I. Multiple Choice (3 points each)

1. Opportunity costs per unit would be constant if
   A. inputs were heterogenous in production capabilities.
   B. market prices were constant.
   *C. inputs were identical in production capabilities.
   D. All of the above are true statements.

2. Suppose the U.S. can produce computers at an opportunity cost of .1 car for each computer. Suppose Mexico can produce computers at an opportunity cost of .2 cars for each computer. Using only this information, a feasible trade would have the U.S.
   A. specialize in cars and trade for computers at a price greater than .2 computers per car.
   B. specialize in cars and trade for computers at a price greater than .1 computers per car.
   *C. specialize in computers and trade for cars at a price greater than .1 cars per computer.
   D. specialize in computers and trade for cars at a price greater than .2 cars per computer.

3. Suppose the U.S. can produce coffee at an opportunity cost of one computer for every 2 tons of coffee it grows. Suppose Colombia can produce coffee at an opportunity cost of one computer for every 4 tons of coffee it grows. A feasible terms of trade, at which both countries gain in trade, is
   A. 2 tons of coffee < P coffee < 4 tons of coffee.
   *B. 1/4 computer < P coffee < 1/2 computer.
   C. 1/4 ton of coffee < P computer < 1/2 ton of coffee.
   D. 1/4 computer < P computer < 1/2 computer.

4. Which of the following statements is true?
   A. A decrease in the price of cameras, due to lower production costs, will increase the demand for cameras.
   B. An increase in the supply of cameras will increase the supply of camera film.
   *C. An increase in the price of cameras, due to higher production costs, will decrease the demand for camera film.
   D. A binding quota on imported cameras will decrease the demand for imported cameras.

5. The model of S&D tells us that in equilibrium, making it illegal to buy and sell concealed weapons would
   A. decrease price and decrease quantity purchased.
   *B. decrease quantity purchased and have an indeterminate effect on price.
   C. raise price and decrease quantity purchased.
   D. raise price and have an indeterminate effect on quantity purchased.
6. 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.

7. Suppose butter and potatoes are dietary complements. Suppose the demand for potatoes increases due to a change in perception regarding their positive dietary characteristics. Which of the following is expected from a S&D analysis of the butter market?

A. Price increase, Qd decrease
B. Price decrease, Qd decrease
C.* Price increase, Qd increase
D. Price decrease, Qd increase

8. Following hurricane Katrina, there was an increase in the price of sugar due to destruction of sugar processing plants. This rise in the price of sugar, used in the production of ice cream, would be expect to cause a

A.* decrease the supply of ice cream, causing the supply curve of ice cream to shift to the left.
B. increase the supply of ice cream, causing the supply curve of ice cream to shift to the right.
C. have no effect on the supply of ice cream.
D. have no effect on the supply curve of ice cream, but will cause a downward movement along the supply curve of ice cream.

9. Assume steel is used in the production of cars and public transportation is viewed as an alternative to driving by consumers. What will happen to the equilibrium price and quantity of new cars if the price of steel falls and simultaneously the price of public transportation decreases?

A. The price will rise and the quantity will decrease.
B.* The price will fall and the quantity may increase, decrease, or stay the same depending on the magnitude of the shifts.
C. The price change may increase, decrease, or stay the same depending on the magnitude of the shifts. The quantity would increase.
D. Both the price and the quantity may increase, decrease, or stay the same depending on the magnitude of the shifts.
E. The price change may increase, decrease, or stay the same depending on the magnitude of the shifts. The quantity would decrease.
10. Which of the following statements 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.

11. Which of the following statements about price elasticity of demand is false?

*A. If there is an increase in a tax on the sellers of a product, the quantity demanded will not change if price elasticity of demand is 1.
B. The longer the time period considered, the higher the price elasticity of demand.
C. The price elasticity of demand for soda is likely to be smaller than the price elasticity demand for a particular brand of soda.
D. Goods that comprise a very small percentage of a household's total expenditures tend to have a relatively low price elasticity of demand.

12. If a person spends $25 each week on movie rentals (regardless of the price of an individual movie rental), one can conclude that for movie rentals this person has an

A. elasticity of demand = 0.
*B. elasticity of demand = 1.
C. elasticity of demand which is infinite.
D. none of the above answers is correct.

13. If a price increase, caused by higher production costs, leads to no change in quantity sold, we can conclude

A. demand is perfectly elastic.
*B. demand is perfectly inelastic.
C. demand is unitary elastic.
D. None of the above are true

14. 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 demand of blank CDs is 4.00.
C. the elasticity of demand of blank CDs is 0.25.
D. the elasticity of demand of blank CDs is 0.25.

15. The supply elasticity is smaller when

A. the demand elasticity is smaller.
*B. the inputs into making the good have a low elasticity of supply.
C. consumer expenditures on the good are a large part of consumer budgets.
D. the time period under consideration is very long.
16. Assume the equilibrium price and quantity of a 12-pack of beer is $5 and 1,000 respectively. If supply increases, which of the following new equilibrium price-quantity pairs would be consistent with an elastic demand for beer?

A. $5.25 and 2,500.
*B. $4.50 and 2,000.
C. $4.50 and 1,050.
D. $4.00 and 1,000.

17. To increase total wages to the group of individuals earning minimum wage, some economists argue for lowering the minimum wage. For these economists to be correct

A.* the demand for labor must be elastic.
B. the demand for labor must be inelastic.
C. the supply of labor must be elastic.
D. the supply of labor must be inelastic.

18. A binding quota on imported tobacco would have a smaller impact on imported tobacco prices if

A. the demand for imported tobacco is highly inelastic.
*B. the demand for imported tobacco is highly elastic.
C. the supply of imported tobacco with no quota is highly elastic.
D. the supply of imported tobacco with no quota is highly inelastic.

19. All else equal, government revenues from an excise tax will be smaller when

*A. demand and supply are highly elastic.
B. demand and supply are highly inelastic.
C. demand is highly elastic and supply is highly inelastic.
D. demand is highly inelastic and supply is highly elastic.

20. Some members of Congress have proposed an increase in the gasoline tax in order to: (1) reduce traffic congestion and air pollution from automobiles, and (2) raise revenue for highway and bridge repairs.

Which, if either, of the following statements is correct concerning this proposed tax increase?

I. It will be less successful in reducing congestion and air pollution, but raise more revenue if demand is highly inelastic.
II. It will be more successful in reducing congestion and air pollution if supply is highly elastic.

A. I only
B. II only
*C. Both I and II
D. Neither I nor II
II. Short Answer (show your work, be brief, complete, concise). Use only the space allotted.

1. Elasticity of demand and excise taxes

Currently, automobile tires are selling for $50 each and 10 million are sold per year. Assume after a $25 per tire excise tax is imposed, the market equilibrium price increases to $70 and the quantity sold falls to 8 million per year.

**Part A:** (2 points) Compute the elasticity of demand for gasoline using the mid-point formula (show your work).

**Part B:** (2 points) Compute the government's revenue from this excise tax (show your work).
2. S&D, Tariffs, and Relative Elasticities

One way of helping the domestic steel industry is to place a tariff of $100 per ton on imports of foreign steel. The impact of these restrictions on the quantity of foreign steel imported would depend on the elasticity of supply of foreign steel.

Part A. (6 points) Provide support for the statement above using the concept of relative elasticity of supply. Support your answer with two appropriate graphs depicting the market for foreign steel and a brief/precise summary statement. Use only the space provided.

Part B. (4 points) Briefly summarize two factors that would yield a relatively more elastic supply of foreign steel.
3. (8 points) S&D, Price Controls, and Relative Elasticities

The impact on EMPLOYMENT and UNEMPLOYMENT of less skilled workers of an increase in a binding minimum wage would depend on the elasticity of supply and demand for these workers.

*Evaluate* this statement using the concept of relative elasticity. Support your answer with appropriate graphs and a brief/precise statement. Use only the space provided.
4. (6 points) S&D, Price Controls, and Relative Elasticities

Suppose the current interest rate on credit cards is 12% and the supply of credit cards is **perfectly elastic**. Using an appropriately drawn S&D graph and a brief discussion, evaluate the impact of a price ceiling on credit card interest rates of 8%.
5. S&D, Taxes, and Relative Elasticities

Assume the government places a $1 per unit tax on sellers of Product A and that Product A currently sells for $4. Further assume the demand for product A is perfectly elastic.

Part A. (4 points) Show graphically how the excise tax impacts the market for Product A. Label precisely. No discussion needed.

Part B. (2 points) What is the price burden of the tax on consumers? What is the price burden of the tax on sellers?
6. S&D and Quotas

Assume the government places a 1000 unit quota on the supply of Product A, and that the current equilibrium quantity is 1500.

A. (4 points) Using S&D, show graphically how the quota impacts the market for Product A. Label precisely. Outline the “process” of market movement from the first equilibrium to the second equilibrium.

B. (3 points) Using S&D, show graphically how the quota impacts the market for Product B, a complement to Product A. Label precisely, no discussion needed.