Notes on the 2005 Final for Econ 202

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The 202 final in 2005 has some confusing phrasing. I suggest the following changes/hints.

Problem 1

- Before part f) write "(HINT: writing out concrete examples will help you to see the proof)."

Problem 2

- Move the assumption that production is CRS to part e), where it is needed.

- In part a) change "Derive" to "Write down".

- Change the phrasing of part b) to "Compare the output resulting from the firm's profit maximization pricing to the output resulting from pricing set by a social planner that maximizes total surplus, defined as the sum of the Marshallian consumer surplus and the firm's profit."

- It seems to me that in this problem, we have to use various inverse demands and inverse production functions. Perhaps if we explicitly told them "Let $P(q)$ be the inverse demand defined by $P(Q(p)) = p$, and let $K(q, l)$ be the capital production function defined by $f(K(q, l), l) = q$" they wuold not feel awkward in making assumptions about them as answers to the later parts of the problem.

Problem 3

- If we told the student that the surefire profit was zero and that x was the possible increment or decrement to the profit that could be attained through the risky strategy, then the compensation function might be made more clear - a is the surefire payment, and bx is a random payment that could be positive or negative. The decision is then whether to take the lottery and risk a negative bx, or take the surefire payment and be certain that bx is zero.

- Add the clarification in part a) that "By 'ensure...more likely', we mean that for any lottery and any surefire profit level, there exists an a such that the manager prefers the risky lottery."

- Add the clarification in part b) that "By 'ensure...more likely', we mean that for any lottery and any surefire profit level, there exists a b such that the manager prefers the risky lottery."

Problem 4

- In part d) I would add the parenthetical "(Note this is consumption of club memberships. An agent might not use his club membership if he had incentive to stay away from the club.)" after "where Y is the aggregate consumption of club memberships".

- I also might add "by finding an explicit Pareto improvement" after "i.e. the first welfare theorem fails".