional revenue from selling one more unit of the product.
   B) change in total revenue from selling one more unit of product.
   C) additional cost of hiring one more unit of a factor of production.
   D) change in revenue from hiring one more unit of a factor of production.
   E) change in total cost when one more unit of the product is produced.
   Answer: D
   Topic: Value of marginal product
   Skill: Level 3: Using models
   Objective: Checkpoint 18.2
   Author: WM

10) The total output of candles in Nick’s Wicks candle shop increases from 20 per hour to 30 per hour as he hires the second worker. The price of each candle is $2. The
   A) marginal product of the second worker is 20 candles.
   B) marginal product of the second worker is 30 candles.
   C) value of marginal product of the second worker is $20.
   D) value of marginal product of the second worker is $30.
   E) value of marginal product of the second worker is $60.
   Answer: C
   Topic: Value of marginal product
   Skill: Level 3: Using models
   Objective: Checkpoint 18.2
   Author: SA
11) The value of the marginal product of labor
   A) always increases as more labor is hired.
   B) is constant as long as each worker is paid the same wage rate.
   C) declines only if each worker is paid more than the previous worker.
   D) at some point declines as more workers are hired.
   E) at first decreases and then increases as more workers are hired.

Answer: D

Topic: Value of marginal product
Skill: Level 2: Using definitions
Objective: Checkpoint 18.2
Author: WM

<table>
<thead>
<tr>
<th>Quantity of labor (trainers)</th>
<th>Marginal product (clients per hour)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
</tr>
</tbody>
</table>

12) Kevin owns a personal training gym in Laredo, Texas. He charges $41 per session. The above table shows the marginal product of trainers in Kevin’s gym. If Kevin hires one trainer, the value of the marginal product of this trainer equals
   A) 4 clients.
   B) $164.
   C) $410.
   D) $41.
   E) None of the above answers is correct.

Answer: B

Topic: Value of marginal product
Skill: Level 3: Using models
Objective: Checkpoint 18.2
Author: JC
13) Kevin owns a personal training gym in Laredo, Texas. He charges $41 per session. The above table shows the marginal product of trainers in Kevin’s gym. If Kevin hires three trainers, the value of the marginal product of the third trainer equals
   A) 2 clients.
   B) $82.
   C) 9 clients.
   D) $369.
   E) $123.

   Answer: B
   Topic: Value of marginal product
   Skill: Level 3: Using models
   Objective: Checkpoint 18.2
   Author: JC

14) Kevin owns a personal training gym in Laredo, Texas. He charges $41 per session. The above table shows the marginal product of trainers in Kevin’s gym. If Kevin hires four trainers, the value of the marginal product of the fourth trainer equals
   A) 10 clients.
   B) $410.
   C) $41.
   D) 1 client.
   E) $10.25.

   Answer: C
   Topic: Value of marginal product
   Skill: Level 3: Using models
   Objective: Checkpoint 18.2
   Author: JC

15) When hiring labor, to maximize profit a firm hires labor
   A) until the value of the marginal product equals the wage rate.
   B) if the workers are not unionized.
   C) regardless of cost, because the firm definitely needs labor.
   D) until the value of the marginal product is greater than the wage rate.
   E) until the value of the marginal product equals the marginal revenue from hiring the worker.

   Answer: A
   Topic: Profit maximization
   Skill: Level 1: Definition
   Objective: Checkpoint 18.2
   Author: WM
16) The rule for employing a profit-maximizing amount of labor is to continue to hire additional workers until the additional worker’s value of marginal product is
   A) less than the wage rate.
   B) equal to the wage rate.
   C) greater than 1.
   D) less than the price of the product.
   E) equal to the price of the product.

   Answer: B
   Topic: Profit maximization
   Skill: Level 1: Definition
   Objective: Checkpoint 18.2
   Author: PH

17) Suppose the Miami Dolphins are considering adding another backup quarterback to their roster. If the salary the Dolphins would have to pay equals $500,000 and the value of the marginal product of the new quarterback equals $800,000, to maximize their profit the Dolphins should
   A) add the new quarterback.
   B) add two new quarterbacks.
   C) not add the new quarterback.
   D) not add the new quarterback and, in fact, get rid of at least one other backup quarterback.
   E) Not enough information is given to determine if the Dolphins should hire the quarterback.

   Answer: A
   Topic: Profit maximization
   Skill: Level 2: Using definitions
   Objective: Checkpoint 18.2
   Author: JC
18) Suppose Mongo runs a glue factory in Knuckle, North Dakota. Mongo wants to fire his cousin Beevo for not working very hard at making glue. If firing Beevo would save Mongo $6.11 per hour in wages and the value of Beevo’s marginal product equals $7.29 per hour, to maximize his profit, Mongo should
   A) fire Beevo.
   B) keep Beevo employed.
   C) add another worker, Teevo, Beevo’s sister, whose value of the marginal product would be $4.83 per hour and whose wage would be $6.11 per hour.
   D) increase the wage he pays Beevo to $7.29 per hour.
   E) There is not enough information given to determine what Mongo should do.

Answer: B

Topic: Profit maximization
Skill: Level 2: Using definitions
Objective: Checkpoint 18.2
Author: JC

19) If the value of the marginal product of the 10th worker is $60, then the
   A) quantity of labor demanded when the wage rate is $60 will be 10 workers.
   B) wage rate of the 10th worker will be $6.
   C) firm will not hire the worker if the wage rate is less than $60.
   D) marginal cost of the 10th worker will be $6.
   E) quantity of labor demanded when the wage rate is $6 will be 10 workers.

Answer: A

Topic: Profit maximization
Skill: Level 2: Using definitions
Objective: Checkpoint 18.2
Author: SA
20) If a firm finds itself at the point where the value of the marginal product of labor is greater than its wage rate, then the firm

A) stops hiring more workers but does not fire any because the firm is maximizing its profit.
B) decreases the number of workers it has hired in order to increase its profit.
C) increases the number of workers it hires in order to increase its profit.
D) increases sales to keep its employees busy.
E) changes its employment of workers and maximizes its profit by hiring the number of workers that makes the difference between the value of the marginal product and the wage rate as large as possible.

Answer: C
Topic: Profit maximization
Skill: Level 3: Using models
Objective: Checkpoint 18.2
Author: WM

21) The demand curve for labor is the same as the firm's

A) marginal revenue curve.
B) marginal cost curve.
C) value of marginal product curve.
D) wage rate curve.
E) supply of output curve.

Answer: C
Topic: Demand for labor curve
Skill: Level 1: Definition
Objective: Checkpoint 18.2
Author: PH

22) If we compare the value of marginal product curve and the demand for labor curve we see that

A) they are the same thing.
B) the value of marginal product curve is twice as steep.
C) the demand for labor curve has no relationship to the value of marginal product curve.
D) the demand for labor curve is twice as steep but they share the same axes.
E) the demand for labor curve lies above the value of marginal product curve.

Answer: A
Topic: Demand for labor curve
Skill: Level 2: Using definitions
Objective: Checkpoint 18.2
Author: WM
23) The demand curve for a factor of production is
   A) the same as the factor's supply curve.
   B) upward sloping.
   C) the same as the factor's value of marginal product curve.
   D) vertical.
   E) None of the above answers is correct.
   Answer: C

Topic: Demand for labor curve
Skill: Level 2: Using definitions
Objective: Checkpoint 18.2
Author: SA

24) A firm's demand for labor curve shifts when there is a change in
   i. the supply of labor.
   ii. population
   iii. the equilibrium wage rate.
   A) i only.
   B) ii only
   C) i and iii.
   D) i and ii.
   E) ii and iii.
   Answer: B

Topic: Demand for labor curve
Skill: Level 2: Using definitions
Objective: Checkpoint 18.2
Author: JC
25) The above figure shows the demand for labor curve for workers at the local Pizza Hut. If the wage rate is $6 per hour, then the
i. quantity of workers Pizza Hut demands is 10 workers.
ii. Pizza Hut would have been willing to hire the 6th worker even if they had to pay $7 per hour rather than $6 per hour.
iii. value of the marginal product of the 10th worker is $6 per hour.

A) i only.
B) ii only.
C) iii only.
D) i and iii.
E) i, ii, and iii.

Answer: E

Topic: Demand for labor curve
Skill: Level 3: Using models
Objective: Checkpoint 18.2
Author: SA
26) The above figure shows the initial demand for labor curve at the local Pizza Hut. The wage rate is $6 an hour. If the demand for pizzas increases so that the price of a pizza rises,
   A) at the wage rate of $6 per hour, Pizza Hut hires fewer than 10 workers.
   B) Pizza Hut’s demand for labor curve shifts rightward.
   C) the supply of labor curve shifts rightward.
   D) Pizza Hut’s demand for labor curve shifts leftward.
   E) the supply of labor curve shifts leftward.

   Answer: B

   Topic: Demand for labor curve
   Skill: Level 3: Using models
   Objective: Checkpoint 18.2
   Author: SA

27) If the price of movie tickets increases, there is
   A) an increase in the demand for actors and actresses.
   B) a decrease in the demand for actors and actresses.
   C) no change in the demand for actors and actresses.
   D) a decrease in the quantity of actors and actresses demanded.
   E) an increase in the supply of actors and actresses.

   Answer: A

   Topic: Demand for labor
   Skill: Level 2: Using definitions
   Objective: Checkpoint 18.2
   Author: JC

28) Robotic technology is a substitute for labor in many manufacturing processes. If the price of robotic technology decreases and the scale of the firm’s production does not change, there is
   A) a decrease in the demand for labor.
   B) an increase in the demand for labor.
   C) no change in the demand for labor.
   D) an increase in the supply of labor.
   E) a decrease in the supply of labor.

   Answer: A

   Topic: Demand for labor
   Skill: Level 2: Using definitions
   Objective: Checkpoint 18.2
   Author: JC
29) As a result of the proliferation of ATM machines, the demand for bank tellers has
   A) increased.
   B) decreased.
   C) not changed.
   D) become perfectly inelastic.
   E) become perfectly elastic.

   Answer: B
   Topic: Demand for labor
   Skill: Level 2: Using definitions
   Objective: Checkpoint 18.2
   Author: JC

30) If we compare the price of a firm’s output and its demand for labor, we see that
   A) as the price of its output rises, its demand for labor decreases.
   B) as the price of its output rises, its demand for labor increases.
   C) the two are not related.
   D) as the demand for labor increases, the price of its output falls.
   E) the price of the output must equal the wage rate in equilibrium.

   Answer: B
   Topic: Demand for labor
   Skill: Level 2: Using definitions
   Objective: Checkpoint 18.2
   Author: WM

18.3 Wages and Employment

1) As the wage rate rises, the quantity of labor an individual supplies
   A) decreases at all wage rates.
   B) initially decreases at low wage rates and then increases at high wage rates.
   C) increases at all wage rates.
   D) initially increases at low wage rates and then decreases at high wage rates.
   E) does not change.

   Answer: D
   Topic: Supply of labor, backward bending
   Skill: Level 2: Using definitions
   Objective: Checkpoint 18.3
   Author: WM
2) The supply of labor curve for an individual is
   A) upward sloping at all wage rates.
   B) downward sloping at all wage rates.
   C) upward sloping for lower wage rates and begins to slope downward at higher wage rates.
   D) downward sloping for lower wage rates and begins to slope upward at higher wage rates.
   E) an upside-down U-shape.

Answer: C

Topic: Supply of labor, backward bending
Skill: Level 2: Using definitions
Objective: Checkpoint 18.3
Author: CD

3) Because leisure time has value to many workers, as wages increase the labor supply curve
   A) has a positive slope.
   B) bends backwards and has a negative slope.
   C) becomes a horizontal line.
   D) becomes a vertical line.
   E) bends forward and has a positive slope.

Answer: B

Topic: Supply of labor, backward bending
Skill: Level 2: Using definitions
Objective: Checkpoint 18.3
Author: JC

4) Over the past several years, the supply of unskilled labor has decreased. This change is the result of
   A) increases in the amount of education and training pursued by individuals.
   B) decreases in the adult population.
   C) advances in the amount of technology in the home.
   D) decreases in the amount of education and training pursued by individuals.
   E) an increase in the value of marginal product of low-skilled workers.

Answer: A

Topic: Supply of labor
Skill: Level 2: Using definitions
Objective: Checkpoint 18.3
Author: JC
5) According to a recent prediction in *The Wall Street Journal* the adult population of Russia will decline dramatically over the next few decades. If this prediction is correct, the supply of labor in Russia will
   A) increase.
   B) not change.
   C) decrease.
   D) become less elastic.
   E) become more elastic.
   Answer: C

*Topic: Supply of labor*
*Skill: Level 3: Using models*
*Objective: Checkpoint 18.3*
*Author: JC*

6) If the wage rate increases, then
   A) the quantity of labor supplied definitely decreases.
   B) there is a movement upward along the supply of labor curve.
   C) the supply of labor curve shifts rightward.
   D) the supply of labor curve shifts leftward.
   E) the quantity of labor supplied definitely increases.
   Answer: B

*Topic: Supply of labor curve*
*Skill: Level 2: Using definitions*
*Objective: Checkpoint 18.3*
*Author: SA*

7) Which of the following shift the supply of labor curve leftward?
   i.  an advancement in technology
   ii.  a decrease in the price of the product that the labor produces
   iii. a decrease in the adult population
   A) i and ii
   B) ii and iii
   C) ii only
   D) iii only
   E) i, ii, and iii
   Answer: D

*Topic: Supply of labor curve*
*Skill: Level 3: Using models*
*Objective: Checkpoint 18.3*
*Author: CD*
8) The figure above shows the market supply of labor curve. Which of the following might be the reason the labor supply curve shifted from $S_0$ to $S_1$?

A) an increase in technology  
B) a decrease in technology 
C) an increase in the number of women in the work force  
D) a decrease in the adult population  
E) an increase in the wage rate

Answer: C

*Topic: Supply of labor curve*

*Skill: Level 3: Using models*

*Objective: Checkpoint 18.3*

*Author: CD*
9) The figure above shows the market supply of labor curve. Which of the following might be
the reason the labor supply curve shifted from \( S_0 \) to \( S_1 \)?

A) an increase in technology  
B) a decrease in technology  
C) a decrease in the number of women in the work force  
D) an increase in the adult population  
E) an increase in the wage rate.

Answer: D  

Topic: Supply of labor curve  
Skill: Level 3: Using models  
Objective: Checkpoint 18.3  
Author: MR

10) Suppose in Chicago, at the going wage rate of $8.00 an hour, the quantity of lifeguards
demanded exceeds the quantity supplied by 13,000 lifeguards. As a result,

A) there is a surplus of lifeguards in Chicago.  
B) there is a shortage of lifeguards in Chicago.  
C) the lifeguard labor market is in equilibrium in Chicago.  
D) wage rates will probably fall in this market.  
E) the demand for labor of lifeguards in Chicago will decrease.

Answer: B  

Topic: Labor market equilibrium  
Skill: Level 2: Using definitions  
Objective: Checkpoint 18.3  
Author: JC

11) Suppose in Philadelphia the quantity of economists demanded is less than the quantity
supplied by 2,000 economists. As a result,

A) there is a shortage of economists in Philadelphia.  
B) salaries for economists fall.  
C) there is equilibrium in this market.  
D) the labor supply curve for economists in Philadelphia is vertical.  
E) the labor demand curve for economists in Philadelphia shifts rightward.

Answer: B  

Topic: Labor market equilibrium  
Skill: Level 2: Using definitions  
Objective: Checkpoint 18.3  
Author: JC
18.4 Financial Markets

1) A firm’s demand for financial capital stems from its ____ used to to produce goods and services.
   A) supply of physical capital
   B) demand for physical capital
   C) supply of human capital
   D) demand for human capital
   E) Both answers A and B are correct.

   Answer: B
   Topic: Demand for financial capital
   Skill: Level 2: Using definitions
   Objective: Checkpoint 18.4
   Author: JC

2) A firm’s demand for financial capital is derived from its demand for
   A) consumer goods and services.
   B) labor used to produce goods and services.
   C) physical capital used to produce goods and services.
   D) substitute resources.
   E) Both answers A and B are correct.

   Answer: C
   Topic: Demand for financial capital
   Skill: Level 2: Using definitions
   Objective: Checkpoint 18.4
   Author: PH

3) Other things remaining the same, the
   A) higher the interest rate, the greater the quantity of financial capital demanded.
   B) lower the interest rate, the smaller the quantity of financial capital demanded.
   C) higher the interest rate, the smaller the quantity of financial capital demanded.
   D) interest rate and the quantity of financial capital demanded are not related.
   E) higher the interest rate, the more the demand for financial capital decreases.

   Answer: C
   Topic: Demand for financial capital
   Skill: Level 1: Definition
   Objective: Checkpoint 18.4
   Author: WM
4) Two main factors that change the demand for capital and shift the demand curve for capital are
   A) population growth and technological change.
   B) population growth and the interest rate.
   C) the interest rate and technological change.
   D) the supply of capital and technological change.
   E) the interest rate and the supply of capital

   Answer: A

   Topic: Demand for financial capital
   Skill: Level 2: Using definitions
   Objective: Checkpoint 18.4
   Author: WM

5) Two main factors that change the demand for capital and shift the demand for capital curve are
   A) the weather and the interest rate.
   B) the interest rate and oil prices.
   C) the wage rate and the interest rate.
   D) population growth and technological change.
   E) the interest rate and the rental rate.

   Answer: D

   Topic: Demand for financial capital
   Skill: Level 2: Using definitions
   Objective: Checkpoint 18.4
   Author: JC

6) As the population grows, there is a
   A) movement upward along the demand curve for capital.
   B) movement downward along the demand curve for capital.
   C) rightward shift in the demand curve for financial capital and a rightward shift in the supply curve for financial capital.
   D) leftward shift in the demand curve for financial capital and a rightward shift in the supply curve for financial capital.
   E) leftward shift in the demand curve for financial capital and a leftward shift in the supply curve for financial capital.

   Answer: C

   Topic: Demand for financial capital
   Skill: Level 2: Using definitions
   Objective: Checkpoint 18.4
   Author: PH
7) If the population increases, then the demand for financial capital
   A) increases.
   B) decreases.
   C) does not change.
   D) might increase, decrease, or not change depending on whether the increase in population increases, decreases, or does not change the supply of financial capital.
   E) None of the above answers is correct.
   Answer: A
   Topic: Demand for financial capital
   Skill: Level 2: Using definitions
   Objective: Checkpoint 18.4
   Author: SA

8) The demand for financial capital increases and the demand curve shifts rightward if
   A) the population decreases.
   B) the interest rate increases.
   C) the population increases.
   D) people expect lower incomes in the future.
   E) None of the above answers is correct.
   Answer: C
   Topic: Demand for financial capital
   Skill: Level 2: Using definitions
   Objective: Checkpoint 18.4
   Author: SA

9) An increase in the interest rate ____ the quantity of financial capital demanded and ____ the quantity of financial capital supplied.
   A) increases; increases
   B) increases; decreases
   C) decreases; increases
   D) decreases; decreases
   E) does not change; does not change
   Answer: C
   Topic: Demand and supply of financial capital
   Skill: Level 2: Using definitions
   Objective: Checkpoint 18.4
   Author: PH
10) People tend to save more
   A) when they are students.
   B) in middle age.
   C) after retirement.
   D) when they expect their income to be higher in the future.
   E) None of the above answers is correct.

   Answer: B
   Topic: Supply of financial capital
   Skill: Level 1: Definition
   Objective: Checkpoint 18.4
   Author: SA

11) If the interest rate increases, then
   A) the opportunity cost of current consumption is higher.
   B) the quantity of financial capital demanded increases.
   C) the quantity of financial capital supplied decreases.
   D) saving decreases.
   E) the demand for financial capital decreases.

   Answer: A
   Topic: Supply of financial capital
   Skill: Level 2: Using definitions
   Objective: Checkpoint 18.4
   Author: SA

12) Suppose that people in Taiwan expect their incomes to increase in the future. As a result,
   A) the supply of financial capital increases.
   B) the demand for capital decreases.
   C) the demand for capital increases.
   D) the supply of financial capital decreases.
   E) neither the supply of financial capital nor the demand for financial capital change.

   Answer: D
   Topic: Supply of financial capital
   Skill: Level 3: Using models
   Objective: Checkpoint 18.4
   Author: CD
13) Which of the following is true about the market for financial capital?

A) The demand for capital curve is upward sloping and the supply of capital curve is downward sloping.
B) An increase in technology unambiguously shifts the demand for capital curve leftward.
C) The supply of capital curve is upward sloping and the demand for capital curve is downward sloping.
D) The supply of capital curve is vertical and the demand for capital curve is downward sloping.
E) None of the above answers is correct.

Answer: C

Topic: Financial markets
Skill: Level 2: Using definitions
Objective: Checkpoint 18.4
Author: CD

14) Advances in technology

A) increase the demand for all types of capital.
B) increase the interest rate if the demand for financial capital increases and the supply of financial capital does not change.
C) increase the supply of saving.
D) decrease the supply of saving.
E) affect neither the demand for nor the supply of financial capital.

Answer: B

Topic: Financial markets
Skill: Level 4: Applying models
Objective: Checkpoint 18.4
Author: CD
15) Consider the market for financial capital. Suppose the equilibrium interest rate is 6 percent. If expected future incomes increase,
   A) there is only a movement upward along the supply curve.
   B) there is only a movement downward along the supply curve.
   C) the interest rate falls below 6 percent.
   D) the interest rate rises above 6 percent.
   E) the demand curve for financial capital shifts rightward and the interest rate rises above 6 percent.

Answer: D

Topic: Financial markets
Skill: Level 3: Using models
Objective: Checkpoint 18.4
Author: CD
16) In the above figure, if the interest rate is above 6 percent
   A) there is a shortage of financial capital.
   B) there is a surplus of financial capital.
   C) the demand for financial capital increases.
   D) the supply of financial capital increases.
   E) the demand for financial capital increases and the supply of financial capital decreases.

Answer: B

**Topic:** Financial markets

**Skill:** Level 3: Using models

**Objective:** Checkpoint 18.4

**Author:** SA
17) Looking at the returns on the stock market and bond market since 1964, we see that interest rates and stock returns
   A) rarely change because there are few fluctuations in the supply and demand for capital.
   B) fluctuate because the supply of capital fluctuates a lot.
   C) fluctuate because both the supply of and demand for capital fluctuate a lot.
   D) fluctuate because the demand for capital fluctuates more than supply.
   E) differ because the interest rate fluctuates much more than do stock returns.

Answer: D
Topic: Eye on the U.S. economy, interest rate fluctuations
Skill: Level 2: Using definitions
Objective: Checkpoint 18.4
Author: WM

18) One of the reasons why interest rates do not persistently increase or decrease over time is because the demand for capital
   A) and the supply of capital both tend to decrease over time.
   B) increases while the supply of capital decreases.
   C) and the supply of capital both increase by roughly the same amount over time.
   D) decreases while the supply of capital increases.
   E) and the supply of capital do not grow very much from year to year.

Answer: C
Topic: Eye on the U.S. economy, interest rate fluctuations
Skill: Level 2: Using definitions
Objective: Checkpoint 18.4
Author: JC

18.5 Land and Natural Resource Markets

1) Nonrenewable natural resources are resources
   A) that can be used repeatedly.
   B) for which the demand is perfectly elastic.
   C) for which the supply is perfectly inelastic.
   D) that can be used only once, and that cannot be replaced once they have been used.
   E) for which the entire factor income is economic rent.

Answer: D
Topic: Natural resources
Skill: Level 1: Definition
Objective: Checkpoint 18.5
Author: PH
2) Nonrenewable natural resources
   A) cannot be reused.
   B) include oil, land, and coal.
   C) can be used repeatedly.
   D) can be reproduced.
   E) have a vertical supply curve.

Answer: A

Topic: Natural resources
Skill: Level 1: Definition
Objective: Checkpoint 18.5
Author: SA

3) Land
   A) is a nonrenewable resource.
   B) has an elastic supply but not perfectly elastic.
   C) is the only factor of production that is not traded in a market.
   D) has a perfectly inelastic supply.
   E) has a perfectly elastic supply.

Answer: D

Topic: Natural resources
Skill: Level 2: Using definitions
Objective: Checkpoint 18.5
Author: SA

4) Rent is the payment for the resource land. The lower the rent, the greater the
   A) demand for land.
   B) quantity demanded of land.
   C) supply of land.
   D) elasticity of supply for land.
   E) quantity supplied of land.

Answer: B

Topic: Market for land, demand
Skill: Level 2: Using definitions
Objective: Checkpoint 18.5
Author: PH
5) The supply curve for land in Oregon is
   A) negatively sloped.
   B) positively sloped.
   C) vertical.
   D) horizontal.
   E) U-shaped.

Answer: C

6) As the price of land rises, the quantity supplied
   A) increases.
   B) decreases.
   C) at first increases and then decreases.
   D) stays the same.
   E) at first decreases and then increases.

Answer: D

7) The price of land is
   A) fixed.
   B) determined by demand.
   C) determined by supply.
   D) profit.
   E) rent and is all opportunity cost because land is fixed in supply.

Answer: B
8) The price of a resource that is fixed in quantity, land for example,
   A) is determined by the demand for the resource.
   B) consists of only opportunity cost and has no economic rent.
   C) cannot change.
   D) is determined by supply.
   E) is precisely half opportunity cost and half economic rent.

   Answer: A

9) Economic rent is defined as the income
   A) only a landowner earns.
   B) any factor earns above its opportunity cost.
   C) that is equal to the value of the marginal product of the factor.
   D) any factor earns below its opportunity cost.
   E) that is nonrenewable.

   Answer: B

10) Economic rent is the income received by any factor of production ____ the amount required to induce a given quantity of the factor to be supplied.
    A) below
    B) equal to
    C) over and above
    D) regardless of
    E) None of the above is correct because economic rent is the amount of demand that exists over and above the amount that will employ the current amount of the factor.

    Answer: C
11) When the income received by a factor of production is over and above the amount required to induce a given quantity of the factor to be supplied, the amount of income in excess of the required income is referred to as
   A) economic rent.
   B) economic profit.
   C) normal profit.
   D) opportunity cost.
   E) nonrenewable income.

   Answer: A

   Topic: Economic rent
   Skill: Level 1: Definition
   Objective: Checkpoint 18.5
   Author: PH

12) The income required to attract a factor of production from its next-best alternative use is referred to as its
   A) economic rent.
   B) opportunity cost.
   C) elasticity of demand.
   D) elasticity of supply.
   E) renewable supply.

   Answer: B

   Topic: Opportunity cost
   Skill: Level 1: Definition
   Objective: Checkpoint 18.5
   Author: PH
13) The price of nonrenewable resources such as metals
   i. falls if new technologies enable these resources to be used more efficiently.
   ii. falls if more reserves are found than were previously unknown.
   iii. has fallen over recent years because forces that bring lower prices have
        outweighed the forces that bring higher prices.

   A) i and ii.
   B) i only.
   C) ii only.
   D) i and iii.
   E) i, ii, and iii.

   Answer: E

   Topic: Natural resources
   Skill: Level 2: Using definitions
   Objective: Checkpoint 18.5
   Author: SA

18.6 Integrative Questions

1) The stock market
   A) is a market in which the stock of physical capital is traded.
   B) is a market in which shares in the stocks of companies are traded.
   C) measures the stock of physical capital available.
   D) determines the price of available resources.
   E) is the market in which shares of physical capital are traded.

   Answer: B

   Topic: Integrative
   Skill: Level 2: Using definitions
   Objective: Integrative
   Author: CD
2) If the United Corporation has sold financial instruments in which it promises to pay investors who have loaned it money $100 each year year for 20 years, the
   A) company has issued stock.
   B) company earns an economic rent.
   C) company has issued bonds.
   D) company earns a normal profit.
   E) financial instrument is bought and sold in the commodity market.

Answer: C
Topic: Integrative
Skill: Level 2: Using definitions
Objective: Integrative
Author: CD

3) The value of marginal product curve
   A) is upward sloping because firms want to hire more workers to increase production.
   B) shows the price of a factor of production multiplied by the amount of the factor employed.
   C) is the same as a firm's supply of labor curve.
   D) is downward sloping because each additional worker brings in a decreasing amount of revenue.
   E) is U-shaped.

Answer: D
Topic: Integrative
Skill: Level 2: Using definitions
Objective: Integrative
Author: CD

4) Which rule does the United Corporation use when maximizing profit?
   A) Issue stock up to point where its price equals the cost of issuing bonds.
   B) If the value of the marginal product of labor exceeds the wage rate, hire fewer workers.
   C) Hire labor up to point at which the value of marginal product equals the wage rate.
   D) Reduce the wage rate until it equals the marginal product.
   E) Hire labor up to point at which the value of marginal product equals the price of the good or service the labor produces for United Corporation.

Answer: C
Topic: Integrative
Skill: Level 3: Using models
Objective: Integrative
Author: CD
5) In the market for financial capital, the ____ is measured on the vertical axis and the ____ is measured on the horizontal axis.
   A) interest rate; quantity of physical capital
   B) interest rate; quantity of financial capital
   C) quantity of financial capital; economic rent
   D) quantity of physical capital; economic rent
   E) economic rent; quantity of financial capital.
   Answer: B

6) The demand curve for financial capital shifts rightward if
   A) the price of bonds decreases.
   B) economic rent increases.
   C) the interest rate rises.
   D) the population increases.
   E) the interest rate falls.
   Answer: D

7) The supply of labor curve for nurses shifts if
   A) the wage rate paid nurses increases.
   B) there is an increase in the time spent in nursing school.
   C) the value of marginal product of nurses increases.
   D) the value of marginal product of nurses decreases.
   E) the marginal product of nurses decreases.
   Answer: B
8) The demand for labor curve of nurses shifts rightward if the
   A) value of marginal product of nurses increases.
   B) wage rate paid to nurses rises.
   C) economic rent earned by nurses decreases.
   D) wage rate paid to nurses falls.
   E) supply of labor curve for nurses shifts rightward.
   Answer: A
   Topic: Integrative
   Skill: Level 3: Using models
   Objective: Integrative
   Author: CD

9) Which of the following curves is most inelastic?
   A) the supply of land
   B) the supply of labor for an individual worker
   C) the supply of labor for all workers
   D) the demand for capital
   E) the demand for labor
   Answer: A
   Topic: Integrative
   Skill: Level 3: Using models
   Objective: Integrative
   Author: CD

10) An individual's labor supply curve is ____ because ____.
    A) backward bending; of large economic rent
    B) upward sloping; of large economic rent
    C) upward sloping; of lower opportunity cost at higher wages
    D) backward bending; at high wages, workers choose to supply less labor
    E) backward bending; at high wages, firms choose to employ less labor
    Answer: D
    Topic: Integrative
    Skill: Level 2: Using definitions
    Objective: Integrative
    Author: CD