1. The principle of diminishing marginal utility states that, as consumption of a good increases, eventually
   a. marginal utility becomes negative.
   b. total utility becomes negative.
   c. consumers become fully satisfied.
   d. the increase in total utility becomes smaller.

<table>
<thead>
<tr>
<th>Slices of Watermelon</th>
<th>Total Utility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>4</td>
<td>10</td>
</tr>
</tbody>
</table>

2. According to the table above, marginal utility of the second slice is
   a. 2
   b. 4
   c. 5
   d. 10

3. According to the table above, marginal utility first diminishes with
   a. the first slice.
   b. the second slice.
   c. the third slice.
   d. the fourth slice.

4. A consumer has chosen the combination of shirts and jeans that maximizes total utility. The marginal utility per dollar for shirts is 4, and the price of each pair of jeans is $30. What is the marginal utility of the last pair of jeans purchased?
   a. 4
   b. 7.5
   c. 30
   d. 120

5. Which of the following is an example of a price floor?
   a. Rent controls
   b. Restricting the price of gasoline to $1.50 when the equilibrium price is $1.75
   c. The minimum wage law
   d. All of the above
   e. None of the above
6. Which of the following goods would have the least elastic demand?
   a. pants
   b. cargo pants
   c. L.L. Bean cargo pants
   d. All are pants so the elasticity of demand will be the same for each good.

7. Hoping to increase both wheat prices and total revenues of wheat farmers, the federal government encourages them to restrict their production, thereby reducing the supply of wheat. If the farmers cooperate,
   a. wheat prices will rise, but only if demand is elastic.
   b. wheat prices will rise, but only if demand is inelastic.
   c. wheat prices will rise regardless of demand elasticity, but the revenues of wheat farmers will rise only if demand is elastic.
   d. wheat prices will rise regardless of demand elasticity, but the revenues of wheat farmers will rise only if demand is inelastic.

8. If the price of a dozen eggs rises from $1.60 to $2.00 and the quantity demanded decreases from 600 to 400, the elasticity of demand for eggs (using the midpoint formula) is
   a. 1.3
   b. 1.8
   c. .75
   d. .38
   e. .56

9. Other things constant, if the price of yachts were to decrease by ten percent, we would expect
   a. a greater than ten percent increase in the number of yachts purchased.
   b. a less than ten percent increase in the number of yachts purchased.
   c. no change in the number of yachts purchased.
   d. a small percentage decrease in the number of yachts purchased.

10. If the price elasticity of demand for a good is 1.22, then a 10% increase in price would be expected to result in a
    a. 1.22 percent increase in quantity demanded.
    b. 1.22 percent decrease in quantity demanded.
    c. 12.2 percent increase in quantity demanded.
    d. 12.2 percent decrease in quantity demanded.
    e. 122 percent decrease in quantity demanded.
11. The income elasticity of demand for spaghetti is estimated to be -0.5, suggesting that spaghetti is
   a. a complementary good.
   b. a substitute good.
   c. a normal good.
   d. an inferior good.
   e. a price-inelastic good.

12. The IU Economics Department uses more paper now than it did ten years ago. The price of computers has fallen over the last decade. These facts suggest that the cross-price elasticity of demand for paper and computers is
   a. zero, indicating paper and computers are unrelated goods.
   b. positive, indicating paper and computers are substitutes.
   c. positive, indicating paper and computers are complements.
   d. negative, indicating paper and computers are complements.
   e. positive, indicating paper and computers are complements.

13. A $1 recycling fee imposed by the government on the buyer whenever a new tire is sold would shift the
   a. demand curve down by $1.
   b. demand curve up by $1.
   c. supply curve up by $1.
   d. supply curve down by $1.
   e. demand and supply curves down by $1.

14. The supply of Japanese bonsai trees is quite inelastic, whereas the demand is elastic. Therefore, sellers of the trees will
   a. pay more of any sales tax levied on bonsai trees than buyers will.
   b. pay less of any sales tax levied on bonsai trees than buyers will.
   c. pay all of any sales tax levied on bonsai trees.
   d. pay none of any sales tax levied on bonsai trees.
   e. pay more of the tax when prices are higher than when prices are lower.

15. A binding minimum wage causes
   a. a decrease in the quantity of labor supplied.
   b. an increase in the quantity of labor demanded.
   c. a shortage of labor among low-skilled workers.
   d. unemployment among low-wage workers.
   e. all of the above.
16. The graph above shows a tax of ____ imposed on the ____.
   a. $1; buyer
   b. $1; seller
   c. $2; buyer
   d. $2; seller
   e. $4; seller

17. In the graph above, the after-tax price paid by buyers and price received by sellers are, respectively,

<table>
<thead>
<tr>
<th>Price paid by buyers</th>
<th>Price received by sellers</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. $4.00</td>
<td>$6.00</td>
</tr>
<tr>
<td>b. $6.00</td>
<td>$4.00</td>
</tr>
<tr>
<td>c. $7.50</td>
<td>$2.50</td>
</tr>
<tr>
<td>d. $6.00</td>
<td>$5.00</td>
</tr>
<tr>
<td>e. $5.00</td>
<td>$6.00</td>
</tr>
</tbody>
</table>

18. In the graph above, the per-unit burden of the tax borne by buyer and seller is, respectively,

<table>
<thead>
<tr>
<th>Buyer</th>
<th>Seller</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. $2.00</td>
<td>$0</td>
</tr>
<tr>
<td>b. $1.00</td>
<td>$1.00</td>
</tr>
<tr>
<td>c. $1.50</td>
<td>$ .50</td>
</tr>
<tr>
<td>d. $ .50</td>
<td>$ .50</td>
</tr>
<tr>
<td>e. $4.00</td>
<td>$2.00</td>
</tr>
</tbody>
</table>
19. Suppose the tax in the previous diagram is repealed and a price floor of $6.00 is enacted. The effects of this policy include a (shortage/surplus) of ____ units.

   a. shortage; 3
   b. surplus; 3
   c. shortage; 4
   d. surplus; 4
   e. surplus; 7

20. Suppose that government attempts to improve the nutrition of low-income children by putting a price ceiling of $1.00 a gallon on milk. The effects of this policy would include

   a. a surplus of milk.
   b. a shortage of milk.
   c. an increase in the quantity of milk supplied and a decrease in the quantity demanded.
   d. an increase in demand for milk and a decrease in supply.
   e. a surplus if the ceiling is above the equilibrium.

21. The equilibrium in free markets

   a. maximizes the sum of consumer and producer surplus.
   b. allocates demand for goods to the sellers who produce them at least cost.
   c. allocates the supply of goods to buyers who value them most highly, as measured by willingness to pay.
   d. All of the above are correct.
   e. None of the above is correct.

22. Assume bagels and cream cheese are complements. Suppose there is a decrease in the cost of producing bagels. In the market for cream cheese, this change leads to a(n) __________ in the equilibrium price, a(n) __________ in the equilibrium quantity, and a(n) ___________ in producer surplus.

   a. decrease; decrease; decrease
   b. decrease; increase; decrease
   c. decease; increase; increase
   d. increase; increase; increase
   e. decrease; decrease; increase
23. Scalping of tickets for admission to the Museum of Modern Art tends to
   a. decrease social well-being.
   b. benefit sellers of the tickets but not the buyers.
   c. maximize the difference between consumer and producer surplus.
   d. increase the likelihood that tickets will be used by those who value them most highly.

24. Suppose that you own a classic Triumph TR3 sports car. You have lost interest in sports cars, so it is worth only $1000 to you. Steven is a real Triumph enthusiast and would be willing to pay as much as $5000. If you sell the TR3 for $2000, then social welfare
   a. rises by $1000.
   b. rises by $3000.
   c. rises by $4000.
   d. decreases by $4000.
   e. decreases by $2000.

25. The economic burden of a per-unit tax imposed on sellers is
   a. equivalent to that of a tax imposed on buyers.
   b. likely to decrease the well-being of the rich more than a tax on buyers.
   c. likely to decrease the well-being of small sellers more than large sellers.
   d. none of the above.
26. According to the graph above, the price sellers receive after the tax is
   a. P1
   b. P2
   c. P3
   d. impossible to determine from the information given.

27. According to the graph, the consumer surplus before the tax is represented by area
   a. A
   b. A + B + C
   c. D + E + F
   d. F

28. According to the graph above, the loss in total surplus from the tax is represented by area
   a. A + B + C
   b. D + E + F
   c. A + B + D + F
   d. C + E + H
   e. C + E
29. Taxes cause deadweight losses because they
   a. reduce the real income of taxpayers.
   b. are used to finance government programs that are of less social value than private spending.
   c. prevent buyers and sellers from realizing some of the mutual gains from trade.
   d. redistribute income from productive to unproductive members of society.
   e. all of the above.

30. The supply of gasoline is relatively inelastic and the supply of entertainment is relatively elastic. Both goods are taxed by the same percentage. Relative to the decline in the quantity of entertainment, the decline in the equilibrium quantity of gasoline would be
   a. greater.
   b. the same, since the tax is the same percentage.
   c. less.
   d. cannot be determined from the information given.

31. A tax on gasoline is likely to
   a. cause a greater deadweight loss in the long run as opposed to the short run.
   b. cause a greater deadweight loss in the short run as opposed to the long run.
   c. generate a deadweight loss that is unaffected by the time period over which it is measured.
   d. raise more revenue during the twelfth month than in the first month.

SAMPLE EXAM 2A ANSWERS
   1d  14a  27b
   2b  15d  28e
   3b  16d  29c
   4d  17b  30c
   5c  18b  31a
   6a  19d
   7d  20b
   8b  21d
   9a  22d
   10d  23d
   11d  24c
   12d  25a
   13a  26b
SAMPLE EXAM 2B
1. The principle of diminishing marginal utility states that, as consumption of a good increases,
   a. total utility eventually falls.
   b. total utility eventually becomes negative.
   c. consumers eventually become fully satisfied.
   d. the increase in total utility eventually becomes smaller.
   e. total utility decreases at an increasing rate.

<table>
<thead>
<tr>
<th>Pieces of chocolate</th>
<th>Total Utility</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>21</td>
</tr>
<tr>
<td>3</td>
<td>33</td>
</tr>
<tr>
<td>4</td>
<td>44</td>
</tr>
<tr>
<td>5</td>
<td>54</td>
</tr>
</tbody>
</table>

2. According to the table above, consumption yields diminishing marginal utility beginning with
   a. the first piece.
   b. the second piece.
   c. the third piece.
   d. the fourth piece.
   e. the fifth piece.

3. The marginal utility of the next sandwich is 150; the marginal utility of the next video game is 200. The price of a sandwich is $6, and the price of a video game is $10. According to marginal utility theory, a rational consumer with sufficient income will
   a. buy a sandwich.
   b. buy a video game.
   c. buy neither item and wait until their prices fall.
   d. buy a sandwich if and only if the total utility from sandwiches is greater than the total utility from video games.
   e. buy a video game if and only if the total utility from video games is greater than the total utility from sandwiches.

4. Suppose the price of a cookie is reduced from $1.65 to $1.35, and as a result the quantity demanded increases from 1400 to 1600. Using the midpoint method, the price elasticity of demand for this cookie in the given price range is
   a. 2/3.
   b. 5/6.
   c. 1.
   d. 6/5.
   e. 3/2.
5. Hoping to increase revenue from volleyball games, suppose that the IU Athletic Department raises ticket prices. Revenue will rise if
   a. demand is elastic.
   b. demand is inelastic.
   c. regardless of demand elasticity.
   d. demand is more inelastic than supply.
   e. supply is more inelastic than demand.

6. The price elasticity of demand for cigarettes bought by teens has been estimated to be 1.2 over a 3-month period of time. Suppose that, for public health reasons, government wants to reduce cigarette consumption by teens by 50%. How large of a price increase is required to achieve this policy goal in the span of three months?
   a. 42%
   b. 4.2%
   c. 0.42%
   d. 2.0%
   e. 20%

7. Suppose the Bloomington City Council imposes a 10% tax on gasoline sold inside the City limits. Monroe County has no gasoline tax. Which of the following is/are true?
   I. Purchases of gasoline within Bloomington would likely fall by more than 10%.
   II. Total revenue of gas stations in Monroe County (outside the Bloomington City limits) would remain unchanged.
   a. I only
   b. II only
   c. Both I and II
   d. Neither I nor II

8. Suppose that the price elasticity of demand for a product is 0.5 over a 3-month period and 1.2 over a 12-month period. How would an increase in price of this product, other things constant, affect total revenue of sellers?
   a. Total revenue will rise at first and will rise more over a longer time period.
   b. Total revenue will fall at first but will rise more over a longer time.
   c. Total revenue will rise at first but will fall over a longer time period.
   d. Total revenue will fall at first and will fall more over a longer time.
   e. Total revenue will depend on the elasticity of supply.

9. Which of the following would likely occur if rent controls in were imposed in Indianapolis?
   a. Decrease in the demand for rental housing
   b. Increase in the vacancy rate
   c. Increase in construction of apartment buildings
   d. Decrease in the quality of apartment buildings
   e. Increase in supply of rental housing
10. Consider the following income elasticities that have been estimated in for a country: the income elasticity of demand is 0.35 for fresh potatoes and 2.82 for frozen potatoes. Based on this information, which of the following statements is correct?
   a. Fresh potatoes and frozen potatoes are complementary goods.
   b. Fresh potatoes and frozen potatoes are substitute goods.
   c. Fresh potatoes and frozen potatoes are normal goods.
   d. Fresh potatoes and frozen potatoes are inferior goods.
   e. Fresh potatoes are an inferior good and frozen potatoes are a normal good.

11. Suppose that beer and pretzels are complements. How would an increase in the cost of producing beer affect the market for pretzels?
   a. Increase in price of pretzels, increase in quantity sold, and increase in producer surplus
   b. Increase in price of pretzels, increase in quantity sold, and decrease in producer surplus
   c. Increase in price of pretzels, decrease in quantity sold, and decrease in consumer surplus
   d. Decrease in price of pretzels, decrease in quantity sold, and decrease in producer surplus
   e. Decrease in price of pretzels, decrease in quantity sold, and increase in producer surplus

12. Social Security (including Medicare) is funded by a 15.3 percent payroll tax. By law, 7.65 percent is paid by the employer, and 7.65 percent is paid by the employee. The economic burden of the Social Security tax is most likely borne
   a. equally be employers and employees.
   b. more by employers than by employees.
   c. more by employees than by employers.
   d. more by large firms than small firms.
   e. more by small firms than large firms.

13. Assume that the Bloomington City Council enacts a “living-wage” ordinance of $12 per hour. This law would require the City and firms that do business with the City to pay workers no less than $12 per hour. Such a law would have the greatest impact on local employment if
   a. labor demand is elastic.
   b. labor demand is inelastic.
   c. labor supply is inelastic.
   d. labor supply is elastic.

14. Suppose that the price of a new bicycle is $700. Alex values the bicycle at $800. It costs the seller $500 to produce and sell this particular bicycle. If Alex buys the bicycle,
   a. consumer surplus falls by $100, and producer surplus falls by $200.
   b. consumer surplus falls by $100, and producer surplus rises by $200.
   c. consumer surplus rises by $100, and producer surplus falls by $200.
   d. consumer surplus rises by $100, and producer surplus rises by $200.
   e. total surplus rises by $200.
15. The deadweight loss from a tax reflects
a. the fact that paying taxes reduces the purchasing power of income.
b. the administrative costs of government agencies that collect the tax.
c. the inefficiency in resource allocation because the tax distorts market choices.
d. the fact that middle-income citizens bear a greater burden of taxes than upper-income citizens.

16. Which of the following would have the most inelastic demand relationship?
a. gasoline
b. gasoline at Marathon gas stations in Bloomington
c. gasoline at the Marathon station at South Walnut Street and Winslow Road.
d. The elasticity of demand will be about the same for each item, because all are gasoline.

17. According to Adam Smith’s “invisible hand,”
a. government plays a behind-the-scenes role in making markets in the economy work efficiently.
b. individuals who are concerned about the public good will almost invisibly promote increased social welfare.
c. free markets require only a little intervention to operate efficiently.
d. many buyers and sellers acting independently out of self-interest can promote general economic well-being.
e. All of the above are examples of Smith’s invisible hand metaphor.

18. Refer to the diagram of a labor market above. Compared to the market equilibrium, the imposition of an $8 minimum wage would cause
a. employment to fall by 20 and unemployment to rise by 20.
b. employment to fall by 35 and unemployment to rise by 35.
c. employment to fall by 15 and unemployment to rise by 35.
d. employment to fall by 65 and unemployment to rise by 100.
19. Refer to the graph above. Which of the following is/are correct?
   a. At $P_1$, consumer surplus is $(A + B + C)$.
   b. At $P_2$, producer surplus is $(B + D + F)$.
   c. At $P_1$, total surplus is at maximum.
   d. All of the above are true statements.
   e. None of the above is true.

20. A tax on gasoline is likely to
   a. cause a greater deadweight loss in the long run as opposed to the short run.
   b. cause a greater deadweight loss in the short run as opposed to the long run.
   c. generate a deadweight loss that is unaffected by the time period over which it is measured.
   d. raise more revenue in the twelfth month after imposition than in the first month.

21. Assume that the supply curve for undeveloped land is perfectly inelastic. A tax levied on undeveloped land will
   a. be borne entirely by sellers of land.
   b. generate no tax revenue for government because land sales will fall to zero.
   c. be borne equally by buyers and sellers of land.
   d. result in a relatively large deadweight loss for society.
   e. be borne entirely by buyers of land.
22. Refer to the graph above. After the tax is imposed the equilibrium price and quantity are
   a. $12 and Q2 units.
   b. $9 and Q1 units.
   c. $7 and Q2 units.
   d. $12 and (Q1-Q2) units.

23. Refer to the graph above. The economic incidence of the tax is
   a. $12 on the buyer and $7 on the seller.
   b. $5 on the buyer and $7 on the seller.
   c. $3 on the buyer and $7 on the seller.
   d. $2 on the buyer and $3 on the seller.
   e. $3 on the buyer and $2 on the seller.

24. In the graph above,
   a. supply is more elastic than demand.
   b. demand is more elastic than supply.
   c. demand and supply have the same elasticities.
   d. elasticities of demand and supply cannot be determined, since the numerical change in quantity
      is not specified.

25. In the graph above, if demand and supply are both more elastic than shown in the graph,
   a. tax revenue would be bigger and deadweight loss would be bigger.
   b. tax revenue would be bigger and deadweight loss would be smaller.
   c. tax revenue would be smaller and deadweight loss would be bigger.
   d. tax revenue would be smaller and deadweight loss would be smaller.
SAMPLE EXAM 2B ANSWERS

1. d
2. d
3. a
4. a
5. b
6. a
7. a
8. c
9. d
10. c
11. d
12. c
13. a
14. d
15. c
16. a
17. d
18. c
19. d
20. a
21. a
22. a
23. e
24. a
25. c