

YORK UNIVERSITY Faculty of Arts

Final Examination February 20, 2009

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. partial equilibrium tax incidence
2. progressive tax
3. excess burden of a subsidy
4. inverse elasticity Ramsey tax rule
5. comprehensive (“Haig–Simons”) income
6. lock-in effect
7. income tax credit
8. deductability of mortgage interest
9. clawback of tax credits
10. target saving

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 shirts, if the shirt industry were perfectly competitive, if the supply curve for shirts had the equation

$$Q^s = 8 + p$$

and the demand curve had the equation

$$Q^D = \frac{84}{P}$$

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

2. “A proportional income tax has a larger excess burden than a uniform sales tax which raises the same amount of tax revenue.” True, false or uncertain? Discuss 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

$$F = \frac{10}{P_F - P_C}$$
$$C = \frac{10P_F}{P_C(P_F - P_C)}$$

where P_F and P_C are the prices paid by the consumer for food and clothing? [Assume that the net-of-tax price of food is greater than the net-of-tax price of clothing.]

continued

4. Outline the main respects in which capital gains are treated differently in the Canadian personal income tax than they would be under the Haig–Simons (“comprehensive”) definition of income.

5. “Taxing the imputed income from owner–occupied housing would make the tax system more fair, but it would make it impossible for young people to afford to buy houses, and it would discourage investment in housing.” Discuss.

6. 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 20 percent
- the first \$10,000 of a person’s income is not subject to tax [so that the basic tax rate of 20 percent applies only on income in excess of \$10,000]
- parents gets a cash grant of \$5000 per year, for each child
- if the taxpayer’s income is greater than \$30,000, then this cash grant is reduced by 25 cents for each dollar of income in excess of \$30,000
- all income over \$80,000 is subject to an additional tax, equal to 20 percent of any income in excess of \$80,000

continued

7. What would be the excess burden of a 50 percent tax on the return to saving, for a person whose preferences could be represented by the utility function

$$U(C_P, C_F) = 21C_P - \frac{1}{2}(C_P)^2 + C_F$$

where C_P is her consumption in the present, and C_F her consumption in the future, if she earned an income (in thousands of dollars) of 40 in the present, and nothing in the future, and if the before-tax rate of return on saving were 100% [so that saving S dollars would give her future consumption of $2S$ if the return to saving were not taxed, and $1.5S$ if the return to saving were taxed]?

8. The new tax-free savings accounts introduced by the federal government allow people to deposit up to \$5000 annually in a special savings account, and the interest earned in this account is not subject to taxation.

How would savings in Canada be affected if the government abolished these tax-free savings accounts, but at the same time lowered the marginal income tax rates so as to compensate people for the damage done by the abolition of the tax-free savings accounts?