

## The Micro 2 Exam Structure from 2013-2014 onwards

From 2013-2014 onwards, while I am teaching the Autumn Term of the module, the examination paper on the Autumn Term material will be set by a computer program (written by myself). Obviously I, and others, will check (and correct if necessary) the output of the program. The examination is in the form of a multiple choice examination. There will be 17 questions on the Autumn Term material and 10 on the Spring Term material, giving a total of 27 questions. The examination scripts for Micro 2 will be scanned by a reader and the responses then marked by the computer. Correct answers will get 4 marks added; incorrect answers 1 mark deducted; blank answers will get a zero mark. The resulting mark, denoted by  $x$ , which will be between -27 and 108, will then be converted into a final mark  $y$  using the formula  $y = (x+27)/1.35$ , which ensures that the final mark will lie between 0 and 100.

**The rest of this document pertains to the Autumn Term material only.**

This examination system is designed *not* to be a test of memory; *nor* a test of *advanced* mathematics; it is a test of microeconomic *understanding*. Students might need some elementary mathematics to solve some of the problems, but what I am hoping is that understanding and intuition will guide them to the correct solution. *Those students who think like economists will find the examinations easy; those who do not, will not.* I have put a specimen paper up on the site. I should repeat the warning I put out before that by doing more and more scripts, in and of itself, is not going to make the actual exam any easier, unless you begin to understand the *method* by which you should solve a particular problem: once you understand the method, then you can apply it over and over again. It is this understanding of method that this module is trying to teach: when students leave the university, they will forget all the details and formula that they memorised; what they will keep with them is any understanding that they have gained. So the philosophy behind the design of this examination system is exactly the same as that behind the design of the course. I want students to leave Microeconomics 2 *thinking as* micro-economists.

I list below the types of problems that will appear in the examination. The precise questions will vary (because of randomisation) and which particular questions (on certain chapters) will appear might also vary, but the basic structure remains the same. I describe this structure chapter by chapter; it will be noticed that about half the chapters in the book do not *directly* have a question on them, but this is not to say that students should not study them – other chapters depend upon them. Read and study all the chapters.

**Chapter 2:** This is a crucial chapter and contains a wealth of material; understanding this alone gives you much of microeconomics. The questions on this chapter concern exchange in some hypothetical market. There are a random number of potential buyers, each wanting to buy at most one of the good and each having a randomly generated reservation price for the good; there are a random number of potential sellers, each wanting to sell at most one of the good and each having a randomly generated reservation price for the good. There will be four questions, randomly generated from eight. These eight are questions concerning competitive exchange (price, quantities and surplus) and other forms of exchange, including price-setting by the buyers or by the sellers

**Chapter 3:** Again this is foundational. It concerns preferences of an individual for a *discrete* good as given by (randomly-generated) reservation prices as expressed through an indifference curve represented *algebraically*. To make the problem simpler it is assumed that the preferences are *quasi-linear*. Two questions will be asked: one concerning whether the individual will be a buyer or a

seller at a given (randomly-generated) price, and how much he or she will want to sell or buy; the second question concerning the surplus that the individual realises at that price.

**Chapter 4:** This differs from chapter 3 in that it concerns quasi-linear preferences of an individual for a *continuous* good; but once again these are given by a set of randomly-generated indifference curves, represented *algebraically*. Questions will be asked about the price in the market when the individual buys or sells a given quantity and the surplus realised at that price.

**Chapters 6 and 7:** The questions on these chapters are concerned with *inference* - something that economists are often asked to do: given some observations on some phenomenon, economists are asked to infer something about something else; this inference will be used to make predictions in the examination. In this case it is inference about preferences from observations on demand and then predictions for other prices. To keep things simple just two goods are involved. The computer will choose at random one of three preferences (Perfect Substitutes, Perfect Complements and Cobb-Douglas) the computer will pick the parameter  $a$  at random from a set of possible parameter values, the computer will then generate two observations on the demand or supply of the individual and questions will be asked about the preferences and the  $a$  parameter driving these observations. In chapter 6, income is in the form of endowments of the two goods; in Chapter 7 in the form of money; otherwise the questions are the same.

**Chapter 8:** This is a very important chapter. The questions on it relate to exchange of two goods between two individuals. Their endowments of the two goods are fixed (and equal) and to make it simple it is assumed that one individual starts with the whole endowment of one of the two goods, and the other individual starts with the whole endowment of the other of the two goods. The computer will generate at random the preferences (either Perfect Complements or Cobb-Douglas) of each individual and also will generate at random the  $a$  parameter of each individual (from a set of possible values). Questions will then be asked on whether there is a Competitive Equilibrium in this situation (and, if so, at what exchange rate and how much will be exchanged) and whether equal division is efficient.

**Chapter 13:** This concerns a competitive firm. The (quadratic) cost function of the firm is randomly generated by the computer as is the price in the market. One of two questions will be asked: "what is the firm's profit-maximising (loss-minimising) output?"; and "what profit (loss) does it make at that price?".

**Chapter 14:** Here we consider an economy in which there are two individuals who can produce two goods. The (linear) technology of each individual is randomly generated by the computer and the question is asked: for a certain (randomly generated) output of Good 1 what is the maximum amount of Good 2 that they two individuals can produce?

In the examination students will be provided with graph paper that may prove useful for determining solutions.

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3<sup>rd</sup> June 2014