

P515/2
PRINCIPLES AND
PRACTICES OF
AGRICULTURE
Paper 2
AUGUST, 2023
3 hours



JINJA JOINT EXAMINATIONS BOARD

Uganda Advanced Certificate of Education

MOCK EXAMINATIONS – AUGUST, 2023

PRINCIPLES AND PRACTICES OF AGRICULTURE

THEORY

Paper 2

3 hours

INSTRUCTIONS TO CANDIDATES:

Answer question 1 in section A and four other questions selecting at least one from each of the sections B,C,D and E.

SECTION A: (20 MARKS)**Question 1 is compulsory**

1. The table below shows the effects of feed amount on the average butter fat content of milk, average milk yield per week and live weight for three breeds of dairy cows.

Feed amount (Kilograms)	Butter fat content (%)	Total milk yield litters per week	Live body weight (kg)		
			A	B	C
40	1.5	60	122	83	103
70	7.9	110	134	96	114
100	14.3	163	156	100	124

- (a) Basing on the information in the table, explain the effects of feed amount on
- (i) Butter fat content. (3 marks)
 - (ii) Live body weight. (3 marks)
 - (iii) Milk yield. (3 marks)
- (b) Explain the factors that affect the quality of milk produced by a cow. (4 marks)
- (c) What are the qualities of good milk for human consumption? (4 marks)
- (d) In what ways can milk quality be maintained before marketing? (3 marks)

SECTION B (20 MARKS)**CROP PRODUCTION**

Answer one question from this section

2. (a) Explain the following in farming
- (i) Urban farming. (2 marks)
 - (ii) Peri-urban farming. (2 marks)
 - (iii) Organic farming. (2 marks)
- (b) Explain the farming practices that promote sustainable agriculture. (14 marks)
3. (a) What are the effects of soil erosion in farming? (6 marks)
- (b) Explain the mechanical methods of soil and water conservation. (14 marks)

SECTION C (20 MARKS)
ANIMAL PRODUCTION

Answer one question from this section

4. (a) What factors may encourage hive colonization by bees? (4 marks)
 (b) Explain the practices that can be carried out to improve the level of honey production in bees. (12 marks)
 (c) Outline the advantages of using top bar hive in bee rearing. (4 marks)
5. (a) State the causes of disease outbreak in poultry. (6 marks)
 (b) What are the signs of new castle disease in poultry birds? (5 marks)
 (c) Explain the factors that a farmer should consider when selecting a poultry breeding stock. (9 marks)

SECTION D (20 MARKS)
AGRICULTURAL ENGINEERING
Answer one question from this section

6. (a) State the qualities of a good wood preservative. (6 marks)
 (b) Describe the following methods of preserving wood for farm use
 (i) **End diffusion treatment** (7 marks)
 (ii) **Hot and cold soaking** (7 marks)
7. (a) What are the desirable qualities of a good draft animal? (6 marks)
 (b) Outline the advantages of using animal draught technology. (5 marks)
 (c) Suggest ways of ensuring efficient working of draft animals. (9 marks)

SECTION E (20 MARKS)
AGRICULTURAL ECONOMICS
Answer one question from this section

8. (a) Briefly explain the following (4 marks)
 (i) **Land adjudication.**
 (ii) **Land registration.**
 (iii) **Settlement.**
 (iv) **Re-settlement.**
 (b) Suggest ways through which settlement and re-settlement schemes increase agricultural production. (4 marks)
 (c) Explain the causes of land conflicts among farmers in Uganda. (12 marks)
9. (a) What is **agricultural development**? (02marks)
 (b) Explain the roles of the following in agriculture development.
 (i) National Agricultural advisory service (NAADS). (05marks)
 (ii) National Agricultural research organization (NARO). (05 marks)
 (c) Suggest measures that can be adopted to improve the efficiency and effectiveness of the NAADS program in Uganda. (10 marks)