I. (3 Points Each) Multiple Choice

1. Assume automobile tires and gasoline are complements. A decrease in the price of crude oil used in manufacturing gasoline will
   A. increase the supply of gasoline and increase the supply of tires.
   B. increase the demand for gasoline and increase the supply of tires.
   C. increase the supply of gasoline and increase the demand for tires.
   D. increase the supply of gasoline and increase the demand for gasoline and tires.

2. Assume farmers in Indiana can grow either corn or soy beans. Ceteris paribus, a decrease in the profitability of growing corn would be expected to
   A. cause an downward movement along the market supply curve for corn.
   B. increase the market supply of soy beans - lowering farmers’ reservation prices for supplying soy beans.
   C. decrease both the market demand and market supply for corn.
   D. increase the demand for soy beans, leading to an upward movement along the supply market curve for soy beans.

3. Which of the following statements is false?
   A. A decrease in the price of cameras will increase the quantity demanded for cameras.
   B. An increase in the price of cameras, resulting from higher production costs, will decrease the demand for camera film.
   C. Assuming cameras are normal goods, an increase in the income of consumers will increase the demand for cameras.
   D. An increase in production costs for cameras will lead to a decrease in the demand for cameras and camera film.

4. Which of the following statements regarding the expected effects of a price control in a competitive market is true?
   A. A price floor above the equilibrium price will generate a shortage.
   B. A price floor below the equilibrium price will generate a quantity exchanged that is greater than the equilibrium quantity.
   C. A price ceiling below the equilibrium price will generate a decrease in supply and an increase in demand.
   D. A price floor above the equilibrium price will generate a quantity exchanged that is less than the equilibrium quantity.

5. If a binding price ceiling is increased,
   A. supply will increase.
   B. demand will decrease.
   C. the shortage caused by the ceiling will decrease.
   D. All of the above would occur.
6. Suppose that an increase in the supply of blank CDs causes an 8% decrease in the price of blank CDs, and a 32% increase in the quantity of blank CDs purchased. It follows that

A. the elasticity of supply of blank CDs is 4.00.
B. the elasticity of supply of blank CDs is 0.25.
C. the elasticity of demand of blank CDs is 4.00.
D. the elasticity of demand of blank CDs is 0.25.

7. Which of the following statements about price elasticity of demand is true?

A. If there is an increase in demand, the quantity supplied will not change if price elasticity of supply is 0.
B. The shorter the time period considered, the higher the price elasticity of demand is expected to be.
C. The price elasticity of demand for cigarettes is likely to be higher than the price elasticity of demand for Camel cigarettes.
D. Goods that comprise a very small percentage of a household’s total expenditures tend to have a relatively high price elasticity of demand.

8. Joe buys 1 Coke each day, even though the price has increased by over 20%. Which of the following statements is correct about Joe? His price elasticity of demand for coke equals

A. 0.
B. 1.
C. 20.
D. infinity.

9. A downward sloping straight-line (constant-slope) demand curve has an elasticity that

A. remains constant along its length.
B. increases for lower and lower prices.
C. decreases for lower and lower prices.
D. at first increases, then decreases for lower and lower prices.
E. None of the above are true.

10. Assume the elasticity of demand for CDs is 1.8 and 100 billion are sold per year. Given only this information, one could estimate that a 20% increase in the price of CDs (caused by higher taxes on firms producing CDs) would lead to

A. increased revenues from CD sales and a reduction in quantity sold of 36%.
B. decreased revenues from CD sales and a reduction in quantity sold of 36%.
C. increased revenues from CD sales and a reduction in quantity sold of 180%.
D. decreased revenues from CD sales and a reduction in quantity sold of 180%.

11. The price elasticity of supply would be greater in situations where

A. firms face a highly inelastic supply of inputs needed for production.
B. firms have no excess capacity.
C. firms require highly specialized inputs for production.
D. None of the above would lead to a greater elasticity of supply.
12. Assume a decrease in supply leads to a decrease in revenues. From this, we can conclude

A. demand is elastic.
B. demand is perfectly elastic.
C. demand is inelastic.
D. demand is perfectly inelastic.

13. Which of the following statements is false?

A. Binding price ceilings lead to a greater quantity exchanged.
B. Binding price ceilings lead to shortages.
C. Binding price floors lead to a greater quantity supplied.
D. Binding price floors lead to a smaller quantity demanded.
E. All of the statements above are false statements.

14. Which of the following statements is true?

A. The greater the elasticity of demand, the smaller the shortage caused by a binding price floor.
B. The smaller the elasticity of supply, the greater the shortage resulting from a binding price ceiling.
C. The greater the elasticity of supply, the greater the reduction in quantity traded caused by a binding price floor or a price ceiling.
D. The greater the elasticity of supply and demand, the greater the surplus caused by a price floor.

15. Binding price floors would be expected to have a **larger impact** on quantity sold

A. in the short term.
B. for inferior goods.
C. for goods with many substitutes.
D. All of the above would lead to a larger impact.

16. Suppose government officials impose an additional excise tax on cigarettes. All other things equal, which of the following statements is **TRUE**?

I. The annual tax revenue generated by this tax will tend to **decrease** in future years.
II. The excise tax will decrease the demand for cigarettes and decrease the supply of cigarettes.

A. I only
B. II only
C. Both I and II are true.
D. Neither I nor II is true.

17. If MU is zero,

A. total utility is decreasing.
B. total utility is increasing.
C. total utility could be increasing or decreasing.
D. total utility is not changing.

18. If the marginal utility of good X is 4 times the marginal utility of good Y, and the consumer is
maximizing utility, we know that

A. the price of X must be 4 times the price of Y.
B. the TU from X must be 1/4 that of Y.
C. the price of X must be 1/4 the price of Y.
D. the TU from X must be 4 times that of Y.

19. Use the information below to answer the next question.

<table>
<thead>
<tr>
<th>Qx</th>
<th>MUx</th>
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<tbody>
<tr>
<td>1</td>
<td>1</td>
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<tr>
<td>2</td>
<td>0</td>
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<tr>
<td>3</td>
<td>-1</td>
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The total utility from 3 units of good X would be

A. 0.
B. -3.
C. -1.
D. undefined.

20. Assume: (1) that the price of cola is $2 and the price of chips is $1; (2) that at your current consumption levels the MU of cola is 10 and the MU of chips is 7; and (3) that you are spending all of your income. From this information we know that

A. you should buy additional units of chips and less cola to maximize utility.
B. you should buy additional units of cola and less chips to maximize utility.
C. your demand for chips is perfectly inelastic.
D. your demand for chips is perfectly elastic.
II. Short Answer (be brief, complete, concise). Use only the space allotted.

1. Assume the binding minimum wage is increased to $10 per hour for employees above 21 years of age.

Part A. (10 points) Using S&D analysis, show and briefly describe the impact on two labor markets: 1) those 21 or older, 2) those under 21.

Part B. (5 points) Would the overall income of all workers 21 or older increase or decrease? Explain.
2. (12 points) An increase in excise taxes has a different short term (immediate) effect than long term (future) effect. Using S&D, show the impact of an increase in per unit excise taxes imposed the sellers of gasoline. Use the concept of elasticity to show (argue) why the short term effect would be different than the long term.

3. (8 points) Construct a situation that would provide the strongest support for the statement given below. Support your answers with a graph.

If a binding quota were placed on Italian automobiles imported into the U.S., the impact on the price of those imports would be negligible.
4. (5 points) Assume you can buy two goods, x and y with prices, P_x and P_y.

State the equal marginal principle for utility maximization for these two goods.

If the price of x is twice as much as the price of y, does this mean to maximize utility you must get twice as much utility from good y?