**FIRST MIDTERM – SAMPLE QUESTIONS**

**Multiple Choice**

1. A meal at Vinny’s Dinette costs $15. Your wage is $12 per hour. Eating at home costs $3 for ingredients. It takes one hour to cook and clean the dishes if you eat at home. The best dish at Vinny’s is the Steak Submarine. What is the **opportunity cost** of eating at Vinny’s.
   A. $15
   B. $12
   C. $9
   D. $3
   E. $0

2. Which of the following taxes would cause a **rent seeking loss**?
   A. A tax of $0.20 per soft drink sold.
   B. A tax of $0.20 per newspaper.
   C. A tax of $100 per person alive on April 15.
   D. A tax of $1,000 per dog alive on April 15.
   E. None of the above.

3. Which of the following taxes would NOT cause a **deadweight loss**?
   A. A tax of $0.20 per soft drink sold.
   B. A tax of $0.20 per newspaper.
   C. A tax of $100 per person alive on April 15.
   D. A tax of $1,000 per dog alive on April 15.
   E. None of the above.

4. In a competitive market an interference by the government through taxes, minimum prices or maximum prices, will only cause a **deadweight loss** if
   A. both the price and quantity sold change
   B. the quantity sold changes
   C. the price changes
   D. the price goes up
   E. the price goes down

5. Which of the following is NOT true of a **competitive market**
   A. The buyers are the people who are willing to pay the most for a good.
   B. The buyers are all willing to pay at least as much for the good as the equilibrium price.
   C. The buyers are the people who most desire the good.
   D. The buyers are all willing to pay at least as much as the good costs to produce
   E. No-one who does not buy is willing to pay as much as anyone who does buy.
6. **Consumer surplus** refers to

A. The cost of producing a unit of the product
B. The maximum that a consumer is willing to pay for the product
C. The difference between the price charged for the product and the cost of producing that product
D. The difference between the maximum that a consumer is willing to pay for a product and the price that is paid for the product
E. The difference between the maximum that a consumer is willing to pay for a product and the cost of producing that product

7. Which of the following is NOT a requirement for **efficiency** in an economy?

A. Output is on the production possibility frontier.
B. The total $ value of consumer and producer surplus in the economy has been maximized.
C. The marginal benefit of any activity is at least as great as its marginal cost.
D. No trades are possible which can make one person better off without making anyone else worse off.
E. All goods are normal goods.

8. Suppose that the demand for pizza can be written as \( Q_d = 36 - P \) and the supply of pizza can be written as \( Q_s = P - 12 \). If the price of pizza is $20, which of the following is true?

A. There will be a surplus of 8 pizzas
B. There will be a shortage of 8 pizzas
C. There will be a surplus of 20 pizzas
D. There will be a shortage of 20 pizzas
E. None of the above are correct

9. The reason many economists argue that the efficient outcome should always be chosen by the government is that

A. The American economy will only remain internationally competitive if it is efficient.
B. Efficiency measures count the desires of the rich much more than those of the poor, and it is the rich who have made America what it is.
C. If the government does not choose efficient outcomes we will end up paying as much in taxes as the wretched Danes.
D. Such a policy maximizes total income. The government can then redistribute if it wishes through tax policy.
E. The average person will be happier if we maximize efficiency.

10. The price elasticity of demand will typically be high where a good:

A. Is a small share of expenditure and is a complement to other goods.
B. Is inferior.
C. Is a small share of expenditure and is a substitute for other goods.
D. Is a large share of expenditure and is a substitute for other goods.
E. Is inferior and is a complement to other goods.
11. Which of the following statements is normative?
A. Selling human organs for transplant would be more efficient than the current system of allocating them based on need.
B. The supply of organs would be increased by such a policy.
C. Poor people needing transplants would be worse off under such a policy.
D. A free market system in organs would be better than the current system.
E. Many people would find such a system repulsive.

12. In which cases will the income elasticity of demand be highest.
A. A normal good which is also a luxury good.
B. A normal good with a constant income elasticity of demand.
C. A normal good which is also a necessity.
D. A good which is a large share of expenditure.
E. A good which is a small share of expenditure.

13. Suppose the own price elasticity of demand for cabbage at the current price is 0. What (approximately) happens to the revenue of cabbage sellers if the price drops by 2%?
A. It stays the same.
B. It falls 2%.
C. It rises 2%.
D. It falls ½%.
E. It rises ½%.

14. Suppose a consumer consumes only two goods, donuts and diet soda. Suppose the price of soda doubles with income unchanged. What happens to the budget constraint?
A. It rotates away from the origin around the intercept on the donut axis.
B. It rotates away from the origin around the intercept on the soda axis.
C. It rotates towards the origin around the intercept on the donut axis.
D. It shifts towards the origin, but stays parallel to the original constraint.
E. It rotates towards the origin around the intercept on the soda axis.

15. Suppose your income doubles. Using the method of budget constraints and indifference curves we can conclude that
A. You consume twice as much of every good.
B. You are twice as happy as you were before.
C. You are more than twice as happy as you were before.
D. You are happier, but less than twice as happy.
E. You are happier.
16. You are offered a place at Pomona College with fees of $20,000 per year. Reed College offers you a scholarship with zero tuition and a $10,000 grant towards living expenses. If you work instead of going to college you can earn $25,000. What is the opportunity cost of attending Pomona if your next best alternative is Reed.

A. $30,000  
B. $10,000  
C. $25,000  
D. $45,000  
E. $35,000

17. Which of the following statements is normative?

a. A competitive market with spillovers is efficient.  
b. Competitive firms will set a price greater than marginal cost.  
c. Competitive markets maximize surplus.  
d. In a competitive market demand equals supply.  
e. Because competitive markets are efficient, the government should not interfere in them.

18. An indifference curve represents

A. the set of all possible combinations that yield the same level of utility to the consumer  
B. the set of all possible combinations that maximize a consumer's utility  
C. the set of all possible combinations of two goods that can be purchased, given the consumer's income and the price of the goods  
D. the set of all equilibrium points  
E. both A and C are correct

19. Which of the following is a requirement for efficiency in an economy?

A. The government intervenes to prevent those who cannot work from starving.  
B. The government redistributes at least some income to those who are poorer.  
C. All people have to earn at least some income.  
D. No trades are possible which can make one person better off without making anyone else worse off.  
E. All goods have at least one substitute.

20. Water has an income elasticity of demand of 1.02. This means.

A. Water is a luxury good.  
B. Water is a normal good.  
C. Water is a necessity.  
D. A. and B.  
E. B. and C.
Taxes in competitive markets.

1. Suppose the daily demand curve for Non-Fat Decafe Lattes in Davis is given by \( Q_d = 100 - 20P \). The cost of a latte is always $2 no matter how much is supplied.

a. (4) Draw the demand curve and supply curve on the graph below, labeling each curve and the axes, and indicating the units.
b. (2) Calculate the equilibrium price and quantity of lattes?
c. (6) A tax of $1 per latte is imposed on the coffee shops. What is the new price and quantity? How much of the tax burden is borne by the coffee shops at the new price?
d. (2) Calculate the deadweight loss from the tax.
e. (2) Calculate the rent seeking loss from the tax.
f. (2) Suppose the tax was instead imposed on consumers. What is the equation for the new demand curve.
g. (2) What is the market price if the tax is imposed on consumers.

2. Suppose that in the town of Munchen there are 1,000 apartments zoned for rental use only, which are thus supplied for rentals whatever the rental price in the market is (they cannot be used for any other purpose). Suppose that the demand for these apartments is given by the equation

\[ Q_d = 1,600 - \text{Rent}. \]

where “Rent” is the monthly amount charged in rent for an apartment.

a. Draw the demand curve and supply curve on the graph below, labeling each curve and the axes, and indicating the units.
b. Calculate the equilibrium rent and quantity of rental apartments?
c. To raise revenue Mayer Kurt Vile imposes a tax of $100 per month on renters. Show on your diagram above the changes that this produces in the demand curve. Calculate the new rent and quantity of apartments? How much of the tax burden is borne by apartment owners after the tax is imposed?
d. Calculate the deadweight loss from the tax.
e. Calculate the rent seeking loss from the tax.
f. Mayor Vile is defeated in a special election by Rosa Luxemburg who promises to tax apartment owners instead of renters. On the diagram below show the demand and supply curves where the $100 tax is imposed on apartment owners. Calculate the new market rental and the quantity of apartments rented.

Efficient Pricing

3. The Bay Bridge toll is $2 on the way into the city. The table below shows (hypothetical) average waiting times for using the bridge going in to the city for different hours of the day:
<table>
<thead>
<tr>
<th>Hour</th>
<th>Average waiting time (minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-5 am</td>
<td>0</td>
</tr>
<tr>
<td>5-6 am</td>
<td>6</td>
</tr>
<tr>
<td>6-7 am</td>
<td>12</td>
</tr>
<tr>
<td>7-8 am</td>
<td>18</td>
</tr>
<tr>
<td>8-9 am</td>
<td>30</td>
</tr>
<tr>
<td>9-10 am</td>
<td>15</td>
</tr>
<tr>
<td>10-11 am</td>
<td>15</td>
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</tbody>
</table>

a. Suppose every driver has the same wage of $20 per hour. Calculate the efficient price for the bridge for 8-9 am, 9-10 am and 4-5 am.
b. In actual practice we do not know exactly what the cost of waiting time is to drivers, and it varies from person to person. How can the bridge operators determine the efficient price for the bridge in practice? Explain.
c. Suppose that the Bart train into the city costs $3.00 per person. If the 7 am train has some empty seats is the efficient price greater or less than $3? Explain.
d. The Bridge Too Far has an operating cost per day of $1,000 and a capacity of 1,000 cars. The demand curve for the bridge per day is \( Q_d = 500 - 10P \). Draw the demand and supply curves on the graph below, and calculate the efficient price for the bridge. Should the bridge be shut down? Explain.

4. The market demand for hamburgers is given by \( Q_d = 10 - \frac{P}{2} \). The market supply is \( Q_s = P - 1 \).
a. Draw the demand curve and supply curve on the graph below, labeling each curve and the axes, and indicating the units.
b. Calculate the equilibrium price and quantity of hamburgers?
c. Calculate the total consumer surplus and producer surplus at this price?
d. Suppose the government restricts the price of hamburgers to $5. Calculate the new consumer surplus. Calculate the deadweight loss.
e. Explain why the market after intervention is not efficient.

5. Suppose in downtown San Francisco the number of on street parking places is 20,000. Suppose also that they are metered, and the city has set the charge at $1 per hour. Suppose the demand for this parking is given by the function \( Q_d = 70,000 - 10,000P \).
a. Draw the demand curve and supply curve for on street parking on the graph below, labeling each curve and the axes, and indicating the units.
b. Calculate the price for on street parking at which demand would equal supply.
c. What is excess demand at the actual price of $1?
d. What is the deadweight loss from the city’s pricing policy?
e. Explain why this pricing policy will cause a rent seeking loss, and calculate the maximum possible amount of this loss.
f. Shopkeepers would oppose raising prices to market clearing levels, fearing that it would discourage people coming to shop in San Francisco. Are their fears justified? Explain.