



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 SCIENCE (ACTUARIAL SCIENCE)

BACHELOR OF ECONOMICS & STATISTICS

BACHELOR OF ECONOMICS & FINANCE

BACHELOR OF EDUCATION (ARTS)

BACHELOR OF ECONOMICS

BACHELOR OF ARTS

EET 100: MICROECONOMIC THEORY I

DATE: 10/8/2021

TIME: 2:00 – 4:00 PM

INSTRUCTIONS TO CANDIDATES

Answer Question **ONE** and any other **TWO** questions

QUESTION ONE (COMPULSORY) (30 MARKS)

- a) Write short notes on the following (6 marks)
- i. Scarcity and choice
 - ii. Opportunity cost
 - iii. The production possibility frontier
- b) Using diagrams, explain the effect of the following factors on demand or supply curve
- i) Increase in Taxation
 - ii) Decrease in Complimentary good
 - iii) Increase in population (9 marks)
- c) Distinguish between a monopoly and monopolistic market structures. Highlight the main sources of monopoly (9 marks)

- d) The following is the demand function for good x

$$Q_x = 180 - 4P_x + 3P_y$$

Where Q_x is the quantity demanded of good x

P_x is the price of good x

P_y is the price of good y

Suppose $P_x=10$ and $P_y=20$

Calculate own price elasticity of demand and cross price elasticity of demand and interpret your results (6 marks)

QUESTION TWO (20 MARKS)

- a) Define the law of diminishing returns and explain its assumptions (4 marks)
- b) Briefly explain the factors that affect own price elasticity of demand for a commodity (8 marks)
- c) Briefly explain the application of the concept of indifference curve analysis. (8 marks)

QUESTION THREE (20 MARKS)

- a) $P = 10 - 2Q$, $TC = 2.5Q$ where P is the demand function, TC is the total cost and Q is the quantity produced and sold. Calculate;
- Total revenue function (2 marks)
 - The output maximizing the revenue (2 marks)
 - The output maximizing the profit and hence the maximum profit. (4marks)
- b) Distinguish between ordinal and cardinal approach in consumer theory. Highlight the assumptions of cardinal theory of consumption. (12 marks)

QUESTION FOUR (20 MARKS)

- a) Briefly discuss characteristics of perfect competition and explain why individual firms are price takers. (10 marks)

b) Discuss the sources of internal and external economies of scale with examples.

(10 marks)

QUESTION FIVE (20 MARKS)

a) Consider the production data below where labour is the variable factor of production:

Labour (hrs)	Total Physical Products
2	28
4	35
6	49
8	72
10	113
12	148
14	162
16	179
18	182
20	180

Find the average physical products and marginal physical products at each level of labour.

(8 marks)

b) Consider a consumer with two normal goods X1 and X2. Suppose the price of X1 reduces, use an appropriate diagram to illustrate the effect of price change

(6 marks)

c) Distinguish between a free-market system and a command market system.

(6 marks)