

**P515/2
PRINCIPLES
AND PRACTICES
OF AGRICULTURE
PAPER 2
August 2016
3 hours**



WAKISSHA JOINT MOCK EXAMINATIONS

Uganda Advanced Certificate of Education

PRINCIPLES AND PRACTICES OF AGRICULTURE

Paper 2

3 hours

INSTRUCTIONS TO CANDIDATES:

- This paper consists of sections A, B, C, D and E.
- Answer Question 1 in section A and four other questions selecting one question from each of the sections B, C, D and E.
- Any additional question(s) answered will not be marked.

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Turn Over

SECTION A (20 MARKS)

Question 1 is compulsory

1. In an experiment, maize grains were soaked in different concentrations of solution X and Y for 24 hrs. In the control experiment, the seeds were soaked in distilled water for the same period. The seeds were placed in moist cotton wool in different Petri dishes. They were left to germinate and grow for 10 days after which the percentage germination was determined. Also the average length of shoots and roots were determined.

Concentration of solutions	% germination		Shoots (cm)		Roots (cm)	
	X	Y	X	Y	X	Y
80	35	00	03	00	10	00
60	50	00	05	00	15	00
40	75	15	10	05	20	05
20	85	45	15	10	35	15
10	90	90	20	15	40	45
Distilled water	98	98	30	30	65	65

- (a) What is the effect of solutions X and Y on;
- Germination of the maize grains (03 marks)
 - Growth of maize seedlings (03marks)
- (b) Compare the growth of seedlings whose grains were previously soaked in 80% and 10% of solution Y. Explain your answer (04marks)
- (c) (i) Explain how the germination test in this experiment could have been carried out. (04marks)
- From the results shown in table, what conclusions can be drawn about solutions X and Y? (02marks)
- (d) Explain other factors that can influence the germination efficiency of seeds. (04marks)

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SECTION B (20 MARKS)

CROP PRODUCTION

2. (a) What is meant by Organic farming. (02 marks)
- (b) What are some of the benefits of encouraging organic farming? (10 marks)
- (c) Suggest the practices that promote organic farming. (08 marks)
3. (a) Explain ways of controlling pests in crop stores. (02 marks)
- (b) Explain why pests like American boll worm are difficult to eradicate from crop fields. (08 marks)
- (c) What are the desirable qualities of a good pesticide? (04 marks)

SECTION C (20 MARKS)

ANIMAL PRODUCTION

4. (a) Outline the advantages of the Top Bar Hive (KTB) and the disadvantages of the traditional log hive. (08 marks)
- (b) Explain the factors considered when choosing a site for an apiary. (08 marks)
- (c) Outline the factors which affect the quality of honey. (04 marks)
5. (a) Distinguish between Infectious and Contagious diseases in cattle. (02 marks)
- (b) Explain the predisposing factors for most livestock diseases. (12 marks)
- (c) What is the importance of ensuring good health of livestock (06 marks)

SECTION C (20 MARKS)

AGRICULTURAL ENGINEERING

6. (a) Differentiate between energy and power as used in farm mechanization. (02 marks)
- (b) What factors influence the adoption of draught technology as a source of farm power. (14 marks)
- (b) How can a farmer achieve excellent power output from a draught animal? (04 marks)
7. (a) Describe how tick control is achieved through dipping. (14 marks)
- (b) What factors limits the wide spread use of dip tanks on most farms? (06marks)

SECTION D (20 MARKS)

AGRICULTURAL ECONOMICS

8. (a) What is meant by Agricultural Policy? (02 marks)
- (b) What are the roles of agricultural research stations in agricultural development in Uganda? (12 marks)
- (d) Identify the challenges that have hampered the success of NAADs in Uganda today. (06 marks)
9. (a) Describe the factors you would consider before establishing an agricultural business in an area. (12marks)
- (b) Explain the remedies you are likely to take in order to counteract the various risks and uncertainties you are likely to face in your agricultural business. (08marks)

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