

YORK UNIVERSITY
Faculty of Graduate Studies
Annual Examination
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Economics 5300.03A : Public Economics I

S. Bucovetsky

time=2 hours

Answer any **five** of the following eight questions.

1. What is the “golden rule” of economic growth? How can tax policy help an economy reach the golden rule path?

2. What is the excess burden of a tax on good 1, if each person in the economy has a utility function

$$U(x_1, x_2) = [x_1]^\alpha [x_2]^{1-\alpha}$$

where x_i is the consumption of good i ?

3. If there are only two types of people in an economy, what are the characteristics of the optimal income tax?

4. Discuss the neutrality of the corporate income tax in the following model.

True economic depreciation on all assets is exponential, with a rate δ . (That is, an n -year old machine is exactly equivalent to $e^{-\delta n}$ new machines.) The depreciation allowances (for corporate income tax purposes) also are “exponential”, except at the rate of α , which need not equal the true depreciation rate δ . A fraction β of a firm’s costs of finance is deductible from the corporate income tax base.

5. Canada’s personal income tax is neither a “pure” (Haig–Simons) income tax, nor a ‘pure” expenditure tax. Discuss the most important respects in which the Canadian personal income tax differs from these two benchmarks.

6. What are the main features of the Nash equilibrium, when a public good is financed through voluntary contributions of individuals?

7. Describe a mechanism which implements the Lindahl allocation for an economy with a public good. What are the main weaknesses of the mechanism?

8. What are the problems with the Nash equilibrium of the following model?

There are several jurisdictions. There are two types of people, “rich” and “poor”. The earnings of each type are exogenous. Each jurisdiction can tax its rich residents and use the proceeds to pay a lump-sum grant to its poor residents. Rich people get utility from their own consumption, and from the consumption of poor people in the same jurisdiction as them. Poor people are mobile among jurisdictions.

the end