



MACHAKOS UNIVERSITY

University Examinations for 2020/2021 Academic Year

SCHOOL OF BUSINESS AND ECONOMICS

DEPARTMENT OF ECONOMICS

FIRST YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR

BACHELOR OF ECONOMICS AND STATISTICS

BACHELOR OF ECONOMICS

BACHELOR OF ARTS

EET 100: MICROECONOMIC THEORY I

DATE: 22/3/2021

TIME: 8.30-10.30 AM

INSTRUCTIONS:

- (i) Answer question one (Compulsory) and any other two questions
- (ii) Do not write on the question paper
- (iii) Show your working clearly

QUESTION ONE (30 MARKS)

- a) Distinguish between a free-market system and a command market system (10 marks)
- b) Using diagrams, explain the effect of the following factors on demand or supply curve
 - i) Increase in Income
 - ii) Increase in own price.
 - iii) Increase in cost of inputs (9 marks)
- c) With the aid of a diagram explain the concept of consumer equilibrium (5 marks)
- d) 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)

QUESTION TWO (20 MARKS)

- a) Consider a consumer who consumes two normal goods X1 and X2. Suppose the price of X1 reduces, Use an appropriate diagram to illustrate the effect of this price changes, while separating the income and substitution effects (7 marks)
- b) Suppose now good X1 is either (i) an inferior good or (ii) giffen good , explain with a diagram the effect of the price change in each of the cases (7 marks)
- c) Explain any four sources of monopoly power (6 marks)

QUESTION THREE (20 MARKS)

- a) Briefly distinguish own price elasticity and cross elasticity od demand (4 marks)
- b) Explain the main determinants of price elasticity of demand in economic decision making. (10 marks)
- c) Derive the demand curve for the following goods using the indifference curve approach;
 - i. Giffen good
 - ii. Inferior good
 - iii. Normal good (6 marks)

QUESTION FOUR (20 MARKS)

- a) Distinguish between a monopoly and monopolistic market structures. (10 marks)
- b) Given the following items calculate the TR, AR and MR. (10 marks)

| Q | P | TR | AR | MR |
|-----|-----|----|----|----|
| 20 | 120 | | | |
| 40 | 200 | | | |
| 60 | 300 | | | |
| 80 | 360 | | | |
| 100 | 400 | | | |

QUESTION FIVE (20 MARKS)

- a) Consider the cost function of Bamburi Cement Ltd given by Total cost (TC) = $4q^2 + 16$. Find the variable cost, fixed cost, average cost, average variable cost, average fixed cost and the marginal cost for Bamburi Cement Ltd. (10 marks)
- b) The following is the demand function of good y

$$Q\partial Y = 5000 - 0.5p_y - 2.3p_w + 0.2p_x + 0.000001p_z + 0.0037I$$

Suppose you are given

$$p_y = 30,000 \quad Q_y = 15,000 \quad income(I) = 60,000$$

Compute

- i) price elasticity of demand and interpret your results (4 marks)
- ii) Income elasticity of demand and interpret your results (4 marks)

From income elasticity of demand, what type of product would y be (luxury or necessity good)? (2 marks)