Econ306 – Intermediate Microeconomics
Problem Set 5

Due: Tuesday, December 4

Question 1

Consider the market for snails in China. There are many buyers, no one of which accounts for a large part of the market. There are many suppliers in the market as well—you can raise them right in your apartment. Moreover, the snails of different farmers are close substitutes, and the buyers are well informed (they are professionals who export the snails they purchase to France). The government allows snail growing, little skill is needed, you can build a snail corral yourself, and there are people who are happy to show you everything you need to know to raise snails. Is this market one for which the competitive model is appropriate? List the fundamental assumptions underlying the perfectly competitive model and explain whether each one of them holds or not.

Question 2

Israeli immigrant Shy Oogav thought he was living the American dream on South Padre Island, Texas, back in 1993. Within a year of buying a T-shirt printing shop, he had been able to use the initial profits to buy out his partner and repay the bank. What he didn't foresee was that the number of T-shirt stores in South Padre would jump from roughly 10 to 40 within two years. Now he laments, "Every day you have to compete with other shops," and it is difficult to earn a profit. Explain why Mr. Oogav should have seen his problems coming.

Question 3

Jack will eat no fat and his wife will eat no lean. Find the contract curve for this household, assuming fixed quantities of fat and lean.

Question 4

Tickets to college basketball games are usually given to students for free.

(i) If students are allowed to sell their tickets, will the allocation of tickets be consumption efficient?

(ii) If students are not allowed to sell their tickets, will the allocation be consumption efficient?

Explain your answers carefully. Present and discuss an Edgeworth box diagram as part of your answer.

Question 5

Your airplane crashes in the Pacific Ocean. You land on a desert island with one other passenger. A box containing 100 little bags of peanuts also washes up on the island.

(i) Suppose that on the island there is also a banana tree with 10 bananas. While your castaway mate jumps on the box of peanuts, you climb up the tree and pick all the bananas. Represent this two-consumer, two-good, no-production economy in an Edgeworth box, remembering to highlight the endowment point.

(ii) *(extra credit)* Now suppose that the peanuts are the only thing to eat (and the box is still on the beach, in no one's possession). In this economy with two people, one commodity, and no production, represent the possible allocations in a diagram, and explain why every allocation is Pareto efficient. (Hint: this is a "degenerated" Edgeworth box, with height equal to zero.)

Question 6 *(extra credit)*

Consider a perfectly competitive firm that produces output Q with two inputs, capital K and labor L. The price of one unit of output is p, the price of capital is r, and the price of labor is w. Suppose that p, r, and w all double. Will the firms profit-maximizing levels of Q, K, and L change? (Hint: use the formula for the profit function in the handout.)