

考試科目	經濟學 3131B	所別	俄羅斯研究所	考試時間	2月27日(六)第一節
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1. (15 points) The economies of two countries, Thrifty and Profligate, have the same production functions and depreciation rates. There is no population growth or technological progress in either country. The economies of each country can be described by the Solow growth model. The saving rate in Thrifty is 0.3. The saving rate in Profligate is 0.05.

- In which country is the level of steady-state output per worker larger? Explain.
- In which country is the steady-state growth rate of output per worker larger?
- In which country is the growth rate of steady-state total output greater?

2. (20 points) For each of the following changes, what happens to the real interest rate and output in the very short run, before the price level has adjusted to restore general equilibrium?

- Wealth rises.
- Money supply rises.
- The future marginal productivity of capital increases.
- Expected inflation declines.

3. (15 points) What happens to the exchange rate (i.e., the price of a unit of foreign currency is expressed in terms of the domestic currency) and net exports in each of the following cases?

- The foreign real interest rate falls.
- Foreign demand for domestic goods rises.
- Domestic output rises.

4. (20 points) Suppose there are only two people, Sharon and Clark, who must split a fixed income of \$200. For Sharon, the marginal utility of income is

$$MU_S = 500 - I_S$$

whereas for Clark, marginal utility is

$$MU_C = 500 - 3I_C$$

where  $I_S$ ,  $I_C$  are the amounts of income to Sharon and Clark, respectively.

- What is the optimal distribution of income if the social welfare function is additive? (5%)
- What is the optimal distribution if society values only the utility of Clark? What if the reverse is true? Comment on your answers. (10%)
- Comment on how your answers change if marginal utility of income for both Sharon and Clark is constant:  $MU_S = 500$ ,  $MU_C = 500$  (5%)

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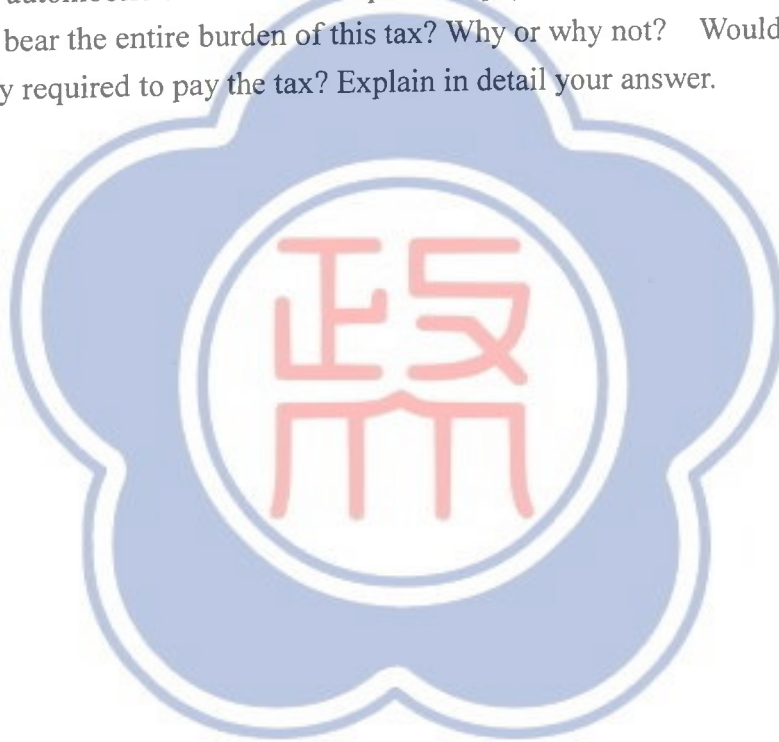
5. (15 points) The use of smoke detectors results in a positive externalities.

(a) Show how a corrective subsidy will increase both the demand and the market price for these devices.

(b) Show expenditure on smoke detectors both before and after the subsidy.

(c) Show the net price and net expenditures on smoke detectors by consumers after they receive the subsidy.

6. (15 points) Suppose automobile salesmen are required to pay a \$1000 tax per car sold. Is it likely that the auto salesmen will bear the entire burden of this tax? Why or why not? Would it matter if the demanders were legally required to pay the tax? Explain in detail your answer.



備

註

- 一、作答於試題上者，不予計分。
- 二、試題請隨卷繳交。