厦门大学《经济学原理》课程试卷

王亚南经济研究院2022年级经济学本科国际化试点班

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试卷类型：（A卷）

PRINCIPLES OF ECONOMICS

MIDTERM EXAMINATION

1

Part I
Multiple Choices (2 points each)

1. Consider Mandy's decision to go to college. If she goes to college, she will spend 20,000 on tuition, 10,000 on room and board, and 2,000 on books. If she does not go to college, she will earn 18,000 working in a store and spend 8,000 on room and board. Mandy's cost of going to college is

   (a) 32,000.
   (b) **42,000**.
   (c) 50,000.
   (d) 58,000.

2. A rational decision maker takes an action only if the

   (a) marginal benefit is less than the marginal cost.
   (b) **marginal benefit is greater than the marginal cost.**
   (c) average benefit is greater than the average cost.
   (d) marginal benefit is greater than both the average cost and the marginal cost.

3. Which of the following is NOT an example of a group responding to an incentive?

   (a) Students attend class because of an attendance policy that reduces their grade for absences.
   (b) Consumers buy more of a product when it is on sale at a reduced price.
   (c) **Universities offer fewer online classes when they generate more revenue than traditional classes.**
   (d) Employees work harder to earn higher commissions.

4. When quantity demanded decreases at every possible price, the demand curve has

   (a) **shifted to the left.**
   (b) shifted to the right.
   (c) not shifted; rather, we have moved along the demand curve to a new point on the same curve.
   (d) not shifted; rather, the demand curve has become flatter.

5. What would happen to the equilibrium price and quantity of lattes if the cost of producing steamed milk, which is used to make lattes, rises?

   (a) Both the equilibrium price and quantity would increase.

(b) Both the equilibrium price and quantity would decrease.

(c) **The equilibrium price would increase, and the equilibrium quantity would decrease.**

(d) The equilibrium price would decrease, and the equilibrium quantity would increase.

6. When consumers face rising gasoline prices, they typically

(a) **reduce their quantity demanded more in the long run than in the short run.**

(b) reduce their quantity demanded more in the short run than in the long run.

(c) do not reduce their quantity demanded in the short run or the long run.

(d) increase their quantity demanded in the short run but reduce their quantity demanded in the long run.

7. Demand is said to be price elastic if

(a) the price of the good responds substantially to changes in demand.

(b) demand shifts substantially when income or the expected future price of the good changes.

(c) buyers do not respond much to changes in the price of the good.

(d) **buyers respond substantially to changes in the price of the good.**

8. Goods with many close substitutes tend to have

(a) **more elastic demands.**

(b) less elastic demands.

(c) price elasticities of demand that are unit elastic.

(d) income elasticities of demand that are negative.

9. When her income increased from $10,000 to $20,000, Heather's consumption of macaroni decreased from 10 pounds to 5 pounds and her consumption of soy-burgers increased from 2 pounds to 4 pounds. We can conclude that for Heather, macaroni

(a) and soy-burgers are both normal goods with income elasticities equal to 1.

(b) is an inferior good and soy-burgers are normal goods; both have income elasticities of 1.

(c) **is an inferior good with an income elasticity of -1 and soy-burgers are normal goods with an income elasticity of 1.**

(d) and soy-burgers are both inferior goods with income elasticities equal to -1.

10. If a price ceiling is not binding, then

    (a) the equilibrium price is above the price ceiling.

    (b) **the equilibrium price is below the price ceiling.**

    (c) it has no legal enforcement mechanism.

    (d) None of the above is correct because all price ceilings must be binding.

11. Welfare economics is the study of

    (a) the well-being of less fortunate people.

    (b) **how the allocation of resources affects economic well-being.**

    (c) how to make people happy using a market mechanism.

    (d) government welfare programs for needy people.

12. The maximum price that a buyer will pay for a good is called

    (a) consumer surplus.

    (b) **willingness to pay.**

    (c) equilibrium.

    (d) efficiency.

13. When the supply of a good decreases and the demand for the good remains unchanged, consumer surplus

    (a) **decreases.**

    (b) is unchanged.

    (c) increases.

    (d) may increase, decrease, or remain unchanged.

14. A drought in California destroys many red grapes. As a result of the drought, the consumer surplus in the market for red grapes

    (a) increases, and the consumer surplus in the market for red wine increases.

    (b) increases, and the consumer surplus in the market for red wine decreases.

    (c) decreases, and the consumer surplus in the market for red wine increases.

    (d) **decreases, and the consumer surplus in the market for red wine decreases.**

15. Producer surplus is

    (a) measured using the demand curve for a good.

    (b) always a negative number for sellers in a competitive market.

(c) **the amount a seller is paid minus the cost of production.**

(d) the opportunity cost of production minus the cost of producing goods that go unsold.

16. When a tax is levied on a good. The buyers share more tax burden

(a) if the tax is levied on the sellers.

(b) if the tax is levied on the buyers.

(c) **if the demand curve is steeper than the supply curve.**

(d) if the supply curve is steeper than the demand curve.

17. When a tax is imposed on a good,

(a) the supply curve for the good shifts.

(b) the demand curve for the good shifts.

(c) neither supply curve nor demand curve shifts.

(d) **either supply curve or demand curve shifts.**

18. Suppose a tax of $3 per unit is imposed on a good. The supply curve is a typical upward-sloping straight line, and the demand curve is a typical downward-sloping straight line. The tax generates tax revenue of $6,000, and the equilibrium quantity before tax was 2,500 units. How much dead-weight loss does the tax create?

(a) **$750.**

(b) $ Cannot be determined by the current information.

(c) $1500.

(d) $500.

19. Suppose the government imposes a tax on cheese. The dead-weight loss from this tax will likely be greater in the

(a) First year after it is imposed than in the eighth year after it is imposed because demand and supply will be more elastic in the first year than in the eighth year.

(b) First year after it is imposed than in the eighth year after it is imposed because demand and supply will be less elastic in the first year than in the eighth year.

(c) Eighth year after it is imposed than in the first year after it is imposed because demand and supply will be more elastic in the first year than in the eighth year.

(d) **Eighth year after it is imposed than in the first year after it is imposed because demand and supply will be less elastic in the first year than in the eighth year.**

20. Suppose the demand curve for a product is $Q_d = 10 - p$, and the equilibrium price is \$1. Now the government levies a tax on the product and increases the price for buyers to be \$4. What is the **reduction** in the consumer surplus?

(a) \$33

(b) \$$\frac{45}{2}$

(c) \$$\frac{61}{3}$

(d) \$29

Part II
Problems

Problem 1 (20 points)

Bagels and cream cheese are substitutes. Bagels are made of flour and cream cheese is produced using milk. We observe that the equilibrium price of cream cheese has risen but the equilibrium quantity of bagels has fallen. **Use appropriately labeled diagrams to answer each of the following questions.**

1. Could a rise in the price of flour be responsible for the observed pattern on the equilibrium price and quantity? Why? (5 points)

2. Could a rise in the price of milk be responsible for our observed pattern on the equilibrium price and quantity? Why? (5 points)

3. Now assume Bagels and cream cheese are complements. Could a rise in the price of flour be still responsible for the observed pattern on the equilibrium price and quantity? Why? Could a rise in the price of milk be responsible for our observed pattern on the equilibrium price and quantity? Why? (10 points)

Ans:

1. **Yes. A rise in the price of flour would decrease the supply of Bagel, so the equilibrium price of Bagel increases and the equilibrium quantity decrease. As a substitute, demand for cream cheese would shift to the right, which lead to a higher equilibrium price, other things equal.**

2. **Yes. similar answer as 1.**

3. **No for the first but Yes for the second. A rise in the price of flour would decrease the supply of Bagel, so the equilibrium price of Bagel increases and the equilibrium quantity decrease. As a complement, demand for cream cheese would shift to the left, which lead to a lower equilibrium price, other things equal; On the other hand, a rise in the price of milk would decrease the supply of cream cheese, which may increase the equilbrium price of cream cheese. As a complement, demand for Bagel would decrease, leading to a decrease in the equilibrium quantity of Bagel.**

Problem 2 (10 points)

Consider a rental housing market, where landlords are on the supply side and consumers(tenants) are on the demand side. The price paid by tenants to landlords are

called rents. To begin with, the market is free and has reached its equilibrium where the number of apartments supplied equals to the number of apartments demanded.

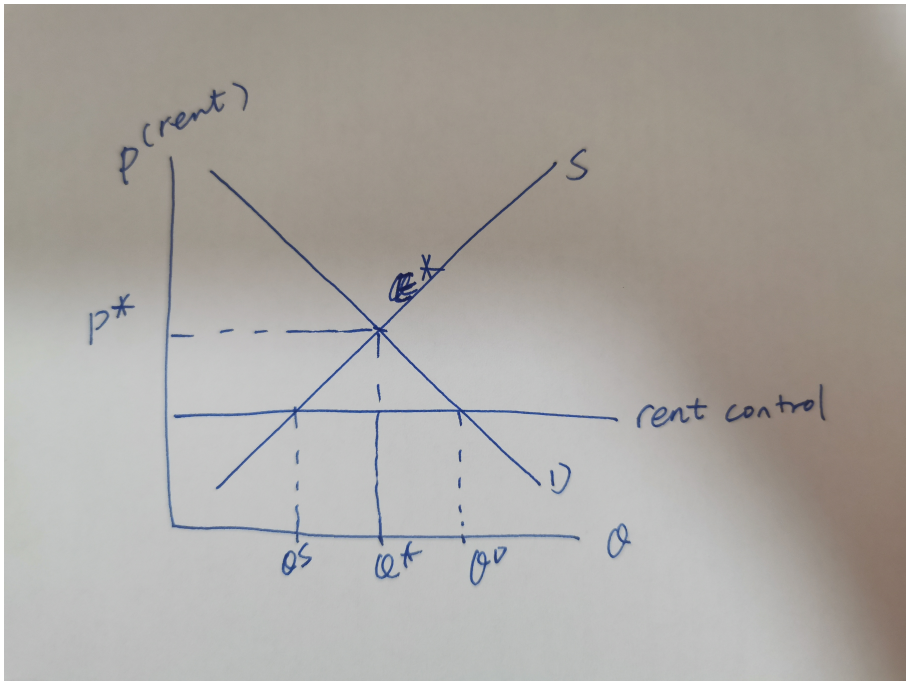
1. Rent control policy is a kind of price ceiling for the rental housing market. Now the government imposes a rent control that is binding for the rental housing market. Use a supply-and-demand diagram of the market to illustrate such a binding rent control policy (2 points).

2. Show the equilbrium rent and the quantity before the rent control (2 points).

3. Show the number of apartments supplied and the number of apartments demanded after the rent control policy is imposed. (2 points)

4. Does the binding rent control result in a shortage or a surplus of the rental housing? (1 points) Will this problem of shortage (or surplus) be bigger in the long run compared to in the short run? (1 point) Why? (2 points)

Ans:



1.

2. P^* **and** Q^*

3. Q^S **and** Q^D

4. **Shortage. Bigger in the long run. Because both the supply and the demand for rental housing are more price elastic in the long run.**

Problem 3 (10 points)

Consider a labor market, where workers are on the supply side and firms are on the demand side. The price paid by firms to hire workers are called wages. The market demand and supply are given by, respectively, $Q_d = 400 - W$ and $Q_s = 3W$. To begin with, the market is free and has reached its equilibrium where the number of workers supplied equals to the number of workers demanded. "Employment" is the number of workers who are hired. "Unemployment" is the number of workers who are looking for a job at the on-going wage level but cannot find a job.

1. What are the equilibrium wage level and employment? (2 Points)
2. Suppose a per unit tax T is imposed on the firms. What is the equilibrium wage level (workers get) and employment after the per unit tax is imposed? (Hint: you may solve the wage level and the employment in terms of T.) (2 points)
3. How much tax revenue will be collected? (2 Points)
4. What will be the dead weight loss from this per unit tax? (2 points)
5. If the government now takes 50% away from the amount firms pay workers, what are the new equilibrium wage (workers get) and employment? (2 points)

Ans:

1. $W = 100$ **and** $Q = 300$

2. $W = 100 - \frac{T}{4}$**,** $Q = 300 - \frac{3T}{4}$**.**

3. $300T - \frac{3T^2}{4}$

4. $\frac{3T^2}{8}$

5. $W = 80$ **and** $Q = 240$

Problem 4 (20 points)

Consider a market of virtual reality device. There are number of sellers who can produce the goods with certain costs, and there are number of buyers who are willing to pay to buy it. Both sellers and buyers produce and buy virtual reality a unit (Each individual will not sell / buy multiple units). Here is the list of sellers:

Seller	Cost
LeBron	\$700
Kobe	\$400
Kevin	\$450
Steve	\$600

Here is the list of buyers:

Buyer	Willingness to Pay
Andrew	\$400
Bethany	\$800
Carlos	\$650
Donald	\$1000

1. Draw the demand curve and the supply curve. (5 points)
2. What will be an equilibrium quantity in this market? Who will buy and who will sell? (3 points)
3. Suppose the price is \$600. Calculate the consumer surplus, the producer surplus and the total surplus. (6 points)
4. Suppose Kobe and Andrew left the market. Does the total surplus change? If so, what is the new total surplus? (Notice that you don?t need a market price to calculate the total surplus. Just think the price is some value that equates supply and demand). (6 points)

Ans:

1. **Easy to draw this. See Figure 1**
2. **The equilibrium quantity is 3. Kobe, Kevin and Steve sell the goods, and Bethany, Carlos, Donald buy the goods.**
3. **The consumer surplus is** $(1000 - 600) + (800 - 600) + (650 - 600) = 650$**. The producer surplus is** $(600 - 400) + (600 - 450) + (600 - 600) = 350$**. The total surplus is** 1000**.**
4. **The equilibrium quantity is 2. Kevin and Steve sell the goods, and Carlos and Donald buy the goods. The total surplus is (1000 - 450) + (800 - 600) = 750.**

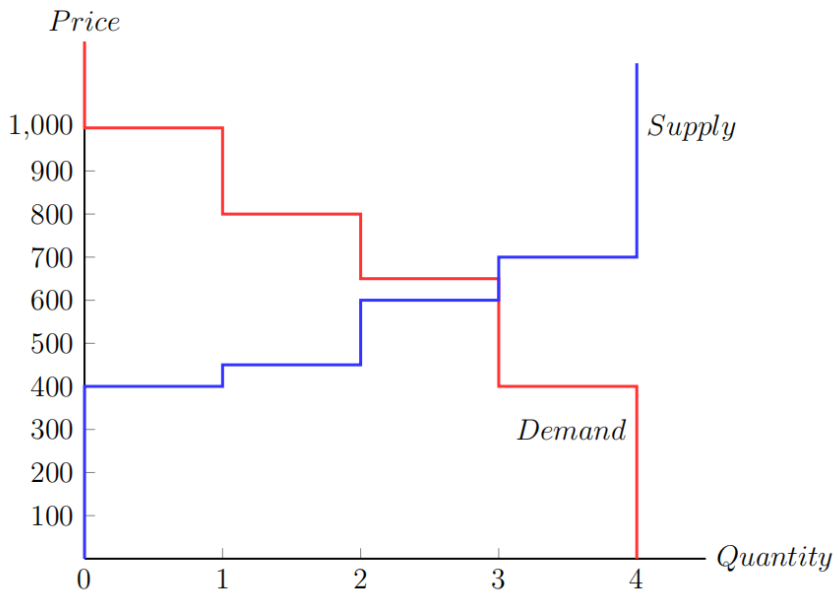


Figure 1: Demand and Supply Curve for VR Device

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