YORK UNIVERSITY, Faculty of LAPS

Final Examination, April 18 2013

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. Lindahl pricing (benefit taxation)

2. pivot tax

3. marginal social cost

4. common property resource

5. median voter

6. principle of minimum differentiation

7. fully–funded pension plan

8. golden rule of economic growth

9. zoning

10. flypaper effect

B : 60 % (15 % per question)

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

1. If some public good is financed by voluntary donations, will the resulting allocation be efficient?

Explain.

2. How much tax revenue would be collected by the following "pivot tax" mechanism, if each person tries to use the mechanism to make herself as well off as possible?

The indivisible ("all or nothing") public project costs $600. There are 6 people : each person knows how much she values the project (but nobody else knows her valuation). Person #1 values the project at $200, person #2, #3, #4 and #5 each value the project at $100, person #6 values the project at $50.

The rules of the tax are : the project will be undertaken if and only if the sum of people's announced valuations exceeds the cost of the project, $600. If the project is undertaken, each person will pay the same share, $100, of the cost. In addition, if any person is "pivotal" (that is, if her valuation alters the overall result), then she will have to pay a pivot tax, equal to the (absolute value of the) difference between the sum of everyone else's announced valuations and the sum of the shares of the cost (500) which they must pay.

3. If access to a common property resource can be controlled, by charging a price for the use of the resource, how should the price be set so as to maximize the net value of the resource?

4. Three towns are located along a straight road. Town 1 is at the south end of the road, and has 60,000 inhabitants. Town 2 is located 15 kilometres north of town 1, and has 10,000 inhabitants. Town 3 is located 25 kilometres north of town 2, and has 35,000 inhabitants.

People can travel along the road at 1 kilometre per minute.

The three towns are all in the same county (and contain all the people in the county). Two parties are running for election to the county council ; each wants to win. The one issue in the election is where to locate the new events centre for the county. Each voter wants her travel time to the events centre to be as low as possible. (The events centre can be located at any point on the 40–kilometre length of the road.)

What location will each party propose as a location for the events centre, if they each want to win the election? Explain briefly.

5. If the head of some city's board of education wanted to make that city's education spending as large as possible, and if this head got to propose the city's education budget, how much spending would she propose if her budget had to be approved by a referendum of all the city's voters?

6. Can the possibility of "adverse selection" (people having better knowledge of their own loss probabilities than anyone else does) justify public provision of some types of insurance?

Explain.

7. Suppose that people's preferences could be represented by the utility function

$$u(C_y, C_o) = C_y C_o$$

where C_y is total consumption in the person's working life, and C_o consumption when retired.

Suppose that the person could save as much (or as little) as she wanted on private markets, at net rate of return r. She earns an income of Y during her working life (and nothing when retired).

How would her saving choice be affected by a government pension plan, which paid her a pension of P when retired, and levied a payroll tax at the rate t on her income earned when working?

8. Is it efficient for local governments to have responsibility for garbage collection? Explain.

the end