Economics 500: Microeconomic Theory
State University of New York at Binghamton
Department of Economics
Fall, 2004

Problem Set #11

1. Suppose that in general competitive equilibrium, markets have successfully allocated resources to their highest value use. Explain the meaning of the term "highest valued use" and offer a criticism of this as a criterion for allocating resources. Is this criticism an indictment of the market mechanism? Explain.

2. "Jack Sprat would eat no fat. His wife could eat no lean." Draw the contract curve.

3. Given an initial endowment of toilet paper and bon bons for Al and Peggy, when the two engage in voluntary exchange, they may end up anywhere on the contract curve. True or False? Explain.

4. The pareto principle merely suggests that all mutually advantages exchanges should be made. No one could possibly disagree with this principle: it is completely uncontroversial. True or False? Explain.

5. Suppose the production possibility frontier for cheeseburgers (C) and milkshakes (M) is given by

$$C + 2M = 600$$

   a. Graph this function.
   b. Assuming that people prefer to eat two cheeseburgers with every milkshake, how much of each product will be produced? Indicate this point on your graph.
   c. Given that this fast-food economy is operating efficiently, what price ration (P_C/P_M) must prevail?

6. The country of Podunk produces only wheat and cloth, using as inputs land and labor. Both are produced by constant returns-to-scale production functions. Wheat is relatively land-intensive commodity.
   a. Explain, in words and with diagrams, how the price of wheat to cloth (p) determines the land-labor ratio in each of the two industries.
   b. Suppose that p is given by external forces (this would be the case if Podunk were a “small” country trading freely with a “large” world). Show, using an Edgeworth box, that if the supply of labor increases in Podunk, the output of cloth will rise and the output of wheat will fall.

7. Use a simple two-good model of general equilibrium pricing to illustrate a situation in which there will be two equilibrium price ratios by relaxing the assumption that the production possibility frontier is concave. Explain your results intuitively.