STUDENTS NAME: …….

SCHOOL NAME: …… RANDOM NUMBER …….

P515/3
PRINCIPLES AND PRACTICES
OF AGRICULTURE
(Practical)
Paper 3
July/Aug. 2022
3 hours.

AITEL JOINT MOCK EXAMINATIONS

Uganda Advanced Certificate of Education

PRINCIPLES AND PRACTICES OF AGRICULTURE
(PRACTICAL)
Paper 3
3 Hours

INSTRUCTIONS TO CANDIDATES:
This paper consists of **five** *questions.*
Answer **all** *questions.*
All answers are to be written in the spaces provided.

FOR EXAMINER'S USE ONLY

QUESTION	MARKS	EXAMINER'S SIGNATURE & NO.
Qn. 1		
Qn. 2		
Qn. 3		
Qn. 5		
Qn. 5		
Total		

1. You are provided with specimen A which is a solution of a fertilizer. You are required to carry out a test on A to establish the identity of the major nutrient content.
Use Iron-II Sulphate solution and concentrated Sulphuric acid.
a) i) Describe your procedure and carry out the test, record observation(s) and conclusion in the table below; (03½ marks)

Procedure	**Observation (s)**	**Conclusion**

ii) From the conclusion made in (i) above, identify the major nutrient contained in the fertilizer. (0½ mark)

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b) The fertilizer used to make specimen A contains 46% of the major nutrient identified per 50kg bag. If the recommended rate of application of the nutrient is 75kg/ha for maize, how many bags of the fertilizer will the farmer apply on 10 ha? (03 marks)

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c) Explain why maize plants may poorly respond to application of the above quantity of fertilizer. (03 marks)

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2. You are provided with specimen **B_1** and **B_2** which are soil samples. Carry out an experiment to determine the PH of each sample using litmus papers.
a) Describe your procedure, state the observation(s) and conclusion in the table below.

Specimens	**Procedure**	**Observation (s)**	**Conclusion**
B_1			
B_2			

b) Basing on the results from the experiment in (a) above, suggest a possible cause of the condition of each specimen. (01 mark)

B_1

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B_2

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c) How can the condition of each specimen be modified to suit crop production? (01 mark)

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d) How does the condition of each specimen affect crops? (02 marks)

B_1

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B_2

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3. Specimens **C**, **D** and **E** are samples of ingredients that can be used to formulate livestock rations. Observe them carefully and answer the following questions.

a) What is the most important food nutrient looked for in each of the specimens? (01½ marks)

C

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D

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E

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b) Describe how specimen **E** is prepared. (01½ marks)

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c) Suppose specimens **C** and **D** have crude protein contents of 8% and 36% respectively. In what proportions would you mix these ingredients so as to make a ration containing 16% crude protein, if specimen **E** is to be added at the level of 2.5%? (04 marks)

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d) Describe how you will hand mix the above ingredients while preparing the ration. (03 marks)

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4. You are provided with plants **F** and **G** which are common crops.

a) i) Examine them and describe how they differ. (03 marks)

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ii) Using the features in (i) above, identify the botanical families to which each belongs. (01 mark)

F

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G

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b) With the aid suitable feature(s), explain how each can help in soil conservation. (03 marks)

F

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G

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c) With the aid of explanations, which crop would you intercrop in a garden of banana? (03 marks)

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5. You are provided with specimens **H, I, J, K, L, M** and **N** which are used to establish a farm structure.

a) Describe how the specimens can be used to establish a cattle crush. (03½ marks)

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b) Explain how the design of specimen **J** and **M** suit their functions. (02 marks)

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Turn Over

c) A farmer wishes to establish a crush that can handle 8 cattle at ago. If the space requirement per animal is 1.5m, and the spacing between specimen **I** is 1.5m, Calculate the quantity of specimen I that he will need. (02 marks)

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d) Measure and record the length of **H**. If 3 horizontal rows of **H** are to be put, how many pieces of **H** will the farmer use? (02½ marks)

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END