

國立高雄大學 105 學年度研究所碩士班招生考試試題

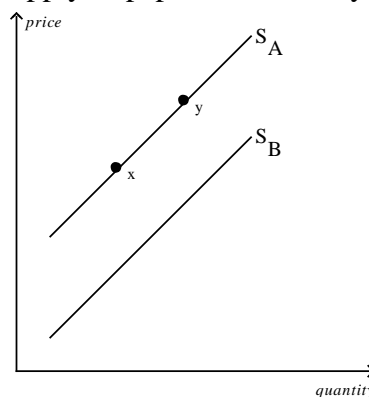
科目：經濟學
考試時間：100 分鐘

系所：統計學研究所(風險管理
組)
本科原始成績：100 分

是否使用計算機：否

Part I: Choose the best one answer for each of the following questions. (3% each)

1. Suppose a gardener produces both green beans and corn in her garden. If she must give up 14 bushels of corn to get 5 bushels of green beans, then her opportunity cost of 1 bushel of green beans is
 - (a). 0.36 bushel of corn.
 - (b). 2.8 bushels of corn.
 - (c). 14 bushels of corn.
 - (d). 70 bushels of corn.
2. Suppose that a worker in Cornland can grow either 40 bushels of corn or 10 bushels of oats per year, and a worker in Oatland can grow either 5 bushels of corn or 50 bushels of oats per year. There are 20 workers in Cornland and 20 workers in Oatland. If the two countries do not trade, Cornland will produce and consume 400 bushels of corn and 100 bushels of oats, while Oatland will produce and consume 60 bushels of corn and 400 bushels of oats. If each country made the decision to specialize in producing the good in which it has a comparative advantage, then the combined yearly output of the two countries would increase by
 - (a). 280 bushels of corn and 450 bushels of oats.
 - (b). 340 bushels of corn and 500 bushels of oats.
 - (c). 360 bushels of corn and 520 bushels of oats.
 - (d). 360 bushels of corn and 640 bushels of oats.
3. The diagram below pertains to the supply of paper in university markets.



All else equal, an increase in the price of the pulp used in the paper production process would cause a move

- (a). from x to y .

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- (b). from y to x .
- (c). from S_A to S_B .
- (d). from S_B to S_A .

4. Refer to Question 3. All else equal, an increase in the use of laptop computers for note-taking would cause a move

- (a). from x to y .
- (b). from y to x .
- (c). from S_A to S_B .
- (d). from S_B to S_A .

5. Which of the following is consistent with the elasticities given in the following Table?

Good	Price Elasticity of Demand
A	1.3
B	2.1

- (a). A is a luxury and B is a necessity.
- (b). A is a good several years after a price increase, and B is that same good several days after the price increase.
- (c). A is a Kit Kat bar and B is candy.
- (d). A has fewer substitutes than B.

6. Studies indicate that the price elasticity of demand for cigarettes is about 0.4. A government policy aimed at reducing smoking changed the price of a pack of cigarettes from \$2 to \$6. According to the midpoint method, the government policy should have reduced smoking by

- (a). 30%.
- (b). 40%.
- (c). 80%.
- (d). 250%.

7. A price ceiling is binding when it is set

- (a). above the equilibrium price, causing a shortage.
- (b). above the equilibrium price, causing a surplus.
- (c). below the equilibrium price, causing a shortage.
- (d). below the equilibrium price, causing a surplus.

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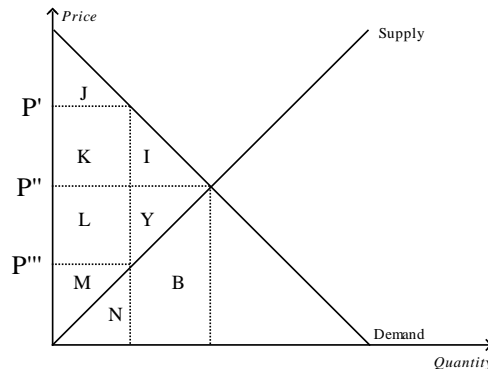
8. Suppose the government has imposed a price floor on televisions. Which of the following events could transform the price floor from one that is not binding into one that is binding?
- (a). Firms expect the price of televisions to rise in the future.
 - (b). The number of firms selling televisions decreases.
 - (c). Consumers' income decreases, and televisions are a normal good.
 - (d). The number of consumers buying televisions increases.
9. 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.
10. Suppose the market demand curve for a good passes through the point (quantity demanded = 100, price = \$25). If there are five buyers in the market, then
- (a). the marginal buyer's willingness to pay for the 100th unit of the good is \$25.
 - (b). the sum of the five buyers' willingness to pay for the 100th unit of the good is \$25.
 - (c). the average of the five buyers' willingness to pay for the 100th unit of the good is \$25.
 - (d). all of the five buyers are willing to pay at least \$25 for the 100th unit of the good.
11. In the market for widgets, the supply curve is the typical upward-sloping straight line, and the demand curve is the typical downward-sloping straight line. The equilibrium quantity in the market for widgets is 200 per month when there is no tax. Then a tax of \$5 per widget is imposed. As a result, the government is able to raise \$750 per month in tax revenue. We can conclude that the equilibrium quantity of widgets has fallen by
- (a). 25 per month.
 - (b). 50 per month.
 - (c). 75 per month.
 - (d). 100 per month.
12. Suppose the government imposes a tax of $P' - P'''$. Total surplus before the tax is measured by the area

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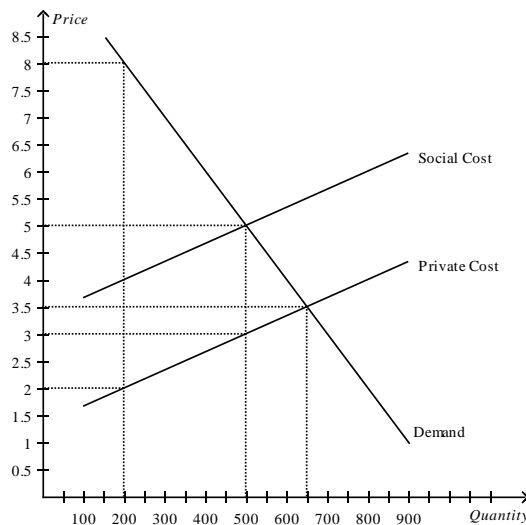


- (a). I+Y.
- (b). J+K+L+M.
- (c). L+M+Y.
- (d). I+J+K+L+M+Y.

13. A country has a comparative advantage in a product if the world price is

- (a). lower than that country's domestic price without trade.
- (b). higher than that country's domestic price without trade.
- (c). equal to that country's domestic price without trade.
- (d). not subject to manipulation by organizations that govern international trade.

14. Suppose that the production of plastic creates a social cost which is depicted in the graph below. Without any government regulation, how much plastic will be produced?



- (a). 200

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- (b). 500
(c). 650
(d). 900
15. It is commonly argued that national defense is a public good. Nevertheless, the weapons used by the U.S. military are produced by private firms. We can conclude that
- (a). resources would be used more efficiently if the government produced the weapons.
(b). resources would be used more efficiently if private firms provided national defense.
(c). weapons are rival in consumption and excludable, but national defense is not rival in consumption and not excludable.
(d). national defense is rival in consumption and excludable, but weapons are not rival in consumption and not excludable.
16. The two taxes that together provide the U.S. federal government with approximately 80 percent of its revenue are
- (a). individual income taxes and property taxes.
(b). individual income taxes and corporate income taxes.
(c). individual income taxes and payroll taxes.
(d). sales taxes and payroll taxes.
17. At Bert's Bootery, the total cost of producing twenty pairs of boots is \$400. The marginal cost of producing the twenty-first pair of boots is \$83. We can conclude that the
- (a). average variable cost of 21 pairs of boots is \$23.
(b). average total cost of 21 pairs of boots is \$23.
(c). average total cost of 21 pairs of boots is \$15.09.
(d). marginal cost of the 20th pair of boots is \$20.
18. Which of the following expressions is correct?
- (a). $\text{marginal cost} = (\text{change in quantity of output})/(\text{change in total cost})$
(b). $\text{average total cost} = (\text{total cost})/(\text{quantity of output})$
(c). $\text{total cost} = \text{variable cost} + \text{marginal cost}$
(d). $\text{average variable cost} = (\text{quantity of output})/(\text{total variable cost})$
19. Firms operating in competitive markets produce output levels where marginal revenue equals
- (a). price.

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- (b). average revenue.
- (c). total revenue divided by output.
- (d). All of the above are correct.

20. For a long while, electricity producers were thought to be a classic example of a natural monopoly. People held this view because

- (a). the average cost of producing units of electricity by one producer in a specific region was lower than if the same quantity were produced by two or more producers in the same region.
- (b). the average cost of producing units of electricity by one producer in a specific region was higher than if the same quantity were produced by two or more produced in the same region.
- (c). the marginal cost of producing units of electricity by one producer in a specific region was higher than if the same quantity were produced by two or more producers in the same region.
- (d). electricity is a special non-excludable good that could never be sold in a competitive market.

Part II: Answer the following problems. (40%)

1. Jane has utility function over her net income $U(I) = \sqrt{I}$.

(a) What are Jane's preferences towards risk? Is she risk averse, risk neutral or risk loving? (3%)

(b) Jane drives to work every day and she spends a lot of money in parking meters. Many days the thought of cheating and not paying for parking crosses her mind. However she knows that there is a $\frac{1}{4}$ probability of being caught in a given day if she cheats, and that the cost of the ticket is \$36. Her daily income is \$100. What is the maximum amount of she will be willing to pay for one day parking? [Hint: by paying that amount she avoids the risk of getting a ticket!]. (6%)

(c) Paul also faces the same dilemma every single day. But he has a utility function $U(I) = I$. His daily income is also \$100. What are Paul's preferences towards risk? Is he risk averse, risk neutral or risk loving? (3%)

(d) If the price of one day parking is 9.25, will Paul cheat or pay the parking meter? Will Jane cheat or pay the parking meter under this price? (6%)

2. Firm 1 and firm 2 are the only producers of spring water in the market. The market demand for spring water is given by $P = 70 - Q_1 - Q_2$. Firm 1 and firm 2 compete by choosing quantities

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Q_1 and Q_2 respectively. Each firm has a marginal cost of 10 and no fixed cost.

(a) Find out firm 1's and firm 2's reaction functions. (6%)

(b) Suppose the two firms choose quantities simultaneously. What are the equilibrium price, quantities, and profits of the two firms in this market? (6%)

(c) Suppose only firm 1 has a chance to bribe the government and get the right to choose the quantity first, what is the maximum amount of money that firm 1 is willing to pay? If firm 1 gets to move first, what are the equilibrium quantities and profits of firm 1 and firm 2? (6%)

(d) Now back to the situation that the two firms choose quantities simultaneously. Suppose the two firms decide to collude and share the profit equally. Assume that both firms value their reputation and will behave according to their agreement. What are the quantities they will choose for each firm? What is the profit of each firm? (4%)