Economics 11 Caltech Spring 2010

QUIZ 7

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Following the Honor code, you should find 20 minutes and do the quiz, by yourself and without using any notes. Paper and pen should be all you need. Turn it in by Thursday 5-20 5pm. (drop off in lecture or in box in front of Baxter 133).
Each quiz is worth 6pts (for 48 out of 200 possible pts for all 8 quizzes)

The answers to the whole homework will be available Friday at 2pm.
1. Definitions (use words not equations)
3 lines or less

- 1pt Please define Tragedy of commons

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2. Word problem

- 2pts one firm has located in the western portion of a town. The single-family residences take up the eastern portion. The firm emits noxious fumes as part of its production. The more fumes the more plants in the residents’ gardens die. Sketch a diagram that details the marginal cost of pollution abatement and the marginal benefit of pollution abatement. On the basis of that graph can you decide what the efficient level of pollution might be? Can you also use the graph to show how it matters whether the firm or the residents decide on air quality?

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3. Technical problem

3pts. Suppose that 100 persons live on a street and that each of them is willing to pay $3 for each extra streetlight, regardless of the number of streetlights provided.
3.1 What is the social demand for street lights?
3.2 If the cost of providing $x$ streetlights is $c(x) = 20x^{1.5}$, what is the efficient number of streetlights to provide.
3.3 If individuals make decisions on their own, will any lights be installed?