

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF
SCIENCE AGRIBUSINESS MANAGEMENT

AGEC 241: PRODUCTION ECONOMIC

STREAMS: AGBM (Y2S2) (PART/TIME)

TIME: 2 HOURS

DAY/DATE: WEDNESDAY 27/12/2023

2.30 P.M. – 4.30 P.M.

INSTRUCTIONS

- Answer all questions in section A and any three in section B
- Answer each question on a separate page

SECTION A**Question one**

- a) Discuss three technologies that farmers can use in ensuring efficiency in agricultural production. (3 marks)

- b) Given the production function

$$Y = 6x + 0.04x^2 - 0.004x^3$$

- i) Complete the table below. (4 marks)

Input (x)	Output (Y)	Average physical product (APP)	Exact Marginal physical product (MPP)
0			
10			
20			
30			
40			
50			
60			
70			
80			

- ii) Plot Y against X (4 marks)
- iii) On the same page below the graph in (ii) above and using the same horizontal axis scale, plot APP and MPP against X. (5 marks)
- c) Discuss the concept of variable cost (VC) and give two examples that a farmer can incur. (3 marks)
- d) Discuss the three types of eventualities that affects agricultural products which have a bearing on the plans for the future production activities. (6 marks)

SECTION B

Question two

- a) A farmer has to incurs total fixed cos of Ksh 150 for production in his farm. Determine the total cost, total revenue and profit at each level of inputs (X) and output (Y) (10 marks)

Output (Y)	X	TVC	TFC	TC	TR	PROFIT
0	0	0				
100	11.6	58.00				
200	17.6	88.00				
300	22.8	114.00				
400	28.0	140.00				
500	34.5	172.50				
600	43.9	219.50				
700	57.8	289.00				
800	90.0	450.00				
810	100	500				

- b) Explain the five types economies and diseconomies of scales in Agriculture. (5 marks)

Question three

- a) Explain the seven characteristics of production function. (7 marks)
- b) Discuss four factors of production that influence the productivity of a farmer. (8 marks)

Question four

- a) Discuss three production time periods giving each its characteristic. (8 marks)

- b) Discuss the three stages of production function and their importance in efficient resource usage. (7 marks)

Question five

- a) Discuss five decisions that a farmer has to make to ensure they achieve efficiency, minimized cost and increased outcome. (10 marks)
- b) Discuss the five risks and uncertainties embedded in agriculture. (5 marks)
-