Microeconomics

Second Midterm

Maria Antonieta da Cunha e Sá — 12/5/2012
Doruk Iris
Bruno Martins — 10-11.30pm

Warnings

1. Calculators or any other electronic devices are not allowed.
2. No questions are answered during the test.
3. Please state on the test sheet anything that was not clear for you.

Honor's Commitment

I declare that I will neither use nor contribute, directly or indirectly, to any illegal procedure or fraud during this test.

Signature: _____

Good Luck!

Grade

Part I:

Part II:

Part III:

Name: _____ Nº: _____

I
(6)

The demand for gasoline is $P = 100 - 5Q^d$ and the supply is $P = 30 + 2Q^s$, where P in euros and Q in litres. Imagine that a tax of 7€/litre is placed on gasoline.

(i) What is the incidence of the tax? Illustrate graphically.

(ii) What is the change consumer surplus? Compute it and illustrate graphically.

(iii) What is the change producer surplus? Compute it and illustrate graphically.

(iv) Imagine now that demand is perfectly elastic at P=50. How would your answers to to the previous questions change? Calculate the pre-tax equilibrium, the post-tax equilibrium, as well as the changes in the producer and consumer surpluses. Illustrate graphically.

II
(4)

You are living in a world where people consume a normal good and live for 2-periods. One day in the second period, a friend of yours comes and tells you that he decided to save less after the interest rate increased. Do you think he was saved or borrowed in the first period? Justify your arguments graphically or analytically.

III
(10)

Imagine that you are the manager of a small competitive firm that produces nails in a market where all the firms are similar, and your total cost curve is given by:

$$TC = 8 + 2q + 2q^2$$

where q represents the amount of nails produced.

(i) If q=4 is the optimal quantity of nails for the installed capacity of your firm, what is the price of nails in the market?

(ii) Given (i), if market demand is given by

$$Q^d = 1000 - 50P$$

How much is produced in the market, and how many firms are competing with yours? Illustrate graphically the solution.

(iii) Based on the results obtained in (i), is this an equilibrium for your firm? And for the market, assuming that all firms are similar? Explain.

(iv) Imagine now that the industry is in long-run equilibrium. Given the total cost curve stated above, how much would your firm produce and at what price? Illustrate graphically.

(v) If market demand is given as in (ii), how much is produced in the market, and how many firms are competing with yours? Illustrate graphically the solution.

NOVA School of Business & Economics

Shaping powerful minds

NOVA School of Business & Economics

Shaping powerful minds