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FE431: PUBLIC FINANCE
Fall 2006
Professor Schmitt
Homework 7 – due October 23rd

1. Assume that a positive externality is associated with college enrollment. Assume that college instruction is sold in a competitive market and that the marginal social cost of providing it increases with enrollment. Show how a corrective subsidy to college students will increase the market price of instruction. Show the net gain in efficiency (well-being) possible from the subsidy and the amount of tax revenue required to finance its cost on your graph.

2. True/False/Explain: According to the Coase Theorem, corrective taxes are necessary to internalize negative externalities when transactions costs of exchanging property rights are zero.

3. The supply of paper is described by the following equation:

$$Q^S = 5{,}000P$$

Where Q^S is tons supplied per year and P is the price per ton. The demand is described by

$$Q^D = 400{,}000 - 1{,}000P$$

Where Q^D is tons demanded per year. Because of the pollution associated with paper production, marginal external costs of $20 are associated with each ton of paper.

a. Assuming that paper is sold in a competitive market, what is the market price per year?

b. How many tons of paper will be produced per year at that price?

c. What is the efficient annual output of paper?

d. How can a correct tax achieve efficiency?