YORK UNIVERSITY   Faculty of Arts

Final Examination   December 11, 2003

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. regressive tax

2. partial factor tax

3. theory of the second best

4. inverse elasticity rule

5. tax avoidance

6. realization of capital gains

7. personal income tax deduction

8. clawback

9. user cost of capital

10. dividend tax credit

continued

Answer any **4** of the following 8 questions.

1. What would be the incidence of a 20 percent tax on a good, if the good were sold by a single–price monopoly, if the total cost of producing Q units of the good were $TC = 10Q$, and if the quantity demanded of the good was $Q^d = 120 - P$, where P is the price paid 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. How much income should a taxpayer report if she wants to maximize her expected net (of taxes and fines) income if : she faces a marginal income tax rate of 40 percent ; her true income is $50,000 ; the probability that she would be caught by the authorities if she cheats is 30 percent ; she faces the following schedule of fines if she is caught?

If caught, she will be required to pay all her taxes owing, plus an additional fine equal to the tax owing on any income underreported, a second fine equal to the tax owing on any underreporting in excess of $10,000, plus another fine equal to the tax owing on any underreporting in excess of $20,000, plus another fine equal to the tax owing on any underreporting in excess of $30,000 and so on. [So, for example, if she were caught underreporting $45,000 in income, she would owe $45t + 45t + (45 - 10)t + (45 - 20)t + (45 - 30)t + (45 - 40)t$ thousand dollars if t were the marginal tax rate. If she underreported only $15,000, she would owe $15t + 15t + (15 - 10)t$ thousand dollars.]

continued

4. Outline the main respects in which the costs and benefits of owner–occupied housing are treated differently in the Canadian personal income tax than they 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, for taxpayers with one child, under an (imaginary) income tax system with the following rules? :

— the basic tax rate is 25 percent

— each individual gets a basic tax credit of $5000

— there is also a tax credit of $5000 for each dependent child

— if tax credits exceed a person's tax payable, then she actually gets a payment from the government ; however, the maximum payment the government will pay is $5000

— if the taxpayer's income is greater than $50,000, then the child tax credit is reduced by 25 cents for each dollar of income in excess of $50,000

— the child tax credit cannot be negative

6. Suppose the government made the return to any form of personal saving exempt from the personal income tax. Would this increase total saving in Canada? Explain briefly.

7. Suppose that the productivity of some piece of equipment declined at a constant rate as the equipment got older. Suppose as well that the firm which owned the equipment could deduct the actual decline in its value each year from its taxable income. If the firm planned to finance any investment by issuing new equity, how would an increase in the corporate tax rate affect the firm's investment decisions?

8. If countries cared about the maximization of world income, how should a country treat the foreign corporate income taxes paid by foreign subsidiaries? Explain briefly.

the end