



Kasarani Campus
Off Thika Road
Tel. 2042692 / 3

49274, 00100

P. O. Box

NAIROBI
Westlands Campus
Pamstech House
Woodvale Grove
Tel. 4442212
Fax: 4444175

KIRIRI WOMENS' UNIVERSITY OF SCIENCE AND TECHNOLOGY
UNIVERSITY EXAMINATION, 2023/2024 ACADEMIC YEAR
SECOND YEAR FIRST SEMESTER EXAMINATION
FOR THE DEGREE OF BACHELOR OF SCIENCE
(BUSINESS ADMINISTRATION)

Date: 11th August, 2023
Time: 2.30pm –4.30pm

KFI 201 - INTERMEDIATE MICRO-ECONOMIC THEORY

INSTRUCTIONS TO CANDIDATES

ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO QUESTIONS

QUESTION ONE (30 MARKS)

Paul Samuelson was an American economist who was the first American to win the Nobel Memorial Prize in Economic Sciences. When awarding the prize in 1970, the Swedish Royal Academies stated that he "has done more than any other contemporary economist to raise the level of scientific analysis in economic theory". Economic historian Randall E. Parker has called him the "Father of Modern Economics", and The New York Times considers him to be the "foremost academic economist of the 20th century. The theory of the budget line was first introduced by Paul Samuelson in his book "Foundations of Economic Analysis" in 1947.

- i) According to Paul Samuelson's assertion on the budget line, derive and explain the slope of a budget line. (6 Marks)
- ii) In line with Paul Samuelson's explanation on consumer behaviour, explain the three assumptions of consumer preferences. (6 Marks)
- iii) In line with the consumer theory by Paul Samuelson, Using a CD utility function of the form $U = X_1 X_2 = X_1 X_2$ obtain the demand functions for the optimal choice bundle. Expenditure function is given by $P_1 X_1 + P_2 X_2 = M$. (6 Marks)
- iv) The economic theory book of Paul Samuelson on the 'History of Economic Analysis' was edited by Steven G. Medema, University of Colorado, Denver, Anthony M. C. Waterman, University of Manitoba, Canada in an online journal titled 'The Monopolistic Competition Revolution from Part IX - Revolutions in Twentieth-Century Economics' published by Cambridge University Press: 05 November 2014. Using examples and in line with the publication, explain three

conditions for price discriminating monopolist.

(6 Marks)

- v) As expounded by Paul Samuelson and other economists on economic theory, illustrate and explain the consumer equilibrium. (6 Marks)

QUESTION TWO (20 MARKS)

- a) Illustrate the concept of Edgeworth Box Diagram and its application. (8 Marks)
- b) Define monopoly and explain the sources of monopoly power. (8 Marks)
- c) Explain the following terms;
- i) Monopolistic market
 - ii) Substitution effect (4 Marks)

QUESTION THREE (20 MARKS)

- a) Differentiate between the weak axiom of revealed preference and the strong axiom of revealed preference. (8 Marks)
- b) Explain the concept of budget constraint. (6 Marks)
- c) Explain the following terms as used in economic theory
- i) The marginal product
 - ii) The technical rate of substitution
 - iii) Diminishing technical rate of substitution (6 Marks)

QUESTION FOUR (20 MARKS)

- a) A firm produces 2 products. The demand function for one product is $Q_1=491/3-2/3P_1$. While the demand function for product 2 is $Q_2=36-1/2P_2$ If the total cost function is given as $C=Q_1^2-2Q_1Q_2-Q_2^2+120$. Determine the Q_1, Q_2, P_1, P_2 that maximizes the profit of the firm hence the maximum profit realized. (8 Marks)
- b) Using proper diagrams differentiate and explain the shapes of indifference curves for perfect substitutes and imperfect substitutes. (8 Marks)
- c) Describe two conditions necessary for price discrimination to occur. (4 Marks)

QUESTION FIVE (20 MARKS)

- a) Using illustration, derive the profit maximization condition for a competitive market firm. (8 Marks)
- b) Describe any two types of monopoly. (4 Marks)
- c) The demand function of a monopoly is $Q=50-0.5P$ and the cost function $C=50+40Q$.

- i) Determine the price and output level that maximizes the monopolist profit (4 Marks)
- ii) Assume a competitive market. Determine the price and output level that maximizes the profit. (4 Marks)