

YORK UNIVERSITY Faculty of LAPS

Final Examination December 11, 2012

Economics 4070.03AF : Public Finance I S. Bucovetsky

time=2 hours

The exam contains two sections, *A* and *B*. Section *A* is worth 40 % of the marks, section *B* 60 %. Note that there is some choice in each section.

A : 40 % (5 % per question)

Explain **briefly** the significance for the economics of taxation of any **8** of the following 10 terms.

1. substitution effect of a specific (partial) factor tax
2. regressive tax
3. excess burden of an excise tax
4. “equi-proportional” Ramsey tax rule
5. comprehensive (“Haig-Simons”) definition of income
6. imputed income from owner-occupied housing
7. lock-in effect
8. target saving
9. straight-line depreciation schedule
10. neutrality of the corporate income tax

continued

B : 60 % (15 % per question)

Answer any 4 of the following 8 questions.

1. What would be the incidence of a 3 dollar unit tax on doughnuts, if the doughnut industry were perfectly competitive, if the supply curve for doughnuts had the equation

$$Q^s = p^2$$

and the demand curve had the equation

$$Q^D = \frac{125}{P}$$

where p is the price of doughnuts received by sellers, P is the price of doughnuts paid by buyers, Q^s is the quantity of doughnuts (in millions) supplied by sellers and Q^D is the quantity of doughnuts (in millions) demanded by buyers?

2. (a) Would there be any excess burden from imposing a small increase in a payroll tax [such as employees' contributions to employment insurance], if people's choice of how many hours to work were totally unresponsive to the net wage they earned per hour?

(b) Would it matter to your answer in (a) if people were observed to reduce their hours of work significantly if they inherited some money from a relative? Explain briefly.

3. What is the relation between the optimal tax rate on clothing, and the optimal tax rate on food, for a person whose compensated demand functions for food and clothing are

$$F = (P_F)^{-3}(P_C)^{-1}$$

$$C = (P_F)^{-2}(P_C)^{-2}$$

where P_F and P_C are the prices paid by the consumer for food and clothing?

4. Outline the main respects in which the return to owner-occupied housing is treated differently in the Canadian personal income tax than it would be treated using the Haig-Simons (or “comprehensive”) definition of taxable income.

5. How does the effective marginal tax rate vary with the taxpayer’s income, if the taxpayer is a single parent with one child, under an (imaginary) income tax system with the following rules? :

- the basic tax rate is 25 percent
- the first \$12,000 of a person’s income is not subject to tax [so that the basic tax rate of 25 percent applies only on income in excess of \$12,000]
- parents gets a non-refundable tax credit of \$10000 per year, for each child
- if the taxpayer’s income is greater than \$60,000, then this tax credit is reduced by 20 cents for each dollar of income in excess of \$60,000
- all income over \$100,000 is subject to an additional tax, equal to 25 percent of any income in excess of \$100,000

6. How could the personal income tax be designed so as to ensure that a dollar of income earned by an unincorporated firm was subject to the same tax, in total, as a dollar of corporate income, if the income (in each case) is paid out as a dividend to the firm’s owners?

7. How could the Canadian corporate tax system be designed, in order to minimize the impact of the corporate tax rate on investment by firms?

8. How should the Canadian tax system treat the earnings of American subsidiaries of Canadian corporations, if we wanted to maximize total Canadian income?