Written Exam for the B.Sc. in Economics summer 2012

Microeconomics A

Final Exam

31. May 2012

(3-hour closed book exam)

Question 1

Consider two consumers George and Bridget. George's preferences can be represented by the utility function $u(x_{1G}, x_{2G}) = (\alpha \ln(x_{1G}) + (1-\alpha)\ln(x_{2G})$ Bridget's preferences can be represented by the utility function $(x_{1B}, x_{2B}) = a * ln(x_{1B}) + x_{1B}$. The prices on the two goods in this economy are (2/3; 2/3), and income for both is 250.

a) Assume that α=1/3, ρ=1/2 and *a*=1/2. Find the demand for George and Bridget
b) Assume again that α=1/3, ρ=1/2 and *a*=1/2. Consider an income change from 250 to 500. What changes in demand do we find for Bridget and George? Explain why there is a difference in these changes - of course this is due to the differences in preferences, but your answer should go a step beyond this.
c) Find the income and substitution elasticities for demand for good 1 when price changes in good 1

Question 2

Jeff's preferences over leisure, *l*, and a general consumer good, *c*, can be represented by the utility function $u(l, c) = l * (c + 1)$. He has *L* hours available every week and he can earn a wage *w* per hour supplied on the labour market.

Suppose that the government introduces an income tax *t* (that reduces the wage per hour by the tax rate). What compensation in income should our consumer have to be as well of as in the situation without the tax. Explain/show how this compensation can be found. You should use the Hicks compensation in your explanation.

Question 3

Comment on the statement:

The slope of the marginal willingness to pay curve (which is the same as the compensated demand curve) is always steeper than the ordinary demand curve because the income effect adds to the change in demand following a price change.

Question 4

True or false: *long run costs curves are always below short run costs curves*

Question 5

Consider an economy with the consumer Ron with preferences over two goods represented by the utility function $u(x_1, x_2) = x_1 x_2$ In the same economy we also have the firm Robin inc., which produces a consumer good (let this be good 1) from the other good in the economy (good 2) using a production function $f(q) = q^{0.8}$. Robin Inc. is owned by Ron.

a) What type of economy is this? What is the crucial assumption that must be made for such an economy to be interesting as a tool of analysis? Describe the consumer preferences and the production technology.
b) Let Ron have an endowment of *e* of good 2 and nothing of good 1. Find the equilibrium price for this economy

Question 6

Comment on the statement:

As long as both current and future consumption are normal goods, a decrease in the interest rate will result in a drop in savings.