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AGRICULTURE

**Paper 1
(Theory)**

2 $\frac{1}{2}$ HOURS



Apex Examination Council

PRE- MOCK EXAMINATIONS 2025

Uganda Certificate of Education

AGRICULTURE

Paper 1

2 Hours 30 minutes

INSTRUCTIONS TO CANDIDATES

This paper has 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 examinations items in all.

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

Answer sheets shall be provided.

SECTION A

SOIL SCIENCE AND VALUE ADDITION

Item 1

John cultivates crops on five small, scattered plots of land located within the same area. He reports that in one of the plots, his maize was slashed down by a neighbor who claims ownership of the land.

He has noticed that some of his plots have compacted soils, while others are overly plastic when moist. The maize plants in his plots are excessively vegetative, producing poorly filled grains.

To control erosion on one of his steeper plots, John used freshly cut grass as mulch. Soil tests revealed that the soil temperature in this plot is 33°C, with poor aeration. Most crops, including maize, thrive at soil temperatures between 22°C and 27°C.

John further complains that he has not benefited from his farming efforts over the last six years.

Task:

Write detailed recommendations to help John maximize profits from his farming activities.

Item 2

Kasukuwere is a leader of a small coffee farmers' cooperative in the Mpinyo community. She appointed her cousin Jane as the treasurer.

After harvesting coffee, she packs both green and red berries in sacks and transports them to her home for sun-drying. During drying, the berries are spread on clean papyrus mats. At night, she covers them with other mats to protect them from rain.

Once dry, the coffee is packed in damp gunny sacks and transported in open trucks to the market. The coffee is stored in a cracked and rodent-infested store.

Part of the money earned is stored in a metallic locker in her office, while the rest is used to repay a loan from a local moneylender. Since starting this business, Kasukuwere has consistently operated at a loss.

Task:

Advise Kasukuwere on how to improve the profitability of her coffee business.

SECTION B

PART I – ANIMAL PRODUCTION

Item 3

Mr. Oguzu rears goats on his farm. During the rainy season, runoff water flows through the goat house, and stagnant urine has been observed on the floor.

Leftover feed is found scattered on the floor where six kids are housed. At 12 weeks, Mr. Oguzu performs castration on the young goats to encourage faster growth.

The adult goats graze in the evening in nearby natural pastures. Some goats show hair loss and crusty patches on their ears. During milking, Mr. Oguzu was observed stripping the teats. The milk yield on the farm is low.

Task:

Provide practical advice to Mr. Oguzu to help him improve productivity and profitability from his goat enterprise.

item 4

Minu is a rabbit farmer (cuniculturist) in Mukono District. She keeps her rabbits in multiple hutches and feeds them exclusively on grass collected from a nearby dumpsite. She gives them pooled water for drinking.

The hutches are placed directly on the ground and are exposed to direct sunlight. The young rabbits (kits) were found curled up together on wooden floors.

After feeding and watering, she transfers feeders and drinkers from one hutch to another. Some adult rabbits have been observed wheezing and showing signs of muscular tremors. Rabbits are only sold once every 11 months.

Task:

As her advisor, suggest ways Minu can increase the productivity and health of her rabbits.

PART II – CROP PRODUCTION

Item 5

Jwiji grows cassava. After the onset of rains, she tilled her land and used cuttings from the previous season's harvest. She dug 40 cm long furrows and applied urea fertilizer before planting.

The cassava was planted too densely, and in some areas, the cuttings failed to establish. Couch grass was manually uprooted from the field. Some cassava plants have mottled and stunted leaves, while others show a cluster of small white insects on the stems.

Several tubers were visible above the soil, and during harvest, many were accidentally cut into pieces.

Task:

Advise Jwiji on best practices to improve cassava yields on her farm.

Item 6

Ntwiga is a cocoa farmer in Bundibugyo. He transplanted 14-month-old cocoa seedlings at a spacing of 1 meter apart.

Some of the young trees appear bent and dry, despite sufficient soil moisture and no signs of disease or pests. Mature cocoa trees have thick canopies, and a sticky, sweet fluid is seen on most of their leaves.

Many cocoa pods are black, soft, and mushy. During harvest, Ntwiga picks both green and orange pods. He has been experiencing consistent losses.

Task:

As a crop science student, advise Ntwiga on how to manage and improve production in his cocoa plantation.

End