



(Knowledge for Development)

KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS

2017/2018 ACADEMIC YEAR

SECOND YEAR SECOND SEMESTER

SPECIAL/SUPPLEMENTARY EXAMINATION

**FOR THE DEGREE OF BACHELOR OF SCIENCE IN
AGRICULTURAL ECONOMICS AND RESOURCES MANAGEMENT**

COURSE CODE: IAE 285

COURSE TITLE: PRODUCTION ECONOMICS

DATE: 12TH OCTOBER 2018

TIME: 8 – 10 AM

INSTRUCTIONS TO CANDIDATES

Answer Question ONE and any other TWO questions.

TIME: 2 Hours

This paper consists of **THREE** printed pages. Please Turn Over. 

1. a) Describe the three stages of classical production functions. (3 marks)
- (a). Explain any **FOUR** factors that determine the product combination. (4 marks)
- (b). Explain **FIVE** factors that influence the value of land in an area. (5 marks)
- (c). (i) Define the term Isoproduct Curve (2 marks)
- (ii) Explain four characteristics of isoproduct curves. (4 marks)
- (d). Explain the following types of functions return relationships.
- (i) Constant Marginal Rate of returns (2 marks)
- (ii) Increasing Marginal Rate of returns (2 marks)
- (iii) Decreasing Marginal Rate of returns (2 marks)
- (e). Consider a cost function TC (Total Cost) = $200+12Y-0.08Y^2+0.12Y^3$.
- Compute:
- (i) Total Fixed Cost & Average Fixed Cost functions. (2 marks)
- (ii) Total Variable Costs & Average Variable Cost functions. (2 marks)
- (iii) Marginal Cost function. (2 marks)
2. The following table shows the number of units produced (Q), total revenue (TR), and the total cost (TC) of a product in a small firm.

Q (Kg)	TR (Kes)	TC (Kes)
100	1000	900
200	1800	1100
300	2400	1400
400	2800	1800
500	3000	2300
600	3000	2900
700	2800	3600
800	2400	4400

- (a). From the above data, determine the firm's optimal size of production. (10 marks)
- (b). Determine the firm's profit at the optimal level of production. (10 marks)
3. a) Explain any **FIVE** types of risks and uncertainties in smallholding dairy farming in Kenya. (10 marks)
- b) Explain how smallholding dairy farmers can manage the risks named in 3 (a) above (10 marks)

4. (i) With the aid of a diagram, explain the concept of a firm's least cost factor combination. (5 marks)

(ii). Explain the following relationship in production economics:

a) Factor – product relationship (5 marks)

b) Factor - factor relationship (5 marks)

c) Product –Product relationship (5 marks)