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UNIVERSITY OF LONDON

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BSc degrees and Diplomas for Graduates in Economics, Management, Finance and the Social Sciences, the Diploma in Economics and Access Route for Students in the External Programme

Introduction to Economics

Monday, 15 May 2006 : 2.30pm to 5.30pm

Candidates should answer **FOUR** of the following **NINE** questions: **QUESTION 1** and **ONE** further question from Section A, and **QUESTION 6** and **ONE** further question from Section B. All questions carry equal marks.

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SECTION A

Answer **question 1** and **one** further question from this section.

1. Answer **THREE** of the following questions:

(a) To produce one unit of commodity x requires *only* half a unit of labour (no capital is needed). Each unit of x needs storage space during the production process which is limited to up to 180 units of x. Commodity y, on the other hand, requires a quarter of a unit of labour and half a unit of capital for the production of one unit. There are 100 units of labour and 100 units of capital.

i. Draw the production possibility frontier.
ii. What will be the opportunity cost of y when we produce 30 units of it?
iii. What will be the opportunity cost of x when we produce 80 units of it?
iv. Had we produced 120 units of x efficiently and the international price of x was 1 y per x, what would now be produced in this economy?

(b) Only when a good is normal will income and substitution effects work in the same direction. True or false? Explain.

(c) When price elasticity of demand is -0.5, it means that an increase in price would decrease consumers' spending. True or false? Explain.

(d) An individual chooses to consume 60 units of y and 40 units of x when the price of both goods is 5 (there are no other goods in the economy). When the price of x falls to 2, the substitution effect (based on the Hicksian definition of real income) will lead the individual to choose a bundle of 60 units of x and 40 units of y. If the government reduced this individual's income by 150, he will be as well off as before the change in the price of x. True or false? Explain.

(e) Any short run average cost schedule will always be tangent to the long run average cost schedule at the level of output for which short run average costs are minimised. True or false? Explain.

(f) In the short run, fixed costs are 16,000 and the variable costs are a function x^3 of output x. There will never be a price at which the firm will have to stop its operations immediately. True or false? Explain.

(g) The short run demand for labour is steeper than the long run demand. True or false? Explain.

(h) A fall in demand in a competitive industry will necessarily bring about a fall in the equilibrium levels of quantity and price. True or false? Explain.

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(i) The fact that there are some natural monopolies does not prevent the economy as a whole from becoming efficient provided that in all other markets there is perfect competition. True or false? Explain.

(j) A monopolist is facing a constant price elasticity of demand. An increase of 10% in its marginal cost will cause an increase of 20% in the equilibrium price. True or false? Explain.

(k) As there are no profits above the normal in the long-run equilibrium of monopolistic competition, the outcome is as efficient as that of a perfectly competitive market. True or false? Explain.

(l) If the prices of all goods were equal to the marginal cost of their production, the economy would be efficient even in the presence of externalities. True or false? Explain.

2. Congratulations! You have won a holiday villa in Greenland (global warming and all that). Unfortunately, you cannot take more than $\bar{x}$ days off work which is just as well as it is not possible to visit your villa any more than this due to weather conditions. The good news is that while normally a day holiday costs p_x^0, a day at your villa will only cost $p_x^1 < p_x^0$ per day. Moreover, if you choose not to go to your villa, you can rent it out at the going daily rate of p_x^0. There are no further costs to a holiday nor are there any costs for keeping your villa out of season (your nearest neighbour is a penguin).

(a) Describe the initial budget constraint before the individual won the villa.

(b) How would his budget constraint change after winning the villa? Is it possible that the individual would choose not to use his villa for a holiday but would rather go elsewhere?

(c) Would the individual now go for more or less holiday days if holiday is a normal good?

(d) If the cost of using the villa were the same as the normal price of a holiday day, how would your answers to (b) and (c) change?

3. The competitive market for vegetables is comprised of two types of producers: large growers and small family plots in remote parts of the country. The costs of production in the small family plots are higher than those for the larger growers. However, to prevent social disintegration which might be triggered by the collapse of village life, the government decides to subsidise the small growers.

(a) What would have happened in the industry had the government not offered a subsidy to the small growers?

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(b) Critics of the government argue that the subsidy is too high and that the result of it would be that the large growers would go out of business while local communities convert their farms to grow vegetables so that they could become eligible for subsidy. Discuss this claim.

(c) Would the government be more successful in achieving its objectives had it chosen to levy a lump-sum tax on the larger grower rather than subsidise the small farms?

4. A famous gallery which houses a large exhibition of rare impressionistic paintings faces demand from tourists as well as locals. The tourists' price elasticity of demand is more inelastic than that of the locals ('there is nothing else to see in this city' and 'it is not as if we are going to come back!').

(a) Draw the demand and the marginal revenue curves facing the monopolist.

(b) Describe the circumstances in which the gallery would prefer to have only one price for everyone. Who, in such a case, would be the main objective of the admission policy?

(c) Under which condition would the gallery wish to offer a special price for locals?

(d) Identify the inefficiency that is generated by the gallery in (b) and (c).

5. (a) Show how the supply of labour is derived. Is there any reason to believe that leisure is an inferior good?

(b) Suppose now that the government proposes to give everyone a basic income irrespective of the number of hours worked and to tax wages to help fund the scheme.

i. Analyse the effect that the proposal will have on individuals' choice of leisure.
ii. What would be the effects of this on the supply of labour and equilibrium wages?
iii. Would the outcome of the deal benefit the workers?
iv. Would the economy as a whole benefit from the proposed legislation?

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SECTION B

Answer **question 6** and **one** further question from this section.

6. Answer **THREE** of the following questions.

   (a) An increase in the marginal propensity to import which is accompanied by a decrease in the rate of proportional income tax would have no effect on the slope of the IS schedule. True or false? Explain.

   (b) The marginal propensity to save is independent of whether there are lump-sum or proportional taxes. True or false? Explain.

   (c) The multiplier of a closed economy with proportional taxes is necessarily greater than that of an open economy with a lump-sum tax regime. True or false? Explain.

   (d) A monetary expansion will have no impact on a closed economy when prices and wages are perfectly flexible. True or false? Explain.

   (e) There is no 'paradox of thrift' in an open economy without capital mobility and with a fixed exchange rate regime. True or false? Explain.

   (f) A general cut in taxation in an open economy with perfect capital mobility and a flexible exchange rate policy will have no effect on domestic investment. True or false? Explain.

   (g) A fall in the government deficit which is equivalent to a fall in net exports will have no effect on domestic investment. True or false? Explain.

   (h) According to the national accounts investment always equals savings in a closed economy. In our model, only in equilibrium would savings be equal to investment. Hence, we are always in equilibrium. True or false? Explain.

   (i) Show how the price of a consol bond is determined.

   (j) Derive the deposit multiplier.

   (k) If the public chooses to increase the amount of cash they hold by 200bn, and there are no assets other than money, the total amount of deposits would decrease by less than 3000bn if the reserve ratio was 5% but there would be no change in the public's wealth. True or false? Explain.

   (l) How does the efficiency wage hypothesis relate to the Classical-Keynesian debate?

7. In a country called Ignoramia, tuition fees in higher education are very high and only a small fraction of the population stays in education after the age of 18. When the government discovered that higher education is actually productive (namely, graduates of higher education institutions have a higher productivity at the work place), it decided to scrap all higher education tuition fees and to increase the number of students.

   (a) Analyse the effect of the policy on a closed economy when prices and wages are flexible.

   (b) What will happen to the level of investment in this economy?

   (c) Will your answers change had it been an open economy without capital mobility and with a fixed exchange rate regime?

8. To increase domestic investment, the government offers tax incentives to save. Up to a certain amount (say, S), income which is directed to savings will be tax free. Assuming that the public uses this opportunity to the full:

   (a) How would the change affect the multiplier?

   (b) What would happen to output and investment?

      i. In a closed economy with fixed wages and prices.
      ii. In a closed economy with flexible wages and prices.
      iii. In an open economy without capital mobility and a fixed exchange rate.

9. Concerns have been expressed about the benefits of financial openness in an economy. The cause of these concerns was the low level of international interest rates which, it was argued, caused the economy to heat up. To counter these pressures, the government now proposes to suspend capital mobility altogether. Analyse the effects of such a move on domestic investment and output in:

   (a) A flexible exchange rate regime.

   (b) A fixed exchange rate regime.

END OF PAPER