

厦门大学《经济学原理》课程试卷

王亚南经济研究院 2020 年級 经济学 本科 国际化 试点班



主考教师：陈煌，韩晓祎，薛绍杰，周斯凡

试卷类型：(A 卷)

PRINCIPLES OF ECONOMICS

MIDTERM EXAMINATION

Part I

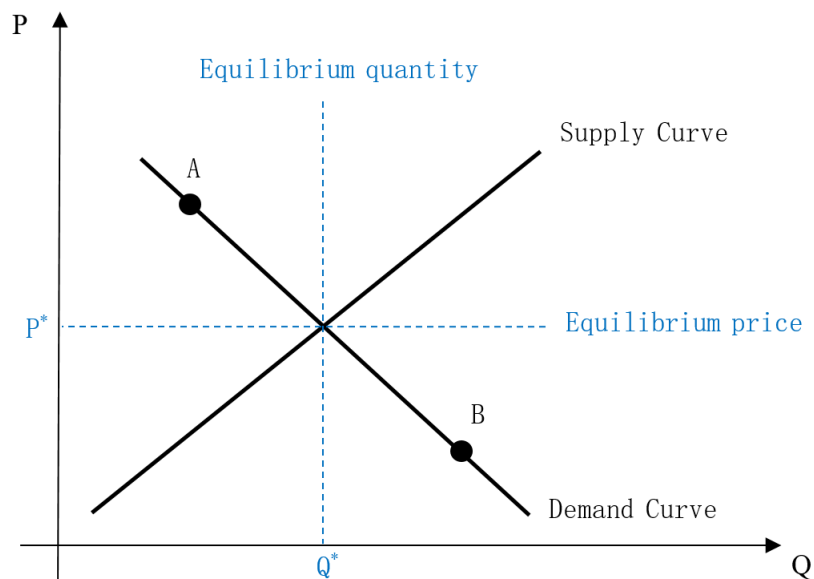
Multiple Choices (2 points each)

1. Guns and butter are used to represent the classic societal tradeoff between spending on
 - (a) durable and nondurable goods.
 - (b) **national defense and consumer goods.**
 - (c) imports and exports.
 - (d) law enforcement and agriculture.
2. The opportunity cost of an item is
 - (a) the number of hours needed to earn money to buy the item.
 - (b) **what you give up to get that item.**
 - (c) usually less than the dollar value of the item.
 - (d) the dollar value of the item.
3. A tax on gasoline encourages people to drive smaller, more fuel-efficient cars. Which principle of economics does this illustrate?
 - (a) People face tradeoffs.
 - (b) The cost of something is what you give up to get it.
 - (c) Rational people think at the margin.
 - (d) **People respond to incentives.**
4. When the government implements programs such as progressive income tax rates, which of the following is likely to occur?
 - (a) equality is increased and efficiency is increased.
 - (b) equality is decreased and efficiency is increased.
 - (c) equality is decreased and efficiency is decreased.
 - (d) **equality is increased and efficiency is decreased.**
5. Following the implementation of laws requiring automobiles to have seat belts, which of the following occurred?
 - (a) An individual's probability of surviving an auto accident rose.
 - (b) There was an increase in pedestrian deaths.
 - (c) There was an increase in automobile accidents.
 - (d) **All of the above are correct.**

6. A rightward shift of a demand curve is called a(n)
- (a) **Increase in demand.**
 - (b) Decrease in demand
 - (c) Increase in quantity demanded.
 - (d) Decrease in quantity demanded.
7. Which of the following would shift the demand curve for gasoline to the right?
- (a) A decrease in the price of gasoline.
 - (b) **An increase in consumer income, assuming gasoline is a normal good.**
 - (c) An increase in the price of cars, a complement for gasoline.
 - (d) A decrease in the expected future price of gasoline
8. A dress manufacturer recently has come to expect higher prices for dresses in the near future. We would expect
- (a) The dress manufacturer to supply more dresses now than it was supplying previously.
 - (b) **The dress manufacturer to supply fewer dresses now than it was supplying previously.**
 - (c) The demand for this manufacturer's dresses to fall.
 - (d) No change in the dress manufacturer's current supply; instead, future supply will be affected.
9. 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.
10. Which of the following will not occur when the government imposes a binding price ceiling
- (a) Rationing
 - (b) Long queues waiting for purchase
 - (c) Ticket Scalping

(d) **Surplus**

11. Suppose there was an originally non-binding binding price floor. A demand shock moves the demand curve outwards (toward the right), which of the following will occur?
- (a) Shortage increases
 - (b) Surplus increases
 - (c) The price floor becomes binding
 - (d) **The price increases**
12. Under which of the following circumstances, government interventions may improve the market efficiency:
- (a) When there are numerous buyers and sellers in the market trading identical products.
 - (b) When all buyers and sellers are price takers.
 - (c) When the market is perfectly competitive.
 - (d) **When there is only one single seller in the market.**
13. During the last few decades in the United States, health officials have argued that eating too much beef might be harmful to human health. As a result, there has been a significant decrease in the amount of beef produced. Which of the following best explains the decrease in production?
- (a) Beef producers, concerned about the health of their customers, decided to produce relatively less beef.
 - (b) Government officials, concerned about consumer health, ordered beef producers to produce relatively less beef.
 - (c) **Individual consumers, concerned about their own health, decreased their demand for beef, which lowered the equilibrium price of beef, making it less attractive to produce.**
 - (d) Anti-beef protesters have made it difficult for both buyers and sellers of beef to meet in the marketplace.
14. Refer to the following figure. The relationship of price elasticities of demand at point A and point B is that



- (a) **A is more elastic than B**
 - (b) A is less elastic than B
 - (c) A and B have the same demand elasticities
 - (d) Undermined
15. Suppose that everything else being equal, when the price of good A increases from \$50 to \$55, the quantity demanded of good B decreases from 110 to 100. Using the midpoint formula, the cross price elasticity of demand is about
- (a) 0.9, and A and B are substitutes
 - (b) 1.9, and A and B are substitutes
 - (c) **-1, and A and B are complements**
 - (d) -1.1, and A and B are complements
16. When the quantity of meat supplied is measured in kilograms instead of Chinese traditional weight unit – Jin, the demand for meat becomes
- (a) more elastic
 - (b) **neither more nor less elastic**
 - (c) less elastic
 - (d) undefined
17. Which of the following statement is correct?
- (a) If the market supply function is $Q^S = \bar{Q}$, where \bar{Q} is a constant, then supply is perfectly elastic.

- (b) Usually supply is more elastic in short-term than in long-run, since people adjust output more effectively in short-run.
 - (c) When the demand is elastic, an increase in market price will increase firms' revenue.
 - (d) **Generally speaking, broadly defined shoes demand elasticity is less than NIKE demand elasticity, in absolute terms.**
18. When a good is taxed, the burden of the tax falls mainly on consumers if
- (a) the tax is levied on consumers.
 - (b) the tax is levied on producers.
 - (c) supply is inelastic, and demand is elastic
 - (d) **supply is more elastic than demand.**
19. Suppose the current price of cookies is \$3 per cookie and 200 cookies are sold per day. The demand curve for cookies is downward sloping. A tax of \$0.5 per cookie could raise a tax revenue of:
- (a) Exactly \$100.
 - (b) **At most \$100.**
 - (c) At least \$100.
 - (d) None of the above
20. Suppose the price of a cup of coffee in Sunwise is \$3, and the equilibrium quantity of its coffee sale in one day is 50 with no tax on it. Starting from this initial situation, which of the following scenarios would result in the largest deadweight loss?
- (a) The price elasticity of demand for a cup of coffee is 0.3, the price elasticity of supply for a cup of coffee is 0.7, and the coffee tax amounts to \$0.40 per cup.
 - (b) The price elasticity of demand for a cup of coffee is 0.2, the price elasticity of supply for a cup of coffee is 0.7, and the coffee tax amounts to \$0.40 per cup.
 - (c) **The price elasticity of demand for a cup of coffee is 0.3, the price elasticity of supply for a cup of coffee is 0.7, and the coffee tax amounts to \$0.50 per cup.**
 - (d) The price elasticity of demand for a cup of coffee is 0.2, the price elasticity of supply for a cup of coffee is 0.7, and the coffee tax amounts to \$0.50 per cup.

Part II

Problems

Problem 1 (10 points)

Cups of coffee and donuts are complements. Both have elastic demand. A hurricane destroys half the coffee bean crop, which is an important production input for coffee beans. Coffee bean is a production input for coffee. Use appropriately labeled diagrams to answer each of the following questions.

1. What happens to the price of coffee beans? (2 Points)
2. What happens to the price of a cup of coffee? (2 points)
3. What happens to total revenue on cups of coffee? (2 Points)
4. What happens to the price of donuts? What happens to total revenue on donuts? (4 points)

Ans:

1. Supply for coffee bean decreases, and the equilibrium price of coffee bean increases.
2. Supply for coffee decreases, and the equilibrium price of coffee increases.
3. Total revenue for coffee decreases as it has elastic demand.
4. The equilibrium price of donut decreases because of a left shift in demand, and its total revenue decreases.

Problem 2 (20 points)

Suppose market demand is given by the equation

$$Q^D = 800 - 50P$$

$$Q^S = 50P$$

1. Suppose the government imposes a price floor at 10 per unit in this market. With the price floor, how much is total consumer surplus? (5 Points)
2. If the government removed the price floor, by how much would total consumer surplus increase? (5 Points)

3. Suppose there is initially a price ceiling set at 4 in this market. How much is total producer surplus with the price ceiling in place? (5 Points)
4. If the government removed the price ceiling, by how much would total producer surplus change? (5 Points)

Ans:

1. Total consumer surplus with a 10 price floor will be \$900.
2. With the removal of the price floor, total consumer surplus would increase from \$900 to \$1,600 for an increase of \$700.
3. Total producer surplus with a 4 price ceiling is \$400..
4. Total producer surplus with the price ceiling is \$400, and total producer surplus after the price ceiling is removed is \$1,600. Therefore, total producer surplus increases by \$1,200.

Problem 3 (10 points)

Assume a firm's manager can only observe two points in a demand curve, which are $(P=5, Q=7500)$ and $(P=15, Q=3500)$.

1. The manager wants to figure out demand elasticity in this market, but doesn't know which of the two observed points is the initial state, therefore, she calculates the elasticity for two possible cases:

- 1) price increases from 5 to 15
- 2) price decreases from 15 to 5.

Denote ε_{5+} as the price elasticity for 1) and ε_{15-} as the elasticity for 2), respectively. Suppose she always puts the price (quantity) of the initial state at the denominator when calculating percentage change in price (quantity). What are the values of ε_{5+} and ε_{15-} ? (4 points)

2. Now suppose she hires a WISE graduate student from XMU, which is you, to help her to get a more accurate demand elasticity. What formula would you suggest she to use? what is your calculated elasticity, denoted as ε_{mp} ? (3 points)
3. She is still afraid of making mistake by simply using your result. Therefore, she consults with an econometrician from XMU, and gets an estimated demand function taking this form: $Q = 8000 - 20P^2$. Please use this demand function to calculate elasticities at $P=5$, 10, and 15. And denote them as, respectively, ε_5 , ε_{10} , and ε_{15} . (3 points)

Ans:

1.

$$\varepsilon_{5+} = \frac{\frac{3500-7500}{\frac{15-5}{5}}}{\frac{7500}{15}} = -\frac{4}{15} \approx -0.27$$

$$\varepsilon_{15-} = \frac{\frac{7500-3500}{\frac{5-15}{15}}}{\frac{3500}{5}} = -\frac{12}{7} \approx -1.71$$

2. I would suggest to use midpoint method to calculate elasticity.

$$\varepsilon_{mp} = \frac{\frac{3500-7500}{(3500+7500)/2}}{\frac{15-5}{(15+5)/2}} = -\frac{8}{11} \approx -0.73$$

3.

$$\varepsilon_5 = -20 * 2 * 5 * \frac{5}{7500} = -\frac{2}{15} = -0.13$$

$$\varepsilon_{10} = -20 * 2 * 10 * \frac{10}{6000} = -\frac{2}{3} = -0.67$$

$$\varepsilon_{15} = -20 * 2 * 15 * \frac{15}{3500} = -\frac{18}{7} = -2.57$$

Problem 4 (20 points)

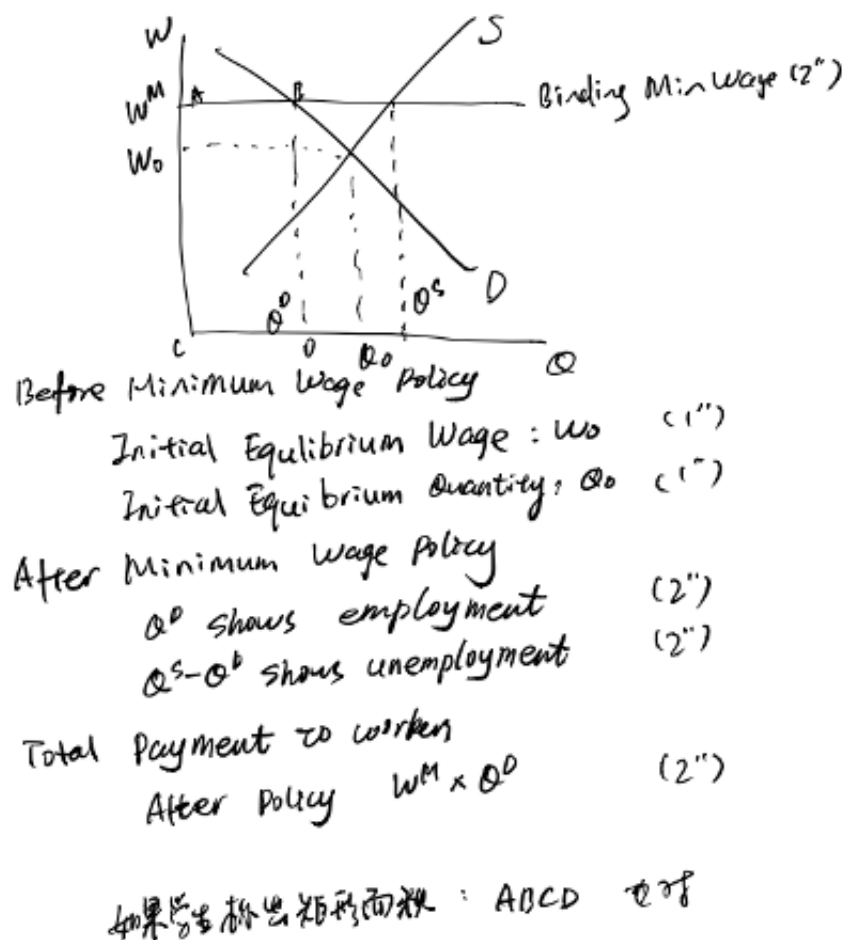
Consider an unskilled labor market, where workers are the supply side and firms are the demand side. The price paid by firms to hire workers are called wages. To begin with, the market is free and has reached its equilibrium where the number of workers supplied equals to the number of workers demanded. "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. Minimum wage policy is a kind of price floor for the labor market. Now the government imposes a minimum wage that is binding for the labor market. Use a supply-and-demand diagram of the market for unskilled labor to illustrate such a binding minimum wage level (2 points), show the equilibrium wage and equilibrium quantity before minimum wage policy (2 points), show the number of workers who are employed (2 points) and the number of workers who are unemployed (2 points) after the minimum wage policy is imposed. Also show the total wage payments to unskilled workers after the minimum wage policy is imposed. (2 points)
2. Now suppose the government increases the minimum wage. How will this change affect unemployment? (2 points)
3. How will this change affect employment? Does your answer depends on the price elasticity of labor demand, or that of labor supply, or both, or neither? (2 points)

4. If the labor demand is perfectly inelastic, how will increasing a binding minimum wage change the total wage payments to unskilled workers? (2 points)
5. If the labor demand is elastic (with the size of the price elasticity of demand bigger than one), how will increasing a binding minimum wage change the total wage payments to unskilled workers? (2 points)

Ans:

1. The figure will be attached later



2. Increase a binding minimum wage will increase unemployment.
3. If the price elasticity of demand is zero (perfectly inelastic demand), then this change will not affect employment. If the price elasticity of demand is nonzero, then this change will decrease employment.

4. Increase total payments.
5. When labor demand is elastic, increasing a binding minimum wage will decrease the employment (by a bigger percentage), so that total payments decrease.