EGT2

ENGINEERING TRIPOS PART IIA

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Friday 3 May 2019   9.30 to 11.10

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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 candidate 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

10 minutes reading time is allowed for this paper at the start of the exam.

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

1   (a)   Using appropriate diagrams, explain a firm's profit maximisation under perfect competition. Make a distinction between the short-run and the long-run case.   [25%]

(b)   Explain and illustrate the Prisoners' Dilemma with the help of a payoff matrix. Why is it called a dilemma? Describe a real-life economic problem that has the structure of this game.   [25%]

(c)   Describe and compare the Cournot and the Stackelberg models of oligopoly. What are the welfare implications, for the economy as a whole, as well as for consumers and producers separately?   [25%]

(d)   In class, we derived the investment equation:

$$I = I_n [MPK-(P_K/P)(r+\delta)]+\delta K$$

Explain each part of the equation and examine how investment changes in response to changes of the variables MPK and r.   [25%]

2   (a)   Explain the concepts of perfect substitutes and perfect complements in consumption using an example for each. Illustrate both cases with appropriate diagrams. [25%]

(b)   Describe the Nash Equilibrium concept using a pure coordination game. Compare Nash Equilibrium with a solution in dominant strategies concerning the existence and number of solutions. How do they differ in what they demand in terms of players' rationality?   [25%]

(c)   Consider a monopoly. Derive the firm's optimal quantity and price (**no** price discrimination), and contrast these with the case of perfect competition. What are the consequences of monopoly for welfare (consumer/producer surplus)?   [25%]

(d)   Name and explain two real-life examples of inefficient market outcomes due to externalities. According to the Coase Theorem, such inefficiencies should not happen, given certain assumptions. State the Coase Theorem and explain which assumptions of the Coase Theorem are violated in your two examples.   [25%]

3   (a)   Explain the concept of inferior goods using an appropriate diagram and giving two real-life examples. Also discuss the special case of a Giffen good.   [25%]

(b)   Explain the concept of a public good. Why are markets not as good in providing public goods as they are in providing private goods? Illustrate your answer using two real-life examples of public goods and how they are provided.   [25%]

(c)   Using Edgeworth Box diagrams, illustrate (i) the concept of Pareto efficiency and the contract curve, and (ii) general competitive equilibrium. With the help of a third Edgeworth Box, state and explain the first fundamental theorem of welfare economics.   [25%]

(d)   Macroeconomic policy in open economies will have an impact on the trade balance. Name three different measures that the government can introduce to increase exports. Discuss the relative advantages and disadvantages of each measure.   [25%]

END OF PAPER