

### ECON1062 (B09A) Basic Microeconomic Concepts: Course Work and Microeconomics Essays

Your class tutor Martin Koppensteiner has already asked you to submit the first problem set to him by next Thursday February 7<sup>th</sup>. Then there is reading week which will give you the opportunity to write an essay: choosing one of Q.1, Q.2 or Q.3. to be submitted when you return. Then the third piece of coursework will be a third problem set and the fourth either another problem set or an essay from Q.4, Q.5 or Q.6. This will complete the four pieces of coursework which are required for this course. Essays should be from 1,500 to 2,000 words.

Q.1 a) Assume a two good economy where only fish and milk are produced. Analyse the effects on the allocation of resources of a permanent increase in the demand for milk..

b) Now take the more realistic assumption that the economy produces  $n$  goods, drawing on general equilibrium analysis to show the interdependence of all parts of the economy. Emphasise the importance of the notions of substitutability and complementarity and relate this to Stigler's suggestions of how one can get a working theory of general equilibrium.

c) What is meant by Walras' Law? Explain its role in the resolution of the redundant equation problem and in the solution of the general equilibrium systems.

d) How would you incorporate the reality of the "credit crunch" into a general equilibrium type of analysis?

Some reading. For part a) see the explanation in many introductory texts such as Lipsey, Parkin, Sloman etc. and they may be suggestive for part b). But for parts b) and c) the lectures drew upon the following:

Stigler, G. The Theory of Price, Revised edition, Macmillan 1952

Baumol, W.J. Economic Theory and Operations Analysis, Second edition, Prentice Hall International, 1965

Backhouse, R. E. The Penguin History of Economics, Penguin Books, 2002

Hicks, J.R Value and Capital, Second edition, Oxford University Press, 1946

For the "credit crunch" much current material from the media

This question is an adaptation and expansion of a question in the B09A examination of 2004.

Q.2 a) How far do your derivations of the optimal mark-up on cost and the optimal mark-up on price formulae from the optimal pricing relationship support the argument that marginalism can be incorporated into the cost-plus pricing approach?

b) Now introduce advertising into the picture. Show that it is incorrect to maintain that a company should increase its advertising expenditure until the last pound spent on advertising brings forth an additional pound in revenue.

c) Use economic analysis to obtain the basic Dorfman-Steiner condition, which may be written as follows:

$$A/PQ = -(E_A / E_P)$$

where  $A/PQ$  = the advertising sales ratio,  $E_A$  = the advertising elasticity of demand and  $E_P$  = the own price elasticity of demand. A market research company forecasts that a new mobile phone product will generate additional sales revenue of £3 million pounds per year assuming a successful advertising campaign. If  $E_A = 0.4$  and  $E_P = -2.5$ , calculate the optimal level of expenditure on advertising.

d) The conclusion in c) is based on the elasticities approach and is comfortably precise. Draw upon your knowledge both of economic theory, marketing theory and the dynamic structure of the mobile phone market to show that this is misleadingly simple.

Some reading. Pindyck chapter 11, Clarke, R. Industrial Economics, Blackwell 1985, Chapter 6. The product life cycle may also merit some attention and is explained in marketing and international business texts. Dicken, P. Global Shift,

Fifth Edition, Sage, 2006 has some good illustrative examples.

Q.3 a) Suppose that you are advising the manager of a sports club on pricing strategy. This club presently operates on a system of a membership fee plus green fees for each round played. Suppose that the golfer's demand (average revenue curve) may be written as:  $P = £100 - Q$  where  $Q$  = the number of rounds per year and  $P$  = the price per round. The marginal cost per round is £10 and marginal cost = average cost.

(i) Calculate the price per round and the associated profit if the club acts as a single price monopolist.

(ii) Do some more calculations to show that the club would make a greater profit with two part tariff pricing with  $Q = 45$ . What would be the annual membership fee and the price per round.

(iii) Show that profit would be even greater with marginal cost pricing and an even higher membership fee.

(iv) The Lady Captain (a regular club member) argues that everyone would be better off if a round of golf is free and that just an annual membership fee is charged. Is she right?

Note that sketching the golfer's demand (average revenue) and marginal revenue curves and the marginal cost curves will assist you in these calculations and in your understanding.

b) (i) What if individual demand curves are not identical? Explain the logic of both a two part tariff with two golfers and a two part tariff with many golfers.

(ii) There may be grounds for thinking that members of a golf club have reasonably similar tastes but there is still room for increasing profit by price discrimination and peak load pricing tactics. Elucidate.

This question is adapted from a question in the B09A Examination 2004.

Some reading. Pindyck chapter 11, Hirschey, M. Managerial Economics 10<sup>th</sup> edition chapter 12

Q. 4 a) Assuming a utility function of the form  $U = U(X, Y)$  and a budget constraint of  $P_X X + P_Y Y = M$ , carefully explain how utility is maximized with reference to the concepts of opportunity cost and the marginal rate of substitution.

- (i) Draw an appropriate diagram to show the optimal point.
- (ii) How would this deal with the case of an affluent consumer who may increase satisfaction by a reduction of income?

b) Use the indifference curve apparatus to explain the meaning of the substitution and income effect in the following cases, examining the effects of a rise in the price of good X, which is on the horizontal axis. Draw diagrams for each of the following cases:

- (i) Y and X both normal goods.
- (ii) Y normal and X inferior.
- (iii) Y normal and X Giffen.

c) One of the basic assumptions of consumer demand theory is that the consumption behaviour of any individual is independent of the consumption of others. Critically examine Leibenstein's relaxation of this assumption and explain his analysis of bandwagon, snob and Veblen effects.

Some reading. Pindyck chapters 3 and 4, various editions of the regular textbooks- Lipsey and Chrystal, Parkin, Sloman, Begg, etc. Part c) is discussed in chapter 4 of Pindyck but the lectures will draw upon Harvey Leibenstein's article "Bandwagon, Snob and Veblen Effects in the Theory of Consumer Demand", Quarterly Journal of Economics no. 62 February 1949, pp165-201.

Q.5 a) Explain the process of how a firm reaches long run equilibrium price and output in perfect competition with the use of appropriate diagrams.

b) Suppose the industry is monopolized yet costs remain the same. What is long run equilibrium price and output now? How does this suggest monopoly power can be measured?

c) Now consider natural monopoly where the nature of the cost curves differ. Explain with the aid of a diagram, the implications for price and output of using the following rules:

- (i) Setting price equal to marginal cost.
- (ii) Average cost pricing.
- (iii) Marginal cost pricing.

d) With reference to a privatized industry, which may be regarded as a natural monopoly, assess the information needed for regulation, the methods used, and the problems encountered in regulation.

Some reading. Pindyck chapter 10. Various editions of general textbooks – Lipsey and Chrystal, Parkin, Sloman, Begg etc. cover the basic theory and have discussions of privatization in the United Kingdom. Hirschey chapters 8 and 13. See also Sawyer, M. The UK Economy 15<sup>th</sup> edition, 2001, chapter 9. Sawyer also gives other references. See also the 16<sup>th</sup> edition.

Q. 6 a) What is the structure-conduct- performance (SCP) model and how is industrial concentration measured?

b) What picture does the SCP model give us of retail food market in Europe or the United Kingdom? How far does this concentration of market power suggest that this sector needs continual vigilance by the competition authorities?

Some reading. The SCP model and concentration ratios are explained in Ferguson, P.R. and Ferguson, G.J. Industrial Economics: Issues and Perspectives (1988) See also Scherer, M. Industrial Structure and Market Performance and Griffiths. A and Wall.S. Applied Economics, Eleventh edition, Prentice Hall, 2007 especially Part 1. Sloman, J. Economics and the Business Environment, Second edition, FT Prentice Hall, 2008 has a useful section in chapter 5.

There are three articles in the Journal of Agricultural Economics March 2003, Vol 54, firstly by Ian Sheldon et al, secondly by Paul W. Dobson et al and thirdly by Douglas Cooper. If you wish to focus on the United Kingdom in particular, there is the Competition Commission report (2000) Cm4842 "Supermarkets: A report on the supply of groceries from multiple stores in the United Kingdom" and the Competition Commission report (2003) Cm5950 on "Safeways plc et al". These can be freely downloaded from [www.competition-commission.org.uk](http://www.competition-commission.org.uk). A recent article in Eurochoices vol5, no3 2007 has a good discussion by Tim Lloyd and Wyn Morgan entitled "Market Power in UK Food Retailing" which is clear, up to date and well referenced. There is much information in the public domain with respect to the struggle for Safeways, the performance of Morrisons and the predatory activities of Tesco. Finally, Sutton, J. Sunk Costs and Market Structure, The MIT Press, 1996 is skeptical about the SCP approach, arguing that the direction of causation can be reversed and that it is difficult to unscramble these simultaneous relationships.

My office hour is on Wednesdays 14.00 to 15.00 in Room 330 Drayton House. E-mail me on [john.mark@kcl.ac.uk](mailto:john.mark@kcl.ac.uk) if you wish to meet.

**John Mark February 4<sup>th</sup> 2008.**





