527/1 AGRICULTURE

> Paper 1 (Theory) July, 2025 2 ½ hours



MATIGO EXAMINATIONS BOARD

MOCK EXAMINATIONS

Uganda Certificate of Education

AGRICULTURE

Paper 1

(Theory)

2 hours 30 minutes

INSTRUCTIONS TO CANDIDATES:

This paper consists of six examination items. It has two sections; A and B.

Section A has two compulsory items.

Section B has two parts; I and II. Answer one item from each part.

Answer four examination items in all.

Any additional item(s) answered will **not** be scored.

All answers **must** be written in the Answer booklet(s) provided.

SECTION A

SOIL SCIENCE AND VALUE ADDITION

Answer all items in this section.

Item 1

The Kira Meat Packers Association (KMPA) supplies sausages that, when bitten, have a slightly bony texture. Additionally, their chicken meat contains excess fat, causing customer complaints. During their recent Annual General Meeting, the agenda included a speech by the chairperson, the introduction of new members, and an opening prayer. KMPA has identified young people aged 18 to 30 in urban centers as their key market for sausages. However, many in this age group are unaware of the association's products. The members are looking for the best strategies to reach these youths and boost sales. Some members with individual bank accounts in Equity Bank are worried because only some receive interest payments at year-end, while others do not.

Tasks:

- (a) Develop a step-by-step set of guidelines KMPA can follow to produce quality chicken sausages and rebuild customer trust.
- (b) Write a message to sensitize KMPA members on good business practices and ways to increase income and youth market reach.

Item 2

Lumbuye hired a piece of land for two years and began planning which crops to grow. He collected soil samples from areas rich in well-decomposed organic matter. While preparing the land to plant eucalyptus seedlings, he noticed many earthworms and sprayed them using a pesticide to protect the seedlings. He received two types of fertilizer: phosphatic and nitrogenous, but he is unsure when to apply each. After a morning rain, it took two days for the water to dry from the field. His goal is to grow eucalyptus trees for electric poles, which take about 15 years to mature. Fertilizers that supply phosphorus promote strong root development, while those supplying nitrogen enhance foliage growth.

Task

Suggest practical solutions to help Lumbuye make the most productive use of his soil and land.

SECTION B

This section has two parts; I and II

PART I: ANIMAL PRODUCTION

Answer **one** item from this part.

Item 3

Kasongo is a rabbit breeder in Sembabule District. His son was observed carrying a male rabbit by its ears while taking it to the female's cage for mating. In one hutch, bunnies aged about eight weeks were feeding alongside their mother, who was three weeks pregnant. Some of the bunnies were feeding on pellets while others were suckling. One of the newly bought female rabbits has given birth to dead bunnies twice so far. Additionally, all his female giant breed rabbits had unusually large tails that completely covered their hindquarters. The young rabbits had been feeding on rabbit pellets, fresh sweet potato vines, and maize bran mixed with silverfish meal. During slaughter, Kasongo tied the front and hind legs of the rabbit before immediately cutting off the head. He then removed the skin, which appeared dry and had plenty of meat pieces attached to it. Research shows that male rabbits are more comfortable and active within their own territories, and that rabbits should only be fed plant-based proteins and feeds of very low moisture content.

Task:

How can Kasongo improve and increase the efficiency of his rabbit farming business?

Item 4

Betty is a prominent goat farmer in Kyenjojo District. All her equipment, including milking tools, spades for manure collection, and hand hoes, are stored together in the same place. The kraal where the goats stay was observed to be surrounded by water for over 8 hours after rains. Goats are sprayed against ticks by sprinkling using a broom. Early in the morning, goats are sometimes seen standing in the pasture field. Several goats become pregnant at different times, which raises concerns about the bucks involved. On some goats' hindquarters, marks from strokes are noticeable. During milking, goats sometimes kick the milk bucket, causing milk to spill. To reduce friction and protect the teats during milking, Betty applies cooking oil on her fingers. Betty's

farm is located in an area frequented by many stray animals, including other livestock and dogs wandering freely around the land. Additionally, during milking, small dung particles are sometimes observed, indicating hygiene concerns.

Task:

What advice would you give to Betty to help her sustain her goat-rearing enterprise and enhance productivity?

PART II: CROP PRODUCTION

Answer one item from this part

Item 5

Majambere, a young farmer from Luwero District, proposed a project to grow pineapples for a nearby juice processing plant. After planting, certain patches in the field remained bare longer than others, with some shoots slow to emerge or failing to develop fully. In some areas, neighboring pineapples were seen with leaves crossing over from one plant to another. Several plants showed multiple small shoots at their bases, while others appeared thin and less vigorous. Within the folded leaves of some plants, faint traces of a sticky substance were found, along with tiny moving dots barely visible to the naked eye. He tried uprooting and digging out weeds, but the thorny mature pineapples made it very difficult. After spraying a fungicide to control diseases, he experienced severe sneezing, headaches, and coughing. He harvested the pineapples while their skin was still mostly green and hard, with crowns stiff and tightly upright. During harvesting, Majambere struggled to hand-twist the fruits from the base. On average, he managed to harvest about 10 pineapples per hour. At harvest, fruits displayed noticeable differences in shape, size, and taste.

Task:

What corrective actions should Majambere consider to improve pineapple production?

Item 6

Akot's passion for farming cassava was clear in the green hills of Lira District. She obtained a cassava variety that takes only 270 days to mature and is highly yielding. The field was littered with big soil clods and sachets and bottles of used pesticides scattered around. The cuttings she sourced looked shriveled, discolored, cracked, and four days later, under storage, a few had already sprouted. As the season progressed, the crop grew unevenly. Some plants looked healthy, while others struggled to develop despite the fertile soils. Throughout the field, unfamiliar broad-leafed, thin-stemmed plants spread quickly. Akot also noticed small moving specks under the leaves, and the foliage showed signs of damage with tiny holes and tears. Digging the harvested tubers was difficult and slow. Newly bought tools just after a week were observed with a brownish coating on their surfaces. At harvest time, Akot faced further disappointment. Many of the harvested tubers were damaged. Some had deep cuts, others were bruised or broken. The tubers were harvested at 6 months and the yields were extremely low compared to the recommendations by agronomists.

Task: Write guidelines that would assist Akot improve her production.

END