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OLLSCOIL NA hÉIREANN, GAILLIMH
NATIONAL UNIVERSITY OF IRELAND, GALWAY

AUTUMN EXAMINATIONS 2002

EC100 ECONOMICS PAPER 1
1st B.A. (Economic and Social Studies), St. Angela's College, Sligo

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Time allowed **THREE hours**
Marks: **350**

Please note that there are specific instructions for each of the three sections in this exam paper: section A, section B and section C (Multiple Choice questions).

SECTION A
(90 marks)

Instructions: Write a short note (maximum two paragraphs) on any **six** of the following:

1. Opportunity cost
2. Price elasticity of demand
3. Cross price elasticity of demand
4. Normal goods and inferior goods
5. Budget constraints
6. The substitution and income effects of a price change
7. Monopolies and barriers to entry
8. Oligopoly
9. Price discrimination
10. The effects of tariffs and quotas on trade

SECTION B
(160 marks)

Instructions: Answer two of the following three questions. All questions are worth 80 marks.

1.

(a) Consider the market for wild salmon. Using well-labelled diagrams, show the effects of each of the following events on the equilibrium price and quantity of wild salmon:

- (i) The European Commission implements a reduction in the number of fishing boats
- (ii) A Government agency encourages people to eat more fish
- (iii) There is a strong rise in consumers' disposable incomes
- (iv) New areas of the sea are opened up for salmon fishing while at the same time farmed salmon becomes cheaper and more widely available

(b) The supply and demand for widgets is described by the following equations. Quantity is measured in thousands and price in euros (€).

$$Qd = 100 - 10P$$

$$Qs = 4 + 2P$$

- (i) Calculate the equilibrium price and quantity. Show all calculations.
- (ii) Suppose the price of widgets is €10. Is this an equilibrium? Explain.
- (iii) If the price was €10, explain clearly what changes would occur in the market. What would be the outcome of these changes?

(c) Suppose many people and politicians complain about a shortage of accommodation and rapidly rising rents. In response, suppose the government introduces a system of controlled rents for houses, flats and apartments.

- (i) Is this an example of a price floor or a price ceiling?
- (ii) Who will gain and lose from this action?
- (iii) What affect would this policy likely have on the following:

  1. the quantity of accommodation
  2. the quality of accommodation
  3. the shortage of accommodation

2.

(a) Using a numerical example, carefully explain the Law of Diminishing Marginal Returns.

(b) Distinguish between normal and supernormal profits.

(c) Suppose a firm faces a constant Marginal Cost of €7 per unit of output. The Marginal Revenue from selling one extra unit is €10.

(i) Should this firm increase or decrease their output level?

(ii) What affect will any change in the output level have on the profits being earned by the firm?

(d) Coda Limited is a firm that faces Fixed Costs of €10,000. They are currently incurring losses of €5,000.

(i) Should Coda continue to operate or else temporarily closedown in the short-run? Why?

(ii) If Coda were experiencing losses of €15,000, what should they do? Continue to operate or temporarily closedown? Explain.

(e) Igus Limited makes electronic components. The firm decides to double the amounts of capital and labour that they use.

(i) Calculate the percentage increase in the amounts of the two inputs (capital and labour) that Igus uses.

(ii) Igus finds that their output level increases by 75%. Is Igus experiencing increasing or decreasing returns-to-scale? Explain.

(f) Draw the Long-run Average Cost curve of a firm experiencing increasing returns to scale. Would this firm have an incentive to increase output? Why or why not?

3.

(a) The demand for telephone services in Sligo is given in the following table. The marginal cost is €60. One firm, Sligo Telecom, has a monopoly in this industry.

Quantity	Price (€)	TR	MR
0	110		–
1	100		
2	90		
3	80		
4	70		
5	60		
6	50		
7	40		

(i) Calculate Total Revenue and Marginal Revenue at each price. Fill in the two columns in the table.

(ii) Find the profit maximising quantity and price.

(iii) Draw a diagram showing the demand, marginal revenue and marginal cost curves.

(iv) Show the optimal price and quantity on the diagram.

(b) Keramik Limited is a small firm that manufactures tiles. The firm operates in a perfectly competitive market. The market price of tiles is €30 per box. The firm's optimal output level is 1000 boxes.

(i) Plot the Marginal Revenue curve of this firm (use a large diagram).

(ii) On the same diagram, sketch a typical Marginal Cost curve, and show the optimal output level.

At the optimal output level the short run average cost of producing a box of tiles is €25.

(iii) Is Keramik making supernormal profits or losses? Calculate the size of these profits or losses.

(iv) Assuming no barriers to entry, what would be expected to happen in the long run in this industry?

(v) What would be the effects on industry supply and demand and on the price of boxes of tiles? How would these changes affect Keramik?

SECTION C
Multiple Choice Questions (100 marks)

Please be careful when answering the following Multiple Choice questions. Write your answers in the same order as the questions. Please write clearly and legibly, as the letters "a", "c", and "d" can often be confused. Negative marking applies. (5 marks for a correct answer, 0 marks for an unanswered question and a penalty of –1 mark for an incorrect answer)

1. The price of a product in a free market is determined by

   (a) the cost of inputs
   (b) interest rates
   (c) the price of land
   (d) inflation rates
   (e) the interaction between demand and supply

2. The level of demand can be affected by

   (a) an increase in the population
   (b) a change in input costs
   (c) a change in technology
   (d) changes in government regulations
   (e) all of the above

3. If demand exceeds supply, the result is that

   (a) the price always stays the same
   (b) the price always decreases
   (c) a surplus will occur
   (d) the price will tend to rise
   (e) none of the above

4. Which of the following would decrease the demand for petrol (i.e. shift the demand curve to the left)?

   (a) an increase in the price of petrol-guzzling cars
   (b) improvements in the road network that make cars more attractive compared to other modes of transport
   (c) an increase in the price of crude oil that causes the price of petrol to rise
   (d) a decrease in the price of petrol-guzzling cars
   (e) all of the above

5. Minimum wage laws may lead to

   (a) a rise in unemployment
   (b) an increase in the quantity demanded of labour
   (c) a drop in the quantity supplied of labour
   (d) a strong rise in employment
   (e) none of the above

6. Eoin says that he would buy one CD a week regardless of the price. If he is telling the truth

   (a) Eoin's price elasticity of demand for CDs is 1
   (b) Eoin's demand for CDs is perfectly price inelastic
   (c) Eoin's income elasticity of demand for CDs is positive
   (d) CDs are an inferior good
   (e) none of the above are correct

7. If the price elasticity of demand for sugar is –0.10 we can say that

   (a) sugar is a normal good
   (b) the demand for sugar is elastic with respect to price
   (c) the demand for sugar is perfectly elastic with respect to price
   (d) sugar is an inferior good
   (e) the demand for sugar is very inelastic with respect to price

8. Your firm manufactures radios. If the demand for your radios is very inelastic and you want to increase your total revenue, then you should

   (a) not change the price of your radios
   (b) cut the price of your radios
   (c) increase the price of the radios
   (d) put your radios on sale at 50% off
   (e) none of the above are correct

9. Suppose the price of coffee rises by 50%. Subsequently, there is a 30% rise in the demand for tea. All other things being equal, the cross price elasticity of demand for tea with respect to coffees is

   (a) 0.60
   (b) 20%
   (c) 80%
   (d) 1.66
   (e) –0.60

10. If the prices of one good falls then

    (a) the budget line shifts inwards parallel
    (b) the budget line rotates inwards
    (c) the budget line rotates outwards
    (d) the consumer moves onto a lower indifference curve
    (e) the budget line shifts outwards parallel

11. Indifference curves

(a) are drawn based on income levels and prices
(b) are drawn based on relative prices
(c) are drawn so that utility increases as you move up along a given indifference curve
(d) represent different combinations of the two goods which give equal satisfaction
(e) all of the above

12. The optimal consumption bundle or combination is found

(a) on the lowest possible indifference curve
(b) where prices are as low as possible
(c) where the budget line is tangential to the highest possible indifference curve
(d) where the consumer's income is as high as possible
(e) always at the top of the budget line

13. If a firm experiences constant returns to scale then

(a) as it produces more output its total costs decrease
(b) as it produces more output its total costs stay constant
(c) it has an incentive to reduce output
(d) as it produces more output its average costs per unit remain constant
(e) none of the above answers are correct

14. In the long-run a firm operating in a perfectly competitive industry will

(a) operate at a loss
(b) earn supernormal profits
(c) be a price maker
(d) earn normal profits
(e) exit the industry

15. The market for mobile telephone services in the Republic of Ireland is an example of

(a) a perfectly competitive market
(b) a monopoly
(c) an oligopoly
(d) none of the above

16. Charging a lower price for a midweek bus journey, rather than at the weekend, is an example of

(a) lower income elasticity of demand
(b) perfectly inelastic price elasticity of demand
(c) price discrimination
(d) diseconomies of scale
(e) all of the above

17. Compared to a perfectly competitive industry, a monopoly tends to

(a) charge the same price and produce the same quantity
(b) charge a lower price and produce a higher quantity
(c) always make losses in the long-run
(d) operate at the lowest point on the Average Cost curve
(e) charge a higher price and produce a lower quantity

18. If a consumer is willing and able to pay €5 for a particular product but only has to pay €3.20 then

(a) the consumer surplus is €5
(b) the consumer surplus is €3.20
(c) the consumer surplus is €8.20
(d) the consumer surplus is €1.80
(e) none of the above are correct

19. If a tax is introduced into the market for a particular product, then the result will be

(a) consumer surplus will rise
(b) equilibrium quantity will increase
(c) the price paid by consumers will rise and the price received by firms will fall
(d) producer surplus will rise
(e) all of the above are correct

20. Starting from a situation of free trade, the introduction of an import tariff on shoes causes

(a) an increase in the selling price of pairs of shoes
(b) lower amounts of imports of shoes
(c) a gain for the government
(d) a rise in domestic production of shoes
(e) all of the above