# YORK UNIVERSITY Faculty of Arts 

Final Examination February 13, 2001

## 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. differential tax incidence
2. capitalization
3. theory of the second best
4. inverse elasticity rule
5. tax avoidance
6. registered retirement savings plans
7. "lock-in" effect
8. imputed income from owner-occupied housing
9. intertemporal budget constraint
10. dividend tax credit

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\text { B : } \mathbf{6 0} \% \text { ( } 15 \% \text { per question })
$$

Answer any 4 of the following 8 questions.

1. What, if anything, do partial equilibrium models of tax incidence contribute to the analysis of the most important taxes currently levied in Canada?
2. If a person consumes only food and clothing, calculate the excess burden of a $\$ 1$ unit tax on her clothing consumption, if her preferences can be represented by the utility function

$$
U(f, c)=f-800 \sqrt{c}
$$

where $c$ is her consumption of clothing, and $f$ her consumption of food, if the net-of-tax prices of food and clothing are constant, and equal to $\$ 1$ each, and if the person's weekly income is $\$ 1000$.
3. If the demand functions for goods $x$ and $y$ were

$$
\begin{aligned}
& X^{D}=8\left(P_{x}\right)^{-1}\left(P_{y}\right)^{-3} \\
& Y^{D}=4\left(P_{x}\right)^{-2}\left(P_{y}\right)^{-2}
\end{aligned}
$$

( where $X^{D}$ and $Y^{D}$ are the quantities demanded of the goods, and $P_{x}$ and $P_{y}$ are the gross-of-tax prices of the goods ), would it be optimal to tax the two goods at the same rate?

Explain your answer.
4. Explain briefly the time inconsistency problem associated with the taxation of capital.
5. Discuss the efficiency implications of modifying the Canadian personal income tax so as to allow renters to deduct the rent they pay on their residence from taxable income.
6. What are the marginal tax rates for a personal income tax schedule with the following rules?

- the basic tax payable is 20 percent of all income
- each household gets a non-refundable tax credit of $\$ 10000$
- however, if the household's income is $\$ 40,000$ or more, this non-refundable tax credit begins to get reduced, by $\$ 1$ for every $\$ 5$ the person earns in excess of $\$ 40,000$, until the credit is reduced to zero
- if the person's income exceeds $\$ 60,000$, then there is a surtax she must pay, equal to 20 percent of her income

7. What are the differences between the treatment of capital gains in the Canadian personal income tax, and in the Haig-Simons ( or comprehensive ) definition of taxable income?
8. Under what circumstances would a firm's investment decisions not be affected by the corporate income tax rate which it faces?

## the end

