

國立清華大學 104 學年度碩士班考試入學試題

系所班組別：經濟學系

考試科目（代碼）：個體經濟學（4001）

共 2 頁，第 1 頁

*請在【答案卷、卡】作答

1. Suppose that:

- France requires 1 hour of labor to produce a handbag and 2 hours of labor to produce a watch.
- Italy requires 2 hours of labor to produce a handbag and 3 hours of labor to produce a watch.
- Each country has 10,000 hours of labor to allocate between the production of handbags and watches.
- In autarky, France consumes 5,000 handbags and 2,500 watches.

- (a) In France, what are the marginal productivities of labor in handbag and watch production? (4%)
- (b) In Italy, what are the marginal productivities of labor in handbag and watch production? (4%)
- (c) What are the autarkic prices of handbags and watches in each country? (6%)
- (d) In which product will each country specialize? (6%)
- (e) Suppose that, when trade occurs, the international price of handbag becomes 3/5 watches per handbag. What will happen to wage in handbag production and wage in watch production in France? How will French labor move? (10%)

2. What is asymmetric information problem? (4%) Describe the problems of adverse selection and moral hazard that may occur in the car insurance market. (8%) What solution can you think of? (please state one solution for each problem) (8%)

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3. Consider a monopolist facing the demand given $P = 100 - Q$ and with a constant marginal cost of production equals to 20. Answer the following questions
- (a) If the monopolist practice the second-degree price discrimination by using block-pricing schedule, e.g., $P = 20$ for $0 < Q < 10$ and $P = 5$ for $Q > 10$. Find the corresponding block-pricing schedule that maximizes the profit. What is the welfare effect of this practice? (12%)
- (b) If the monopolist uses two-part pricing, what is overall payment for the consumers? What is the corresponding welfare effect? (8%)
4. Use two graphs to show the welfare effects of a per-unit subsidy provided by the government on a competitive market and a market monopolized by one firm? What is the main difference between the two market structures? (15%)
5. Peter and Sam consume apple, A, and banana, B. Peter's utility function is $U_P = A_P B_P$, and Sam's is $U_S = A_S^{0.5} B_S^{0.5}$. Their endowments are $A_P = 10$, $B_P = 20$, $A_S = 20$, and $B_S = 10$.
- (a) What are the marginal rates of substitution for each person? (6%)
- (b) Derive the contract curve. Draw an Edgeworth box and find out the contract curve. (9%)