



MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY (MMUST)

UNIVERSITY EXAMINATIONS

ACADEMIC YEAR: 2022/2023

FOURTH YEAR FIRST SEMESTER MAIN EXAMINATION FOR THE DEGREES OF
BSc. AGRICULTURE EDUCATION AND EXTENSION

COURSE CODES: AEC 482

COURSE TITLE: PRODUCTION ECONOMICS

DATE;24/04/ 2023 TIME: ...8-10 AM.....

INSTRUCTION TO CANDIDATES

- Answer **ALL** questions in section **A** and any **Two** questions in section **B**

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-term 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)**

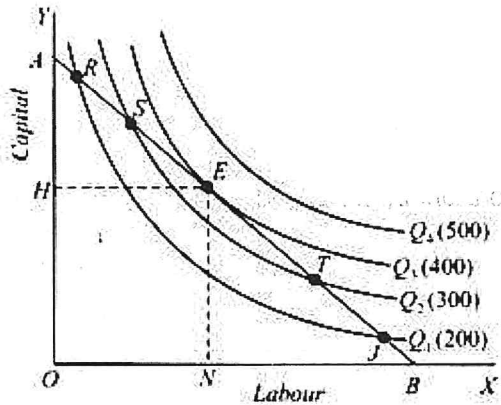


Fig. 18.6. Output-maximisation for a given cost.

(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)