



University of Kelaniya – Faculty of Social Sciences

Academic Year 2017/2018

Bachelor of Arts Honors Degree Second Year

First Semester Examination- July/August 2019

Economics

ECON 31414/SOST 31434 : Intermediate Microeconomics

Answer any Four (04) Questions only.

No. of Questions: 07

Time: 03 hours

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01. Two firms produce automobiles: Toyota and Nissan, Each firm has a cost function given by

$$C(q) = 20q + q^2$$

The market demand for these cars is represented by the inverse demand equation

$$P = 200 - 2Q$$

Where $Q = q_1 + q_2$

- (a) If each firm acts to maximize its profits, taking its rival's output as given (Cournot Duopoly) what will be the equilibrium quantities selected by each firm? What is total output and what is the market price? What are the profit for each firm?

(10 Marks)

- (b) It occurs to managers of these two firms that they could do a lot better by colluding. If the firms collude, what will be the profit maximizing choices of outputs? The industry price? The output and the profit for each firm in this case?

(10 Marks)

02. (a) In with aspects monopolistic competition and perfect competition market structures are similar ? (02 Marks)
- (b) Discuss the short-run and long-run equilibrium in the monopolistic competition? (use relevant diagrams) (07 Marks)
- (c) What are the sources of inefficiency in a monopolistically competitive industry? (06 Marks)
- (d) Do you think it is a good idea to regulate the monopolistic competition ? (05 Marks)

03. (a) Show that the demand for X and Y depends of the income and price of each commodity, if the utility function is (10 Marks)

$$U(X, Y) = X^a Y^{1-a}$$

P_x = price of commodity X P_y = Price of commodity Y I = Total income

- (b) Show the duality in the consumer theory (10 Marks)
04. (a) For which of the following good is a price change increase likely to lead to a substantial income (as well as substitution) effect? (04 Marks)
- (i) Salt
 - (ii) Housing
 - (iii) Theater tickets
 - (iv) Food
- (b) Graphically explain the substitution and income effects of a price change. (05 Marks)
- (c) Derive the Slutsky Equation. (06 Marks)
- (d) Show income and substitution effect of a Giffen good. (05 Marks)

05. Kamal lives in Colombo where the probability of occurring flood is 10% .Suppose that his utility function given by $U(W) = \sqrt{W}$ where W represents total wealth. If Kamal chooses not to buy insurance next year, his wealth is Rs 500,000 if no flood occurs, and Rs. 300,000 if flood occurs. The reduction in wealth is attributable to the loss of his house due to the flood . The risky option is not buying insurance.

- (a) Is Kamal risk averse, risk loving or risk natural? (04 Marks)
- (b) Find the expected value (EV) of not buying insurance (risky option) (04 Marks)
- (c) Find the EV [U (risky option)] (04 Marks)
- (d) Find the wealth that results in the utility level associated with the expected value of utility of the risky option. (04 Marks)
- (d) Find the Risk premium. (04 Marks)

06. (a) What are the two main types of the information problem? Why are economists concerned about the problem of asymmetric information? (05 Marks)

(b) What are the expected outcomes of asymmetric information? Suggest available solutions to overcome the problems that are generated by information asymmetry. (08 Marks)

(c) Using examples, describe how Akerlof's "lemon" theory applies in all markets where asymmetric information exists between buyers and sellers.

(05 Marks)

07. (a) Describe why the firms that are in an Oligopoly market may want to form a Cartel. (05 Marks)
- (b) Using an appropriate diagram, explain how a firm is benefited by being a member of a Cartel. (05 Marks)
- (c) 'If a cartel is established it may be in the individual interests of a firm to cheat on the cartel agreement.' Comment on this statement. (05 Marks)
- (d) What is meant by antitrust laws? Why is it important for an economy? (05 Marks)