SIM UNIVERSITY

ECO201e

Examination – July Semester 2015

Managerial Economics

Wednesday, 11 November 2015   **10:00 am – 12:00 pm**

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Time allowed: 2 hours
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INSTRUCTIONS TO STUDENTS:

1. This examination contains **FOUR (4)** questions and comprises **FOUR (4)** printed pages (including cover page).

2. You must answer **ALL** questions.

3. This is a closed book examination.

4. All answers must be written in the answer book.

At the end of the examination
Please ensure that you have written your examination number on each answer book used.

Failure to do so will mean that your work cannot be identified.

If you have used more than one answer book, please tie them together with the string provided.

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THE UNIVERSITY RESERVES THE RIGHT NOT TO MARK YOUR SCRIPT IF YOU FAIL TO FOLLOW THESE INSTRUCTIONS.

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You must answer ALL the questions. (Total 100 marks)

Question 1

(a) Use demand and supply graphs to show and explain the effects of the following events on the price and quantity of cars. Analyse each incident separately.

   (i) There is an improvement in the technology of producing cars.

   (6 marks)

   (ii) The price of petrol decreases.

   (6 marks)

(b) Discuss whether the following statements are true or false. Justify your answers.

   (i) Any point on the supply curve indicates the minimum price that a producer must receive in order to supply a specific quantity of output.

   (4 marks)

   (ii) Maximising producer surplus is the same as maximising profit.

   (4 marks)

(c) Suppose the demand schedule for a product X is as follows:

Price	Quantity Demanded
$8	40
$10	32

Use the midpoint method to calculate the price elasticity of demand for X as the price of X increases from $8 to $10. Is it wise to decrease price of X in order to earn more revenue?

   (5 marks)

Question 2

Consider a monopolist with a demand equation P = 60 - 2Q with a constant marginal cost of $20 which is equals to the average total cost.

(a)   Assume the monopolist charge a single price to all its customers. Identify the price and quantity with the aid of a suitable monopolist diagram.

(10 marks)

(b)   Identify the profit and consumer surplus of the monopolist. What can you say about the producer surplus of the monopolist?

(8 marks)

(c)   Assume that the government was to break up the monopoly, brings in competition and transform this market to perfect competition.

Compare to monopoly, identify the price, quantity and efficiency gain when this market becomes perfectly competitive.

(7 marks)

Question 3

Consider two firms, Alpha and Beta, selling differentiated cars. Each firm is contemplating whether to increase their prices or reduce their prices. If both firms raise their prices, each can earn $3 million of profit. If both lower their prices, each can earn $5 million profit. If one firm raises its price while the other firm reduces its price, the firm that raises its price will suffer a loss of $2 million, while the firm that reduces its price will earn $10 million profit.

(a)   Describe and construct the payoff matrix for this game.

(10 marks)

(b)   Establish whether dominant strategy exist for this game. Hence or otherwise, solve for the Nash equilibrium in this game.

(10 marks)

(c)   Explain whether this game is a prisoner's dilemma game.

(5 marks)

Question 4

Consider the education market of a country where the demand equation for education is given by $P = 14 - \frac{1}{2}Q$ and the supply equation of education is given by $P = 2 + Q$, where P is the price measured in thousand dollars and Q is the quantity of students measured in millions of students.

(a) If there is no government involvement and the education market is competitive, determine the equilibrium student enrollment and price of education. Use an education market diagram to explain your answers.

(10 marks)

(b) If education is able to generate positive externality, is the equilibrium quantity in answer in (a) efficient? Discuss.

(5 marks)

(c) Assume that the external benefit of education is $6000. If the government provides a subsidy of $6,000 for every students, determine the student enrollment and price of education after the subsidy. Explain your answers with the aid of a diagram.

(10 marks)

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