YORK UNIVERSITY
Faculty of Arts
Final Examination
May 22 2001
Economics 4080.03MW : Public Finance II
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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 public expenditure of any **8** of the following 10 terms.

1. non–excludable good

2. preference revelation mechanism

3. positive externality

4. single–peaked preferences

5. logrolling

6. moral hazard

7. actuarially fair insurance

8. experience rated insurance premiums

9. unfunded (or "pay as you go") pension plan

10. unconditional grant

B : 60 % (15 % per question)

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

1. What are all the efficient allocations in the following two–person, two–good economy? Person 1's preferences can be represented by the utility function

$$U(x_1, Z) = \ln x_1 + \ln Z$$

where x_1 is her consumption of a pure private good and Z is the amount provided of a pure public good ; person 2's preferences can be represented by the utility function

$$U(x_2, Z) = 3 \ln x_2 + \ln Z$$

where x_2 is his consumption of a pure private good ; the production possibility curve for the economy has the equation

$$x_1 + x_2 + Z = 100$$

2. Three social choice rules, i, ii and iii, are described below. Each of the rules is being considered for use in a country with 10,000 people, numbered $1, 2, 3, \ldots 10000$.

In each case, state an axiom of Arrow's Impossibility Theorem which is violated by the rule.

i Rank alternative A above alternative B if and only if at least two of people #1, #2 and #3 rank alternative A above alternative B.

ii Rank alternative A at least as high as alternative B if and only if *both* person #1 and person #2 rank alternative A at least as high as alternative B.

iii Rank alternative A at least as high as alternative B if and only if person #1 ranks alternative A at least as high as alternative B,

3. Discuss the relevance of the median voter theorem for representative democracy (that is, Hotelling's principle of minimum differentiation) in explaining the policies chosen in a multi–party parliamentary democracy such as Canada.

4. If the senior civil servants who administer government programmes have better information about the costs of these programmes than do politicians or voters, what might the consequences be for the amount of government spending, and for the amount of waste in government? Explain briefly.

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5. Discuss critically some explanations of why old age pensions are publicly provided and compulsory in so many countries.

6. Must an unfunded public pension plan reduce saving? Explain briefly.

7. Suppose that all people in some metropolitan area had the same preferences, represented by the utility function

$$U(x, Z) = xZ$$

where x was a person's consumption of a private good, and Z her consumption of a local public good, and that people differed only in their incomes. (A local public good is a good for which the benefits are non–excludable for residents of the jurisdiction providing it, but which is rivalrous, in that the total cost of provision is proportional to the number of people in the jurisdiction.)

i If there were many jurisdictions in a metropolitan area, each providing a different level of the local public good, and each financing its local public sector by sharing the cost of the local public sector equally among all residents, what would be people's location pattern?

ii How would the answer to part *i* change if the local public sector were funded by a proportional income tax (instead of sharing the cost of the local public sector equally among all residents)?

8. Outline briefly the structure of Canada's equalization programme.

the end