Chapter 5 Review

Matching

a. variable e. supply curve
b. quantity supplied f. supply schedule
c. market supply schedule g. production schedule
d. elasticity of supply h. law of supply

1. how much of a good is offered for sale at a specific price
2. the principle that the higher the price, the larger the quantity produced
3. a factor that can change
4. relationship between price and total quantity supplied by all firms
5. a graphical representation of a supply schedule
6. a measure of how suppliers react to a change in price

Multiple Choice
Identify the choice that best completes the statement or answers the question.

B. Main Ideas
Directions: Identify the choice that best completes the statement or answers the question.

7. The price of home computers rises. According to the law of supply, manufacturers will respond to this price increase by
   a. increasing computer production.
   b. decreasing computer production.
   c. halting computer production.
   d. keeping computer production steady.

8. Which of the following is the best example of the law of supply?
   a. When the price of a sandwich rises, the sandwich shop increases the quantity supplied.
   b. A catering company buys a new dishwasher to make its work easier.
   c. A food producer increases the number of acres of wheat he grows to supply a milling company.
   d. A milling company builds a new factory to process flour to export.

9. When the price of a product goes down, what happens?
   a. Existing producers expand, and new producers enter the market.
   b. Some producers produce less, and others drop out of the market.
   c. Existing firms continue their usual output but earn less.
   d. New firms enter the market as older ones drop out.
10. Ultimately, the main factor that drives decisions about production is the
   a. availability of natural resources.
   b. government regulations and rules.
   c. public need for better goods.
   d. desire to maximize profits.

11. A supply schedule is characterized by which of the following?
   a. It shows the quantity supplied at only one price.
   b. It shows the factors that could influence supply.
   c. It is sensitive to changes in the costs of labor and parts.
   d. It lists supply for a specific good.

12. Both individual and market supply schedules show possible combinations of
   a. goods and services.
   b. price and quantity supplied.
   c. volume and output.
   d. profits and income.

13. Which of these best describes a supply curve?
   a. It always falls from left to right.
   b. It always rises from left to right.
   c. It rises if supply is elastic.
   d. It falls if supply decreases.

14. Which of these events would indicate a movement along a supply curve for batteries?
   a. A new law requires battery manufacturers to spend more money on environmentally
      safe batteries.
   b. Workers at a major battery factory go on strike and stop production.
   c. Battery manufacturers raise the price of a package of AA batteries from $3.50 to
      $3.95.
   d. A new trade agreement enables stores to import foreign batteries.

15. For which of the following goods is supply likely to be inelastic in the short term whether prices rise or fall?
   a. cargo ships
   b. haircuts
   c. newspapers
   d. staples

16. A sudden increase in fuel costs sparks a rise in both prices and demand for fuel-efficient cars. Yet it takes months for car companies to manufacture more cars. In this case, the supply for cars is
   a. inelastic.
   b. elastic.
   c. static.
   d. inferior.
17. If the supply of a good is inelastic,
   a. producers will not change their quantity supplied by much if the market price doubles.
   b. a small increase in price will lead producers to sharply increase their quantity supplied.
   c. producers will increase their quantity supplied in response to sharp drops in the market price.
   d. producers have diminishing marginal returns of labor.

18. Ruth runs a bakery whose supply is highly elastic. When the price of baked goods falls, Ruth will
   a. close the bakery and open a store that sells perfume.
   b. try to find a way to increase prices again.
   c. make up the lost revenue by cutting production costs.
   d. increase production to balance the loss of profit.

<table>
<thead>
<tr>
<th>Labor (number of workers)</th>
<th>Output (shoes per hour)</th>
<th>Marginal Product of Labor</th>
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19. The table shows the marginal product of labor at a shoe factory. In order to maximize marginal returns, how many workers should the factory have making these shoes?
   a. 2
   b. 4
   c. 6
   d. 8

20. How is the total cost of a factory or other production site determined?
   a. marginal cost plus fixed costs
   b. fixed costs plus variable costs
   c. marginal cost plus variable costs
   d. marginal cost plus output cost

21. When the eighth worker is hired, the marginal product of labor becomes negative. This is because
   a. the workers are making more shoes than the demand.
   b. the need for a greater supply of shoes has decreased.
   c. there are fewer workers available to make more shoes.
   d. there are more workers than are needed, disrupting output.
22. Fixed costs would include
   a. rent.
   b. labor.
   c. raw materials.
   d. heating fuel.

23. Gerda owns a grocery store. When decreasing prices force her to cut costs, one of the first things she does is
   a. stop paying her property taxes.
   b. cut her rent costs in half.
   c. decrease hours for some workers.
   d. stop selling perishable foods.

24. A sports equipment company increases its production of volleyballs. It costs the company $4.00 to make 10 volleyballs and $4.10 to make 11 volleyballs. This 10 cent difference is an example of
   a. fixed cost.
   b. variable cost.
   c. marginal cost.
   d. total cost.

25. How does a manufacturer set total output to maximize profit?
   a. set production so that total revenue plus cost is greatest
   b. set production at the point where marginal revenue is smallest
   c. set production at the point where marginal revenue equals marginal cost
   d. set production so that marginal revenue and profit are the same

26. If a supplier who has no control over the market price reports that the marginal revenue of a product is $10, that means
   a. the supplier makes $10 on every unit sold.
   b. consumers pay a market price of $10 per unit.
   c. it costs $10 to make each additional unit of the item.
   d. the total revenue before deducting costs is $10.

27. If marginal cost becomes higher than price, what happens to a company?
   a. The company will go out of business.
   b. The company will lose money on each additional unit produced.
   c. Company specialization will lower the actual price charged.
   d. Diminishing marginal returns will shrink the production.

28. To make 10 scooters, a company has fixed costs of $24, variable costs of $55, and marginal revenue of $30. In order to operate at the ideal level of output, the marginal costs of making 10 scooters should be
   a. $24.
   b. $30.
   c. $55.
   d. $54.

29. Which of the following is the correct mathematical formula for calculating average cost?
   a. total revenue divided by market price
   b. total cost divided by variable cost
   c. total cost divided by quantity produced
   d. total revenue divided by marginal cost
30. When would it make sense for a factory that is losing money to remain in operation?
   a. if marginal revenue is equal to marginal cost
   b. if the total cost of the goods being manufactured exceeds the operating cost
   c. if the marginal product of labor becomes negative
   d. if the total revenue from the goods being produced exceeds the operating cost

31. A steel mill has fixed costs of $100 per hour and variable costs of $50 per hour. What will happen to these costs if the mill closes?
   a. Both fixed and variable costs will remain the same even if output halts.
   b. The mill will no longer incur any costs because it will no longer be operating.
   c. The fixed costs will decrease, but the variable costs will increase.
   d. The variable costs will drop to zero, but the fixed costs will stay the same.

32. What effect do rising input costs have on the price of a good?
   a. The good becomes dependent on government regulation.
   b. The good becomes cheaper to produce.
   c. The good becomes more expensive to produce.
   d. It has no effect on the cost of the good.

33. How does new technology generally affect production?
   a. It lowers cost and decreases supply.
   b. It lowers cost and increases supply.
   c. It increases cost and decreases supply.
   d. It has very little effect on production.

34. Farmer Brown has ten dairy cows. Her costs to feed the cows go up, although milk production remains the same. What effect will this rise in costs have on her supply?
   a. None, although she will raise prices to make up the lost revenue.
   b. Her supply will go down, because her fixed costs have risen.
   c. Her supply will go up, because she won’t sell as much milk.
   d. Supply will remain the same, but she will have to sell more.

35. Big Publisher Inc. is considering using e-mail instead of shipping printed materials to its long-distance workers. How will this move affect Big Publisher Inc.?
   a. Costs will drop, but supply will remain the same.
   b. Supply and costs will probably both decrease.
   c. It should lower costs and increase supply.
   d. At first, supply will rise, but then it will decrease.

36. What is one reason European governments protect the growing of food with subsidies?
   a. to have food in case imports are ever restricted
   b. to allow the food producers to pay their debts
   c. to reduce the price of farm-grown food
   d. to help the population forget the food shortages after World War II

37. Which of the following is an example of government influence on supply?
   a. law of supply
   b. subsidies
   c. marginal costs
   d. market supply curve
38. Which of the following actions by the government constitutes a subsidy?
   a. a price floor on wages
   b. a payment to farmers for not cultivating land
   c. an excise tax on cigarettes
   d. a requirement to use lead-free fuel

39. When government intervention causes the supply of a good to rise, what happens to the supply curve?
   a. It shifts to the left.
   b. It shifts to the right.
   c. It reverses direction.
   d. The supply curve is not affected.

40. What is the effect of import restrictions on supply?
   a. They cause the available supply of goods to drop.
   b. They cause the available supply of goods to rise.
   c. They often cause supply to rise steeply and then drop.
   d. They usually do not have any lasting effect on supply.

41. You have been asked to write a newspaper story for the financial section about how the restaurants in your city are doing. Based on the graph, which of the following headlines will you use?
   a. Wholesale Prices Stay Steady
   b. Restaurants Hit by Rising Costs
   c. High-End Restaurants Suffer
   d. Government Lifts Meal Tax
42. Which of the following factors is likely to have had the greatest impact on the change in supply shown in the graph?
   a. lifting of import bans
   b. new technology for freezing food
   c. government farm subsidies
   d. high global demand for fuel

43. If a seller expects the price of a good to rise in the future, the seller will
   a. place these goods on the market immediately.
   b. increase production of the good.
   c. store these goods until the price goes up.
   d. increase the price of the good now.

44. What do sellers do if they expect the price of their goods to increase dramatically in the near future?
   a. sell the goods now and try to invest the money instead of resupplying
   b. sell the goods now but try to get the higher price for them
   c. store the goods until the price rises
   d. store the goods indefinitely regardless of when the price rises

Short Answer: You MUST answer TWO QUESTIONS for FIVE POINTS EACH. Additional correct answers earn one point of extra credit.

45. A company is trying to decide whether to shut down a factory that is losing money. What factors should the company consider when making this decision?

46. How do you think the invention of the airplane affected the supply of imported goods from other continents?
Critical Thinking and Writing

Directions: Use complete sentences to answer the questions below.

47. If your company makes a concentrated product, such as maple syrup, vanilla extract, or perfume, where should you locate your production facilities? Why?

48. An orange juice company is trying to decide where to locate a new processing and bottling plant. It must choose between Florida, near the orange groves, or Oregon, near its largest market. The cost of shipping bottled juice from Florida to Oregon is lower than the cost of shipping oranges. Where should the company locate the plant?
Chapter 5 Review
Answer Section

MATCHING

   OBJ: 5.1.1 Explain the law of supply.
   TOP: Supply | Quantity Supplied
   NAT: 7.2 | 8.2 | 8.3  STA: F.5
   OBJ: 5.1.1 Explain the law of supply.
   TOP: Supply | Law of Supply
   NAT: 7.2 | 8.2 | 8.3  STA: F.5
   OBJ: 5.1.2 Interpret a supply schedule and a supply graph.
   TOP: Supply | Variable
   NAT: 8.2 | 8.3
4. ANS: C  PTS: 2  DIF: L3  REF: A.112
   OBJ: 5.1.2 Interpret a supply schedule and a supply graph.
   TOP: Supply | Market Supply Schedule
   NAT: 8.2 | 8.3
5. ANS: E  PTS: 2  DIF: L3  REF: A.113
   OBJ: 5.1.2 Interpret a supply schedule and a supply graph.
   TOP: Supply | Supply Curve
   NAT: 8.2 | 8.3
   OBJ: 5.1.3 Examine the relationship between elasticity of supply and time.
   TOP: Supply | Elasticity of Supply

MULTIPLE CHOICE

7. ANS: A
   The law of supply says that producers will offer more of a good as its price goes up and less as its price goes down.
   PTS: 3  DIF: L3  REF: A.109  OBJ: 5.1.1 Explain the law of supply.
   NAT: 7.2 | 8.2 | 8.3  STA: F.5  TOP: Supply | Law of Supply
8. ANS: A
   The law of supply says that as the price of goods rises, the quantity supplied rises.
   PTS: 3  DIF: L3  REF: A.109  OBJ: 5.1.1 Explain the law of supply.
   NAT: 7.2 | 8.2 | 8.3  STA: F.5  TOP: Supply | Law of Supply
9. ANS: B
   Producers of products and services can adjust to falling prices by producing less or dropping out of the market.
   PTS: 3  DIF: L3  REF: A.111  OBJ: 5.1.1 Explain the law of supply.
   NAT: 7.2 | 8.2 | 8.3  STA: F.5  TOP: Supply | Lower Production
10. ANS: D
The search for profits drives a supplier’s decisions about production.

PTS: 3     DIF: L3     REF: A.111     OBJ: 5.1.1 Explain the law of supply.  
NAT: 7.2|8.2|8.3    STA: F.5    TOP: Supply | Profits

11. ANS: D
A supply schedule shows the supply for one good at different prices.

PTS: 3     DIF: L3     REF: A.112     OBJ: 5.1.2 Interpret a supply schedule and a supply graph.  
NAT: 8.2|8.3    STA: F.5    TOP: Supply | Supply Schedule

12. ANS: B
Supply schedules show combinations of price and quantity supplied for a good.

PTS: 3     DIF: L3     REF: A.112     OBJ: 5.1.2 Interpret a supply schedule and a supply graph.  
NAT: 8.2|8.3    STA: F.5    TOP: Supply | Supply Schedule

13. ANS: B
A supply curve always rises from left to right because of the law of supply.

PTS: 3     DIF: L3     REF: A.113     OBJ: 5.1.2 Interpret a supply schedule and a supply graph.  
NAT: 8.2|8.3    STA: F.5    TOP: Supply | Supply Curve

14. ANS: C
A supply curve shows changes in the quantity supplied at various prices.

PTS: 3     DIF: L3     REF: A.113     OBJ: 5.1.2 Interpret a supply schedule and a supply graph.  
NAT: 8.2|8.3    STA: F.5    TOP: Supply | Supply Curve

15. ANS: A
Cargo ships take a long time to build, so the supply changes slowly.

PTS: 3     DIF: L3     REF: A.114     OBJ: 5.1.3 Examine the relationship between elasticity of supply and time.  
TOP: Supply | Elasticity of Supply, Short Term

16. ANS: A
When a firm cannot easily change its output level, supply is inelastic regardless of price.

PTS: 3     DIF: L3     REF: A.114     OBJ: 5.1.3 Examine the relationship between elasticity of supply and time.  
TOP: Supply | Elasticity of Supply

17. ANS: A
If supply of a good is inelastic, producers cannot increase supply in the short run when prices increase.

PTS: 3     DIF: L3     REF: A.114     OBJ: 5.1.3 Examine the relationship between elasticity of supply and time.  
TOP: Supply | Elasticity of Supply
18. ANS: C
   Businesses that are highly elastic can make up for lower prices by cutting other costs, such as decreasing production or laying off workers.

   PTS: 3  DIF: L3  REF: A.115
   OBJ: 5.1.3 Examine the relationship between elasticity of supply and time.
   TOP: Supply | Elasticity of Supply

19. ANS: B
   The marginal product of labor increases when the number of workers increases up to four workers. With more than four workers, the marginal product of labor decreases.

   PTS: 5  DIF: L4  REF: A.117
   OBJ: 5.2.1 Explain how firms decide how much labor to hire in order to produce a certain level of output.
   TOP: Supply | Marginal Returns

20. ANS: B
   Total cost is determined by adding fixed costs and variable costs.

   PTS: 3  DIF: L3  REF: A.118 | A.119
   OBJ: 5.2.2 Analyze the production costs of a firm.
   TOP: Supply | Total Cost

21. ANS: D
   Adding too many workers can decrease output because workers get in each other’s way and disrupt production.

   PTS: 3  DIF: L3  REF: A.118
   OBJ: 5.2.1 Explain how firms decide how much labor to hire in order to produce a certain level of output.
   TOP: Supply | Marginal Returns

22. ANS: A
   Fixed costs are costs that do not change, no matter how much of a good is supplied.

   PTS: 3  DIF: L3  REF: A.118
   OBJ: 5.2.2 Analyze the production costs of a firm.
   TOP: Supply | Fixed Costs

23. ANS: C
   Businesses can cut variable costs by laying off workers or cutting back on their hours.

   PTS: 3  DIF: L3  REF: A.118
   OBJ: 5.2.2 Analyze the production costs of a firm.
   TOP: Supply | Variable Costs

24. ANS: C
   Marginal cost is the additional cost of producing one more unit.

   PTS: 3  DIF: L3  REF: A.119
   OBJ: 5.2.3 Explain how a firm chooses to set output.
   TOP: Supply | Marginal Cost

25. ANS: C
   A company can maximize profits by setting production of a good at the point where marginal cost equals marginal revenue (market price for a good).

   PTS: 3  DIF: L3  REF: A.120
   OBJ: 5.2.3 Explain how a firm chooses to set output.
   TOP: Supply | Setting Total Output
26. ANS: B
   The marginal revenue is equal to the market price of an item when a supplier has no control over the market price.

   PTS: 5  DIF: L4  REF: A.120
   OBJ: 5.2.2 Analyze the production costs of a firm.  TOP: Supply | Marginal Revenue

27. ANS: B
   If the cost of producing an additional unit becomes higher than the price the company can charge per unit, then the company will lose money on each unit.

   PTS: 3  DIF: L3  REF: A.121
   OBJ: 5.2.3 Explain how a firm chooses to set output.  TOP: Supply | Marginal Cost

28. ANS: B
   The ideal level of output is where marginal revenue (price) is equal to marginal costs.

   PTS: 3  DIF: L3  REF: A.121
   OBJ: 5.2.3 Explain how a firm chooses to set output.  TOP: Supply | Marginal Revenue and Cost

29. ANS: C
   To calculate the average cost, use this formula: total cost divided by quantity produced.

   PTS: 3  DIF: L3  REF: A.121
   OBJ: 5.2.3 Explain how a firm chooses to set output.  TOP: Supply | Average Cost

30. ANS: D
   If revenue is greater than the operating cost, then some of the revenue can be used to offset fixed costs, so the factory loses less money by staying open than it would if it closed.

   PTS: 3  DIF: L3  REF: A.122
   OBJ: 5.2.4 Identify the factors that a firm must consider before shutting down an unprofitable business.  TOP: Supply | Shutdown Decision

31. ANS: D
   If a firm shuts down a factory, it must still pay all of its fixed costs.

   PTS: 3  DIF: L3  REF: A.122
   OBJ: 5.2.4 Identify the factors that a firm must consider before shutting down an unprofitable business.  TOP: Supply | Shutdown Costs

32. ANS: C
   An increase in input costs makes producing a good more expensive. Both machinery and raw materials are inputs.

   PTS: 3  DIF: L3  REF: A.123
   OBJ: 5.3.1 Explain how factors such as input costs create changes in supply.  TOP: Supply | Input Costs
33. **ANS: B**
Advances in technology can lower production cost and increase supply.

**PTS:** 3  |  **DIF:** L3  |  **REF:** A.123  
**OBJ:** 5.3.1 Explain how factors such as input costs create changes in supply.  
**TOP:** Supply | Effect of Technology

34. **ANS: A**
A supplier sets output at the most profitable level. If fixed costs go up, but production remains the same, then the supplier will raise prices to compensate.

**PTS:** 5  |  **DIF:** L4  |  **REF:** A.123  
**OBJ:** 5.3.1 Explain how factors such as input costs create changes in supply.  
**TOP:** Supply | Rising Costs

35. **ANS: C**
Technology such as e-mail lowers costs and increases supply.

**PTS:** 5  |  **DIF:** L4  |  **REF:** A.123  
**OBJ:** 5.3.1 Explain how factors such as input costs create changes in supply.  
**TOP:** Supply | Technology

36. **ANS: A**
One purpose of farm subsidies is to preserve domestic food production in the event of import restrictions.

**PTS:** 3  |  **DIF:** L3  |  **REF:** A.124  
**OBJ:** 5.3.2 Identify three ways that the government can influence the supply of goods.  
**NAT:** 16.5  |  **STA:** F.1  
**TOP:** Supply | Subsidies

37. **ANS: B**
Subsidies are government payments to support a business or market.

**PTS:** 3  |  **DIF:** L3  |  **REF:** A.124  
**OBJ:** 5.3.2 Identify three ways that the government can influence the supply of goods.  
**NAT:** 16.5  |  **STA:** F.1  
**TOP:** Supply | Subsidies

38. **ANS: B**
A subsidy is a payment by the government.

**PTS:** 3  |  **DIF:** L3  |  **REF:** A.124  
**OBJ:** 5.3.2 Identify three ways that the government can influence the supply of goods.  
**NAT:** 16.5  |  **STA:** F.1  
**TOP:** Supply | Subsidies

39. **ANS: B**
When the supply of a good increases, the supply curve shifts to the right.

**PTS:** 3  |  **DIF:** L3  |  **REF:** A.125  
**OBJ:** 5.3.2 Identify three ways that the government can influence the supply of goods.  
**NAT:** 16.5  |  **STA:** F.1  
**TOP:** Supply | Increasing Supply and the Supply Curve
40. ANS: A
Import restrictions reduce total supply by limiting or eliminating imports.

PTS: 3  DIF: L3  REF: A.125
OBJ: 5.3.3 Analyze other factors that affect supply.  NAT: 8.2
TOP: Supply | Import Restrictions

41. ANS: B
Between 2007 and 2008, supply has decreased at all price levels, so it is likely that input costs for all
types of restaurants have increased.

PTS: 5  DIF: L4  REF: A.125
OBJ: 5.3.1 Explain how factors such as input costs create changes in supply.
TOP: Supply | Change in Supply

42. ANS: D
High demand for fuel would drive prices up, and restaurants would have to pay more to have ingredients
shipped to them.

PTS: 3  DIF: L3  REF: A.125
OBJ: 5.3.1 Explain how factors such as input costs create changes in supply.
KEY: Supply | Change in Supply

43. ANS: C
If a seller expects a future increase in the price of a good, the seller will hold onto the good (if the good
can be stored), then place it on the market when prices go up.

PTS: 3  DIF: L3  REF: A.126
OBJ: 5.3.3 Analyze other factors that affect supply.  NAT: 8.2
TOP: Supply | Future Expectations of Prices

44. ANS: C
If the price of a good is expected to rise in the future, a supplier will store the goods until they can be
sold at a higher price.

PTS: 3  DIF: L3  REF: A.126
OBJ: 5.3.3 Analyze other factors that affect supply.  NAT: 8.2
TOP: Supply | Price Expectations

SHORT ANSWER

45. ANS:
Possible answer: The firm should keep the factory open if the total revenue from the goods the factory
produces is greater than the cost of keeping it open.

PTS: 7  DIF: L4  REF: A.122
OBJ: 5.2.4 Identify the factors that a firm must consider before shutting down an unprofitable business.
TOP: Supply | Shutdown Factors
46. **ANS:**
   Possible answer: The invention of the airplane would have reduced the costs of importing goods, which would have increased the supply of imports, shifting the supply curve to the right.

   **PTS:** 5  
   **DIF:** L3  
   **REF:** A.125  
   **OBJ:** 5.3.3 Analyze other factors that affect supply.  
   **TOP:** Supply | Technology

47. **ANS:**
   Possible answer: You should locate close to the source of the raw ingredients, because it would cost more to ship those raw ingredients than it would to ship the much smaller quantity of the concentrated product.

   **PTS:** 7  
   **DIF:** L4  
   **REF:** A.128  
   **OBJ:** 5.3.4 Explain how firms choose a location to produce goods.  
   **TOP:** Supply | Suppliers

48. **ANS:**
   The company should locate the plant in Florida. It would be cheaper to ship the finished product than to ship tons of oranges to Oregon.

   **PTS:** 5  
   **DIF:** L3  
   **REF:** A.128  
   **OBJ:** 5.3.4 Explain how firms choose a location to produce goods.  
   **TOP:** Supply | Location of Facilities