

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

THIRD YEAR EXAMINATION FOR THE AWARD OF DEGREE  
OF BACHELOR OF SCIENCE IN AGRICULTURAL ECONOMICS

AGEC 344: FARM MANAGEMENT APPLICATIONS

STREAMS: BSC (AGEC) Y3S2

TIME: 2 HOURS

DAY/DATE: THURSDAY 06/04/2020

11.30 A.M. – 1.30 P.M.

**INSTRUCTIONS:**

- Answer question ONE and any other THREE questions
- Do not write on the question paper

**QUESTION ONE (25 MARKS)**

- (a) Discuss the nature and characteristics of agriculture production in Kenya citing examples [4 marks]
- (b) Explain uses of gross margin in farm business management [3 marks]
- (c) Differentiate between the following:
- (i) Explicit and implicit agricultural systems [2 marks]
  - (ii) Deterministic and stochastic agricultural systems [2 marks]
  - (iii) Supplementary and complementary enterprises [2 marks]
- (d) Define the following terms as used in agricultural farming systems:
- (i) Comparative advantage [2 marks]
  - (ii) Farm management [2 marks]
  - (iii) Farm gross margin [2 marks]
- (e) Examine four tips for profit making in livestock enterprises. [4 marks]
- (f) Explain two major challenges facing farmers today [2 marks]

**QUESTION TWO (15 MARKS)**

- (a) In developing countries accessing adequate and functional internet services and other ICT facilities are among the major concerns to farmers both in the rural and urban areas.

Discuss six benefits associated with the application of ICT in farm management.

[6 marks]

- (b) A livestock farmer, in Chuka, Tharaka Nithi County is considering whether to go into production of poultry or rabbitry. Given the information below what advice would you give him based on the gross margin analysis?

	Poultry per year (kshs)	Rabbit per year (kshs)
Equipment	18,000	10,800
Labour costs	36,000	24,000
Feed cost	120,000	96,000
Drugs	24,000	6,000
Utilities – light	6,000	2,400
– water	8,400	3,600
Eggs sale	480,000	
Chicken sale	108,000	
Rabbit for meat		540,000
Empty feed bad sale	12,000	3,600

If the farmer can use a different breed of poultry that will increase the value of egg sale by 5%, which enterprise would you advise him to denote his resources to? [9 marks]

**QUESTION THREE (15 MARKS)**

- (a) A farmer has the following enterprises,  
 1 Hectare land bought from the neighbor @ ksh 100,000, maize is grown in 2 acres and the rest has beans. The cost of maize production was follows.
- (i) 100 kg DAP fertilizer @ ksh 3,000 / 100 kg
  - (ii) 100 kg CAN fertilizer @ 1600 / bag
  - (iii) 100 ml pesticide for ksh 1200
  - (iv) Maize seed 20 kilo @ ksh 450 per 2 kg packet

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- (v) Gunny bags 40 @ ksh 50 / bag
- (vi) 20 work man days @ 200 per person
- (vii) Cost of harvesting and threshing ksh 1000 per acre

### Other costs

- (i) Transportation cost of maize used by farmer from the farm to the market at ksh 1000
- (ii) Storage cost ksh 500
- (iii) Dusting kshs 400

Total harvest for two acres was 40 bags

The farmer sold the maize stalk to a livestock farmer @ 1500 per acre and 40 bags of maize @ kshs 2500

Calculate the maize gross margin per acre and state whether the project is viable

[12 marks]

- (b) Explain the three types of farm enterprises in relation to relative contribution to the farm income and resource allocation [3 marks]

### QUESTION FOUR (15 MARKS)

- (a) Explain five structural elements applied specifically to a farm household system of order level 12 [10 marks]
- (b) Explain five advantages of keeping farm records [5 marks]

### QUESTION FIVE (15 MARKS)

- (a) Explain three classifications of agricultural farming systems [9 marks]
- (b) Use the table below to:

	Wafula	Tarus
Maize kg/ha	6.8	1.06
Rice kg/ha	2.0	1.43

Calculate the relative and absolute advantage between these crops and explain the results

[6 marks]