



**MASINDE MULIRO UNIVERSITY OF
SCIENCE AND TECHNOLOGY
(MMUST)
SCHOOL OF AGRICULTURE, VETERINARY SCIENCES AND
TECHNOLOGY (SAVET)**

MAIN CAMPUS

**UNIVERSITY EXAMINATIONS
2023/2024 ACADEMIC YEAR SEMESTER TWO**

**MAIN EXAMS
OF
BSc. AGRICULTURE EDUCATION AND EXTENSION, BSc.
AGRICULTURE ECONOMICS AND RESOURCE MANAGEMENT AND
BSc. AGRIBUSINESS MANAGEMENT**

COURSE CODE: ^{AEC}ACE 482/425

COURSE TITLE: PRODUCTION ECONOMICS

DATE: 18/4/2024

TIME: 12-2 PM

INSTRUCTIONS TO CANDIDATES

This paper is divided into two sections, **A and B**. Answer ALL Questions in SECTION A and any Two in SECTION B

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of 2 Printed Pages. Please Turn Over

Time: 2 hours

SECTION A

- Q1 (a) Explain the relevance of economics of scale in agriculture economics (3 marks)
- (b) Describe the two types of economics of scale? (6 marks)
- (c) Explain the uniqueness of the nature of agricultural production (6 marks)
- Q2 (a) Describe the short run production function (5marks)
- (b) Explain the three regions of the short term production function and how they guide the farm manager in production decision making? (10marks)

SECTION B

Q3 Draw graphs to demonstrate:

- (a) The relationship between marginal and average products and explain how they are used in production decision making? (4 marks)
- (b) The effect of changes in income on the isocost curve and explain how the changes influence production decisions in each scenario? (4 marks)
- (c) Explain the process of cost minimization using the isocost and isoquant curves and the least cost recipe? (4 marks)
- (d) Using isoquant maps demonstrate the concept of constant returns to scale? (4 marks)
- (e) Explain how the concept of marginal cost and marginal revenue help managers in determining the profit maximizing level of production? (4 marks)
- Q4 (a) What factors determine labor supply? (4 marks)
- (b) State and briefly explain the factors of production? (6 marks)
- (c) Using sketch diagrams describe the two approaches to profit maximization? (10 marks)
- Q5 (a) Use the diagram below to explain cost minimization and output maximization (10marks)

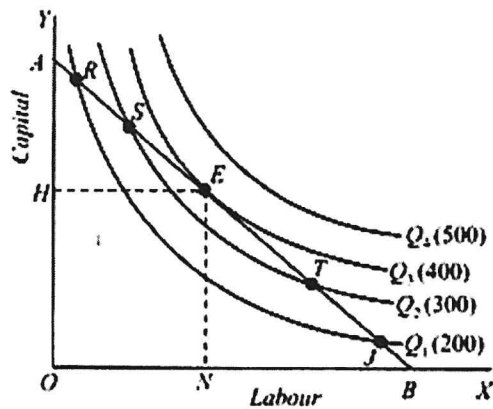


Fig. 18.6. Output-maximisation for a given cost.

(b) Describe the two concepts of profit (4marks)

(c) Briefly explain the three functions of profit? (6 marks)

Q6 (a). A farm manager has a machine A with the following details: Purchase price of machine A = \$10 000; Immediate resale value = \$9 600; Resale value if machine A which has been lying idle for a year = \$8 000; Resale value of machine A after operating for a year = \$4 000; Additional operating expenses of machine A (e.g., labour cost) = \$1 000. Calculate the following costs:

1. Acquisition cost? (2 marks)
2. Continuing possession cost? (2 marks)
3. Operating cost? (2 marks)

(b) Explain how the question “for whom to produce” is answered in a market economic organization? (5 Marks)

(c) Supposing the law of diminishing returns did not apply;

- (i) What would happen to productivity of for example land? (3 marks)
- (ii) What would happen to the price of the factor of production e.g. land? (3 marks)
- (iii) Would be factor be scarce or less scarce? (3 marks)