GX464

OLLSCOIL NA hÉIREANN, GAILLIMH
NATIONAL UNIVERSITY OF IRELAND, GALWAY

AUTUMN EXAMINATIONS 2002

PAPER I

ECONOMICS (EC100)

1st B.A., 1st B.A. (Public & Social Policy),
1st B. Comm., 1st B. Comm. International,
1st B. Corp. Law, 1st B.Sc. in Financial Mathematics and Economics

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TIME ALLOWED: 3 Hours

Total Marks Available: 375

There are two sections in this paper. Read all the directions for each section. Write your answers for each section in separate answer books.

Please allocate your time to each question according to the number of marks that the question is worth.

SECTION A: Applied Economics (175 marks)

Answer three of the following questions. Each question is worth equal marks. Use a separate answer book(s) for this section. Only three answers will be corrected. If you answer more than three questions please clearly indicate which three answers you wish to be corrected. Otherwise the first three answers will be corrected.

1. The Housing Market

Identify any four of the factors that have been identified in the various Bacon reports as having caused the dramatic increase in house prices in Ireland in recent years. For each factor, explain how it affects the demand or supply of houses. One of the reports found that the short run price elasticity of supply was 0.6 while the long run price elasticity of supply was 1.5. Explain why the long-run elasticity is larger than the short-run elasticity. How could the government increase the long run elasticity of supply?

2. Agricultural policies

Suppose that beef farmers in the European Union persuaded the European Commission to increase the price of beef. The Commission decides to impose quotas on the production of beef and orders every beef farmer in Europe to reduce production of beef by 20%. Use a diagram to show the effects of such a policy on the market for beef. You may ignore the production and consumption of beef outside the European Union. Will farmers be better off as a result of this policy? Explain your answer.

3. Poverty

Consider two methods of measuring poverty – relative and consistent (where consistent poverty is defined as in the National Anti-Poverty Strategy). Explain how each method is calculated and explain the difference between these methods. Discuss the main trends in both of these indicators for Ireland since 1994. Which method is the most appropriate measure for policy purposes?

4. Cost-benefit analysis

Economists generally believe that one has to have some estimate of the value of a statistical life in order to conduct effective cost benefit analysis of particular policies and projects. Outline the various methods that are used to provide these estimates and discuss the limitations of each method.

Section B: Microeconomics (200 marks)

Answer four questions in this section. Each question is worth 50 marks. Use a separate answer book(s) for this section. Only four answers will be corrected. If you answer more than four questions please clearly indicate which four answers you wish to be corrected. Otherwise the first four answers will be corrected.

1. There are three separate parts to this question. Answer each part.

A. Use carefully labelled diagrams to analyse the following situations.

a. What will happen to the equilibrium price and quantity of sweatshirts if more productive knitting machines are invented?

b. What will happen to the equilibrium price and quantity of oranges if income increases and severe weather kills twenty per cent of orange trees? (Assume oranges are a normal good).

B. Assume that the gold-mining industry is competitive

a. Illustrate a long-run equilibrium using diagrams for the gold market and for a representative gold mine.

b. Suppose that an increase in jewellery demand induces a rise in the demand for gold. Using your diagrams, show what happens in the short run to the gold market and to each existing gold mine.

c. If the demand for gold remains high, what would happen to the price over time? Specifically, would the new long-run equilibrium price be above, below, or equal to the short-run equilibrium price in part (b)? Is it possible for the new long-run equilibrium price to be above the original long-run equilibrium price? Explain. Will all the firms be earning zero economic profit in the new equilibrium?

C. Suppose the government cuts income tax rates in order to increase the supply of labour in the economy. Explain the difference between the income effect and substitution effect of such a reduction in tax rates.

2. What is an externality? Give examples of two different kinds of externalities. Using a diagram, show why a private market will not result in the efficient quantity of a good being produced if production involves a negative externality. Indicate on the diagram the size of the deadweight loss from the externality. What is the Coase theorem? There are several ways of reducing pollution – taxes, private bargaining, regulation and marketable permits. Which policy is best? Explain.

3. Suppose a worker in the United States can produce a maximum of 50 computers or 100 shirts in a month while a worker in Brazil can produce a maximum of 2 computers or 50 shirts per month. For simplicity assume that each country has only one worker. Graph the Production Possibilities frontier for each country. What is the opportunity cost of a computer in Brazil and in the US? What is the opportunity cost of a shirt in Brazil and in the US? Which country has the absolute advantage in shirts and in computers? Which country has the comparative advantage in shirts and in computers? Explain your answers. Suppose initially there is no trade between these countries. In this situation the American worker produces 41 computers and 18 shirts while the Brazilian worker produces 1 computer and 25 shirts. The Brazilian worker suggests the following trade: he will concentrate on producing shirts and will trade 20 shirts in return for 2 computers. Show that this trade will benefit both countries. Assume that after the trade the American worker will produce 50 computers. Suppose the Brazilian worker had suggested a trade of 20 shirts in return for 14 computers. Would this trade have benefited both countries? Explain your answer.

4. Consider a small town that has only one hairdressing salon. This firm has a total monopoly of this industry in this town and new firms are prevented from entering the industry. The following table contains information about the demand curve facing this firm.

Price (€)	20	18	16	14	12	10
Quantity	0	1	2	3	4	5
Total Revenue						
Marginal Revenue						

(a) Complete this table.

(b) Suppose that there are no fixed costs and that the marginal cost of each haircut is €6. (Thus the average total cost of each haircut is also €6). What will be the price and quantity chosen by this firm? Calculate the profit earned by the firm

(c) Explain the concept dead weight loss. Economists claim that monopolies produce inefficient outcomes. In what way is the outcome in Part (b) inefficient?

(d) Suggest a way in which this firm might be able to engage in price discrimination. Would price discrimination reduce the dead weight loss caused by monopolies? Explain. If a firm were going to engage in price discrimination, would it charge a higher price to those customers with a high or a low price elasticity? Explain.

5. Consider a market with two firms A and B. Each firm is making a decision about whether to advertise or not. Each firm must make its decision without knowing what the other firm has decided to do. The choices they face and the payoffs under each outcome are indicated in the following matrix. The first number in each case is the payoff for firm B.

		Firm A	
		Advertise	Don't Advertise
Firm B	Advertise	500, 550	800, 200
	Don't Advertise	200, 900	600, 600

a. What is a dominant strategy? Does Firm A have a dominant strategy? Explain your reasoning clearly.

b. What is the equilibrium outcome of this game?

c. Is this game an example of a Prisoner's Dilemma game? Explain your answer clearly.

Suppose instead that the payoffs are as follows. The first number in each case is the payoff for firm B.

		Firm A	
		Advertise	Don't Advertise
Firm B	Advertise	300, 800	450, 600
	Don't Advertise	400, 900	300, 200

d. Does Firm A have a dominant strategy? Does Firm B? Explain your reasoning clearly.

e. What is the equilibrium outcome of this game? Is this game an example of a Prisoner's Dilemma game? Explain your answer clearly.