



# MACHAKOS UNIVERSITY

University Examinations for 2016/2017 Academic Year

SCHOOL OF BUSINESS AND ECONOMICS

DEPARTMENT OF ECONOMICS

SECOND YEAR FIRST SEMESTER EXAMINATION FOR DEGREE IN

BACHELOR OF ECONOMICS AND FINANCE

EET 200: MICROECONOMIC THEORY II

DATE: 2/6/2017

TIME: 2:00 – 4:00 PM

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**INSTRUCTIONS:**

**Answer Question One and Any Other Two Questions**

**QUESTION ONE (COMPULSORY) (30 MARKS)**

- a) Discuss the conditions under which a perfect competitive firm operates (5 marks)
- b) Explain why indifference curves cannot intersect (3 marks)
- c) With the aid of diagrams differentiate between perfect substitutes and perfect complements. (4 marks)
- d) What is meant by the following terms as used in economics, with the aid of a diagram:
  - i. Opportunity cost
  - ii. Isoquant
  - iii. Consumer Rationality (6 marks)
- e) Consider a monopolist facing an average revenue function given by  $P=280-4Q$ . In addition, his total cost is given by  $TC=20+10Q^2$ . Find:
  - i. His profit maximization output level ( $Q^*$ ) and the maximum profit ( $\pi^*$ ). (5 marks)
  - ii. Indicate clearly his first and second order conditions for profit maximization (4 marks)
  - iii. From your solution above, calculate the monopolist's sales maximization quantity, price and the maximum revenue (3 marks)

### QUESTION TWO (20 MARKS)

- a) What is meant by price discrimination by a monopolist? (2 marks)
- b) Discuss three conditions that favour effective use of price discrimination (6 marks)
- c) Under perfect competition market structure, and short run equilibrium, use well labelled illustrations to demonstrate a firm making;
  - i. Super normal profits (4 marks)
  - ii. Losses (4 marks)
  - iii. Zero economic profit (4 marks)

### QUESTION THREE (20 MARKS)

- a) Differentiate between normal good, inferior good and a giffen good (6 marks)
- b) Assume a consumer spends all his income in the purchase of two goods X and Y whose prices are Sh30 and Sh20 per unit respectively. The consumer's monthly income is Sh12,000. He is satisfied with the various combinations of X and Y but prefers to spend his income in equal proportions on the commodities, that is, at a ratio of 1:1 to maintain his level of satisfaction:
  - I. Using clearly labelled diagrams:
    - i) Show the relevant budget line and indifference curves indicating the equilibrium position of the consumer (3 marks)
    - ii) What is the effect of an increase in the consumer's income from Sh12,000 to Sh24,000 per month (3 marks)
  - II. Suppose X is a normal good, illustrate graphically the substitution and income effects on a fall in the price of good X (8 marks)

### QUESTION FOUR (20 MARKS)

- a) Explain the concept of Pareto optimality and derive the condition for Pareto efficient allocation assuming two goods (5 marks)
- b) State the law of variable proportions and outline its key assumptions (6 marks)
- c) Using well labelled diagram(s), illustrate the relationship between Total Product (TP), Marginal Product (MP), and Average Product (AP). Indicate economic and efficient zones respectively (9 marks)

### QUESTION FIVE (20 MARKS)

- a) Why firm's short-run and long-run costs are curves U-shaped? (4 marks)
- b) With the help of a well labelled diagram explain the relationship between average fixed cost, average variable cost, average total cost and marginal cost curves. (8 marks)
- c) Explain what economies and diseconomies of scale are. Give examples of both of these (8 marks)