Guide to Written Exam for the B.Sc. in Economics Summer 2010

Micro B, 2nd year

August, 2010

1

Gravelle and Rees 14C: When there are restrictions on the policy instruments to be used, it may be necessary to deviate from the usual optimally FOC's, for instance that price should be identical to marginal costs.It may be better to set the price of using a bridge lower than MC if such a low price can attract traffic from nearby congested roads for which it is not possible to charge drivers for using the road.

2

$G^* = 16$, and individual prices are 3/8 and 5/8 for A and B respectively. Quasi-linear preferences yield optimum independent on wealth distribution.

3

The Pareto Principle is clearly met (if all vote for x over y, clearly there is a majority). So is the Principle of Irrelevant Alternatives. The procedure will not, however, yield a total preorder, as majority voting may yield intransitivity (Condorcet Cycles).

4

The set of Pareto-Optimal allocations are those in which A consumes only good 1, or B consumes only good 2, or both. These allocations yield the frontier given by

For $0 \leq u_A \leq 10$: $u_B = 15 - \frac{1}{2} \cdot u_A$

For $10 \leq u_A \leq 15$: $u_B = 30 - 2 \cdot u_A$

With W, the result is to let A consume (5,5), B = (0,0), and the reverse for V.

5

Pigouvian taxes internalize an externality by levying a tax corresponding to the marginal impact of the externality, most often the marginal harm inflicted on others, at the Pareto Optimal level of that externality. This internalization gives the agent who causes the externality an incentive to take into account the impact his or her actions has on others.

6

Varian 26.2