

Written Exam for the B.Sc. in Economics, Winter 2010/2011 - reeksamen

Mikroøkonomi A

Final Exam

18 February 2011

(3-hour closed book exam)

Please note that the language used in your exam paper must correspond to the language of the title for which you registered during exam registration. I.e. if you registered for the English title of the course, you must write your exam paper in English. Likewise, if you registered for the Danish title of the course or if you registered for the English title which was followed by “eksamen på dansk” in brackets, you must write your exam paper in Danish.

If you are in doubt about which title you registered for, please see the print of your exam registration from the students’ self-service system.

Problem 1

Define and discuss the concept of WARP (Weak Axiom of Revealed Preferences) for a consumer.

Problem 2

Consider a consumer whose preferences can be represented by the utility function $u(x_1, x_2) = \min\{x_1, x_2\}$, the first good being food, the second being drinks. The consumer lives in a pure exchange economy with perfect competition markets and initially owns $w = (4, 2)$, i.e. four units of food and two units of drinks.

- Find the expression for the consumer's price offer curve, as a function of prices (p_1, p_2) , both being strictly positive.
- What happens with the desired net trade if both prices are tripled?
- Verify that consumption of food increases as p_1 increases, but decreases if p_2 increases. Please provide some economic intuition.

Problem 3

A consumer has preferences represented by the utility function $u(x_1, x_2) = x_1 \cdot x_2$, with good 1 being clothing, good 2 being food. The consumer has an exogenous money income which is $m = 12$. Initially, prices are $p = (1, 2)$, but then change to $p = (1, 1)$.

- How does the price change impact the consumer's choice of the two goods?
- Using the concept of Slutsky income compensation, analyze, for both goods, how much of the changes are substitution effects and how much are income effects.

Problem 4

Consider an Edgeworth economy with two consumers, A and B, with utility functions $u_A(x_{1A}, x_{2A}) = \ln(x_{1A}) + x_{2A}$ and $u_B(x_{1B}, x_{2B}) = x_{1B} + x_{2B}$. The goods are: Food (1) and housing (2). The total initial endowments in the economy are $(5, 5)$, i.e. 5 units of both food and housing.

- Identify the Pareto Optimal (Pareto Efficient) allocations in the economy, and comment

Problem 5

Within the realm of financial assets, define the concept "the price of risk".

Problem 6

A firm produces toys using labor (input 1) and capital (input 2). The production function is $y = f(q_1, q_2) = q_1^{1/2} \cdot q_2^{1/2}$.

- Is this production technology characterized by having decreasing, increasing or constant returns to scale?

- With the price of labor being w_1 , and the price of capital w_2 , find the expression for the firm's cost function $C(y)$