Choose the single best answer for each question. Do all of your scratch work in the margins or in the blank space on page 5.

1. A person who has smoked a pack of cigarettes a day for years most likely has a demand for cigarettes this is
   a. inelastic.
   b. unit elastic.
   c. elastic.
   d. perfectly elastic.
   * inelastic.

2. If the own price elasticity of demand for a good is -4.0, then a 10% increase in the good's price will result in a
   a. 0.4% decrease in quantity demanded.
   b. 2.5% decrease in quantity demanded.
   c. 4% decrease in quantity demanded.
   d. 40% decrease in quantity demanded.
   * 40% decrease in quantity demanded.

3. When the MU Market and Cafe cuts its price for 16 oz. Cafe Mochas from $3.55 to $3.25, its sales increase, on average, from 28 to 36 Cafe Mochas per day. Over this range of prices, the own-price elasticity of demand (calculated by the "midpoint method") for 16 oz. Cafe Mochas is
   a. -2.83.
   b. -1.67.
   c. -0.60.
   d. -0.35.
   * -2.83.

4. Sam's Recycling Center recently increased the price that it pays for aluminum cans from $0.60/lb. to $0.80/lb. As a result, the volume of recycled aluminum cans it purchases each month increased from an average of 1200 lbs./month to an average of 1400 lbs./month. Over this range of prices, the elasticity of supply (calculated by the midpoint method) of aluminum cans is
   a. 0.54.
   b. 0.74.
   c. 1.35.
   d. 1.86.
   * 0.54.

5. In the competitive market for gizmos, when supply increases, equilibrium price falls by 10% and the revenue of gizmo producers falls by 8%. Based on this information, we can conclude that
   a. the supply of gizmos is elastic.
   b. the supply of gizmos is inelastic.
   c. the demand for gizmos is inelastic.
   d. the demand for gizmos is elastic.
   * the demand for gizmos is inelastic.
6. If two goods are substitutes, 
* their cross-price elasticity of demand is positive.
b. their cross-price elasticity of demand is negative.
c. both will have inelastic demand.
d. both will have income elasticities of demand that are greater than one.

7. Suppose that, in the competitive market for pencils, supply is elastic. When the demand for pencils increases, the percentage change in equilibrium price 
a. will be equal to the percentage change in equilibrium quantity.
b. will be greater than the percentage change in equilibrium quantity.
* will be less than the percentage change in equilibrium quantity.
d. could be greater than, equal to, or less than the percentage change in equilibrium quantity, depending on the elasticity of demand.

8. Which of the following features of a good will tend to make the demand for the good inelastic? 
a. The good has no close substitutes.
b. The good is a necessity.
* Both a and b.
d. Neither a nor b.

9. Assume that the demand for gasoline is more elastic in the long-run than in the short-run, but that the elasticity of gasoline supply is the same in the short- and long-run. The market is in equilibrium to begin, then supply decreases. The equilibrium price response to the supply shift is _______ in the short-run than in the long-run. The equilibrium quantity response to the supply shift is _______ in the short-run than in the long-run. 
a. smaller; smaller.
b. smaller; bigger.
* bigger; smaller.
d. bigger; bigger.

10. If a price floor in a competitive market is not binding, then 
a. there will be a surplus in the market.
b. there will be a shortage in the market.
c. the market will be less efficient than it would be without the price floor.
* the price floor will have no effect on the market price or quantity sold.

11. Which of the following is a symptom of a binding price ceiling in the market for a good? 
* customers lining up before the stores open, hoping for a chance to purchase.
b. sellers secretly offering to sell the good at prices below the ceiling level.
c. sellers unable to sell all that they would like to sell at the ceiling price.
d. none of the above.
12. When a market is subject to a strictly enforced binding price floor which the government does not "support" through the purchase of surplus, the quantity sold in the market will be the same as
a. the quantity demanded at the floor price.
b. the quantity supplied at the floor price.
c. both a and b.
d. neither a nor b.

13. A minimum wage that is set above a labor market's equilibrium wage will result in
a. an excess demand for labor; in other words, unemployment.
b. an excess demand for labor; in other words, a shortage of workers.
c. an excess supply of labor; in other words, unemployment.
d. an excess supply of labor; in other words, a shortage of workers.

14. As of today (February 25, 2009), Iowa's minimum wage is
a. $5.15/hour.
b. $6.55/hour.
c. $7.25/hour.
d. $7.75/hour.

15. Suppose that the government has imposed a price floor on the competitive market for cell phones. Which of the following events could transform that price floor from one that is binding into one that is not binding?
a. Scientists announce the discovery of a health risk associated with cell phone use.
b. Traditional land-line phone service becomes more expensive.
c. Technological advances make it possible to produce cell phones more cheaply.
d. None of the above.

16. If a $1.00/unit excise tax is imposed on a competitive market with inelastic demand and elastic supply, the price buyers pay (inclusive of the tax)
a. will increase by $1.00/unit.
b. will increase by more than $0.50/unit but less than $1.00/unit.
c. will increase by less than $0.50/unit.
d. will remain unchanged.

17. In the United States, Social Security and Medicare are paid for with proceeds from
a. the federal individual income tax.
b. the FICA payroll tax.
c. state and local property taxes.
d. charitable contributions from wealthy Americans.

18. Consumer surplus is the
a. amount of a good the consumer gets for free.
b. amount a consumer pays for the good minus the consumer's willingness to pay.
c. consumer's willingness to pay for the good.
d. none of the above.
19. Producer surplus measures the 
* benefits to sellers of participating in a market. 
b. costs to sellers of participating in a market. 
c. price that buyers are willing to pay for sellers' output of a good or service. 
d. quantity produced of the good, over and above the quantity demanded.

Questions 20 and 21 refer to the following information. The table lists willingness to pay for the first, second, and third pizzas of the month for three hypothetical consumers. All three have zero willingness to pay for pizzas after the third of the month.

<table>
<thead>
<tr>
<th></th>
<th>First pizza</th>
<th>Second pizza</th>
<th>Third pizza</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meng</td>
<td>$16.00</td>
<td>$12.00</td>
<td>$6.00</td>
</tr>
<tr>
<td>Michelle</td>
<td>$18.00</td>
<td>$16.00</td>
<td>$13.00</td>
</tr>
<tr>
<td>Mason</td>
<td>$15.00</td>
<td>$13.00</td>
<td>$10.00</td>
</tr>
</tbody>
</table>

20. If the price of pizzas were $14.00, the number of pizzas purchased each month by each consumer would be:
  a. Meng - 2; Michelle - 1; Mason - 1.
  b. Meng - 1; Michelle - 3; Mason - 2.
  c. Meng - 2; Michelle - 3; Mason - 1.
  * Meng - 1; Michelle - 2; Mason - 1.

21. If the price of pizzas were $12.00,
  a. Meng's consumer surplus would be $6/month.
  * Michelle's consumer surplus would be $11/month.
  c. Mason's consumer surplus would be greater than Meng's.
  d. None of the above.

22. What will happen to producer surplus in a competitive market for a normal good as a result of an increase in average household income?
  * Producer surplus will increase.
  b. Producer surplus will decrease.
  c. Producer surplus will remain unchanged.
  d. Producer surplus could increase, decrease, or remain unchanged – it's impossible to say without more information.

23. What will happen to consumer surplus in a competitive market for a good as a result of a technological innovation that reduces the good's production costs?
  * Consumer surplus will increase.
  b. Consumer surplus will decrease.
  c. Consumer surplus will remain unchanged.
  d. Consumer surplus could increase, decrease, or remain unchanged – it's impossible to say without more information.
24. A competitive market is currently subject to an excise tax of $1.00/unit. If the tax were raised to $2.00/unit,
a. tax revenue and deadweight loss would definitely increase, and consumer surplus would definitely decrease.
b. deadweight loss would definitely increase, and tax revenue and consumer surplus would definitely decrease.
* deadweight loss would definitely increase, and consumer surplus and producer surplus would definitely decrease.
d. tax revenue and producer surplus would definitely increase, and consumer surplus would definitely decrease.

25. Assume that the equilibrium price of gasoline is $2.00 per gallon, and the equilibrium quantity is 10 million gallons per day. In which of the following scenarios would a new gasoline excise tax of $0.50 per gallon result in the largest deadweight loss? The elasticity of demand for gasoline is
a. -0.8, and the elasticity of supply is 0.8.
b. -0.8, and the elasticity of supply is 1.2.
c. -1.2, and the elasticity of supply is 0.8.
* -1.2, and the elasticity of supply is 1.2.

26. The Laffer curve describes the relationship between the marginal income tax rate and
* income tax revenue.
b. the deadweight loss resulting from the income tax.
c. the average income tax rate.
d. the supply of labor.
The following graph depicts supply and demand in a hypothetical market. Use it to answer questions 27, 28, 29, and 30.

27. When the market is in equilibrium (with no excise tax) consumer surplus is
   a. $2250/day.
   b. $3600/day.
   c. $4500/day.
   * $5400/day.

28. If the government were to levy an excise tax of $15/unit, on this market, it would collect tax revenue of
   * $4500/day.
   b. $4800/day.
   c. $9000/day.
   d. $9300/day.

29. With the excise tax of $15/unit in effect, producer surplus in this market would be
   a. $450/day.
   * $900/day.
   c. $1800/day.
   d. $2400/day.

30. The deadweight loss of a $15/unit excise tax on this market would be
   a. $1350/day.
   b. $1950/day.
   * $2250/day.
   d. $4500/day.