

Version AM/4

EGT2: IIA
ENGINEERING TRIPOS PART IIA

Tuesday 22 April 2014 9.30 to 11

Module 3E1

BUSINESS ECONOMICS

*Answer not more than **two** questions.*

All questions carry the same number of marks.

*The **approximate** percentage of marks allocated to each part of a question is indicated in the right margin.*

*Write your number **not** your name on the cover sheet.*

STATIONERY REQUIREMENTS

Single-sided script paper

SPECIAL REQUIREMENTS TO BE SUPPLIED FOR THIS EXAM

CUED approved calculator allowed

You may not start to read the questions printed on the subsequent pages of this question paper until instructed to do so.

Version AM/4

- 1 (a) With reference to the theory of the 'rational consumer':
- (i) Explain and illustrate how consumer choices can be modelled as optimisation problems; [20%]
 - (ii) What are 'normal' and 'inferior' goods? [15%]
 - (iii) Define and graphically identify the 'substitution' effect and the 'income' effect generated by a change in the price of a normal good on the quantity demanded of that good. [15%]
- (b) In the context of macroeconomic analysis:
- (i) Define the concept of investment; [10%]
 - (ii) Identify and explain the role of each component of the following investment function:
$$I = I_n [MPK - (P_K / P)(r + \delta)] + \delta K$$
 [25%]
 - (iii) What other factor or factors not captured in the function above may also influence investment, and in what way? [15%]
- 2 (a) With reference to the theory of the profit maximising firm:
- (i) Why is profit maximised at the level of output at which marginal revenue equals marginal cost? [15%]
 - (ii) What is a Cobb-Douglas production function and how may it be used to explain the firm's choice of capital and labour? [15%]
 - (iii) Explain how the firm's profit maximisation problem differs in the long run relative to the short run. [20%]

Version AM/4

- (b) Describe the standard Solow growth model. [20%]
- (c) With reference to the Solow growth model described in (b):
- (i) What is 'the golden rule' level of capital? [15%]
 - (ii) Discuss the limitations of the model. [15%]
- 3 (a) In relation to the problem of making strategic choices in an oligopoly market:
- (i) What is a 'Nash equilibrium'? Define the concept and provide an example in a normal form game; [20%]
 - (ii) Define the Cournot model and illustrate it by means of appropriate diagrams; [20%]
 - (iii) Explain why the optimal solution of a Cournot model is a Nash equilibrium. [10%]
- (b) In relation to the role of government spending in the macroeconomy:
- (i) Set out in diagrammatic form the concept of the 'Keynesian cross' relating planned and actual expenditures; [20%]
 - (ii) Use the Keynesian cross to identify the effects on national income generated by an increase in government spending; [20%]
 - (iii) Define the concept of 'tax multiplier'. [10%]

END OF PAPER

