Coláiste na Tríonóide, Baile Átha Cliath
Trinity College Dublin
Ollscoil Átha Cliath | The University of Dublin

FACULTY OF ARTS, HUMANITIES AND SOCIAL SCIENCES

SCHOOL OF SOCIAL SCIENCES AND PHILOSOPHY

DEPARTMENT OF ECONOMICS

Senior Freshman   Hilary Term 2018
BESS, TSM, PPES

EC: ECONOMICS I

FOUNDATION SCHOLARSHIP EXAMINATION

Monday 8th January 2018   GMB   14.00 – 16.15

Professor F. O'Toole

Instructions to Candidates:

Please answer Question 1 and two other questions.
Each question carries equal weight.

Materials permitted for this examination:
Standard calculator and graph paper (although neither is necessary).

You may not start this examination until you are instructed to do so by the Invigilator.

Section A (Compulsory Question)

1. Describe and evaluate how economics might contribute to a discussion on the possible effects of a change in taxation on labour supply.

Section B (Please answer any two of the following four questions)

2. (a) Describe how indifference curve and budget constraint analyses can be used to examine, from a theoretical perspective, the effects of changes in the interest rate on the individual's choice between consumption today and consumption tomorrow, i.e. between consumption and savings. [50 marks]

    (b) Within the context of the incomes-in-two-periods model demonstrate that a borrower becomes better off if the interest rate decreases and that a saver becomes better off if the interest rate increases. Does a saver necessarily become worse off if the interest rate decreases? Does a borrower necessarily become worse off if the interest rate increases? Explain your answers. [30 marks]

    (c) Comment briefly on some of the limitations of the standard incomes-in-two-periods model used to address the choice between consumption and saving. [20 marks]

3. (a) In a Cobb-Douglas production function framework where a firm attempts to maximise output subject to a specific cost constraint, derive the demand for labour function and the demand for capital function. In this same Cobb-Douglas framework, discuss the relative magnitudes of the output/scale and substitution effects for the two factors following a change in, say, the wage rate. [50 marks]

   (b) Define and describe the concept of the elasticity of substitution. Derive the elasticity of substitution between labour and capital for the Cobb-Douglas production function. Discuss the economic significance of the elasticity of substitution between factors of production. [50 marks]

4. (a) From an economics perspective, and leaving aside the possible existence of natural monopoly, compare/contrast the welfare attributes of the outcomes from perfect competition and monopoly. [70 marks]

   (b) Define natural monopoly. Briefly discuss some mechanism(s) by which a natural monopoly might be regulated. [30 marks]

5. (a) Define Nash equilibrium. Outline two examples of economic games together with their Nash equilibria. [30 Marks]

   (b) Discuss the differences between a Cournot Nash equilibrium and a Bertrand Nash equilibrium. Within the context of oligopoly theory, which do you think is more "appropriate" or "better"? Explain your answer. [30 Marks]

   (c) Discuss the policy relevance (or otherwise) of **either** the First Fundamental Theorem of Welfare Economics **or** the Second Fundamental Theorem of Welfare Economics. [40 marks]