



# MACHAKOS UNIVERSITY

University Examinations for 2019/2020 Academic Year

SCHOOL OF BUSINESS AND ECONOMICS

DEPARTMENT OF ECONOMICS

SECOND YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR

BACHELOR OF ECONOMICS AND STATISTICS

BACHELOR OF ECONOMICS

EET 200: MICROECONOMIC THEORY II

DATE: 22/01/2021

TIME: 2.00-4.00 PM

---

## INSTRUCTIONS:

Answer question one and any other two questions

### QUESTION ONE

- a) Explain the following economic concepts
- Marginal rate of substitution
  - Diminishing marginal utility
  - budget constraint
  - consumer equilibrium (10 marks)
- b) Suppose that the demand equation for Delmonte, a monopolist, is given by  $P = 400 - 20Q$  cost equation is given by  $TC = 500 + 20Q^2$ . Find the profit-maximizing price and output for the monopolist. (6 marks)
- c) What are indifference curves? Illustrate any three peculiar shapes that can be taken by indifference curves (6 marks)
- d) With the aid of a diagram explain the inefficiency of a monopoly when a tax is imposed on it? (8 marks)

## QUESTION TWO

- a) A firm produces candles. The market for candles is highly competitive, with candles currently selling for \$10. The firm's short-run total cost function is  $C = 200 + 0.2q$ , so its marginal cost is  $MC = 0.4q$ .
- What is the firm's profit-maximizing quantity? (4 marks)
  - Is the firm earning a profit? (5 marks)
  - What is the short-run shutdown price? (3 marks)
- b) Discuss any four sources of monopoly power. (8 marks)

## QUESTION THREE

- a) Consider a consumer who consumes two normal goods  $X_1$  and  $X_2$ . Suppose the price of  $X_1$  reduces, Use an appropriate diagram to illustrate the effect of this price changes, while separating the income and substitution effects (10 marks)
- b) Suppose now good  $X_1$  is an inferior good, explain with a diagram the effect of the price change in each of the cases (10 marks)

## QUESTION FOUR

- a) Illustrate the concept of Edge worth Box Diagram and its application (10 marks)
- b) With the aid of diagrams discuss the concept of revealed preference, strong and weak axioms of revealed preference. (10 marks)

## QUESTION FIVE

Suppose that the consumer has a demand function for good  $x$  of the form.

$$X = 10 + \frac{M}{10P}$$

Let his original income be Kshs.120 per day and let the price of good  $X$  be Ksh.3 per unit.

Required,

- Determine the demand for good  $X$  per day (6 marks)
- Suppose the price of good  $X$  falls to Ksh.2 per unit determine his new demand at his new price (7 marks)
- If the total change in demand is increased by 2 units of good  $X$  per day calculate the Substitution effect and income effect. (7 marks)