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PRINCIPLES AND
PRACTICES OF
AGRICULTURE
Paper 1
July/Aug. 2025
2½ hrs



UGANDA TEACHERS' EXAMINATIONS SCHEME
Uganda Certificate of Education
JOINT MOCK EXAMINATIONS
PRINCIPLES AND PRACTICES OF AGRICULTURE
(THEORY)

2 hour 30 minutes

INSTRUCTIONS:

This paper consists of two sections A and B.

Section A is compulsory.

attempt any two items from section B selecting one item from each part.

All responses should be written in the answer booklets provided.

Attempt four items in total.

No additional sheet of paper should be attached to this question paper.

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Turn Over

SECTION A

VALUE ADDITION AND SOIL SCIENCE

Item 1

Dairy farming is one of the most income generating enterprises in western Uganda. Kansime decided to establish a dairy farm on her one-acre piece of land to tap income. Her two jersey cows give her a lot of milk per day but she doesn't know how much she earns from each individual animal. She carries the jerry cans of milk on her head to the dairy plant for sale. She opened an account with rural development bank but still keeps her money under the pillow. Her milk is occasionally rejected at the plant due to poor quality. At the beginning of the year she decided to borrow money from the village self-help group to acquire equipment for producing milk products. She was asked to pay 72000 shillings before being given a loan since she is not a member. She started making ice cream and yoghurt from the rejected milk. The yoghurt made is smelly and watery and tasteless and it has also been rejected by customers. Registered members do not pay any money while applying for a loan in a village saving group.

Task

- (a) Guide miss Kansime on how she can produce good quality yoghurt.
- (b) As an agriculture student, advise Kansime on how she can gain highly from milk production.

Item 2

Masereka owns a gently sloping piece of land on which he wants to grow Irish potato. Irish potato grows well in soils with a pH range of **between 3 to 5**. Part of his land is being claimed for by his neighbour who has a land title for the same piece of land. Masereka is confused and doesn't know what to do with issues concerning that land. The upper part of the land is characterized by red

soils and small clearly cut channels. The lower part has soils which are highly plastic and sticky. When he picked soil samples from the upper field to the research center for analysis, the results showed pH 2 and low amounts of living organisms. Masereka is seeking advice on how best he can improve his soil productivity.

Task

As an expert in soil science, advise Maseraka.

SECTION B

PART I

ANIMAL PRODUCTION

Item 3

Hajji Lwanga is a prominent rabbit farmer in Wobulenzi Town council. He rears his rabbit for meat production. Rabbits reach slaughter age at 6 months. Hajji uses modernized hatches but recently he observed that there was water passing through one of the hatches. The roof hanging over to control rain water from the hatch was too short. One side of the hatch has wire mesh with widely torn parts. One of the hatches was placed on the ground because it was too heavy to lift up. His rabbits have long claws. He always feeds them on fresh sweet potato vines. The rabbits scratch themselves. The male rabbits always fight in the hatch. He slaughters his rabbits at the age of two months for meat using a surgical blade.

Task

Advise Hajji Lwanga on how he can rear rabbits profitably.

Turn Over

Item 4

With the increased demand for local birds and eggs due to the increased population in Kampala, Rtd. LT. Lutwama a resident of Kamwokya decided to start a poultry project using his retirement package. He constructed a deep litter house using the old

iron sheets which had holes. The wire mesh surrounding the litter house had wide gaps that would allow in wild birds. The foundation of the poultry system was sunk in the ground and running water would enter whenever there was a heavy down pour. He bought the breeding stock to rear from his neighbour who had local birds on free range. He used to feed his birds on maize brand daily and in the evening gives them soapy water after washing due to water scarcity in town. He normally punishes birds that eat eggs by denying them food for a day or two days. The litter in the poultry house looks dump and caked. He collects the eggs from the poultry house after three days when eggs have accumulated in number. He only sells his birds for meat when they have fallen sick.

Task

Write an essay to advise Rtd LT. Lutwama and other farmers of that category to profitably benefit from poultry production.

PART II

CROP PRODUCTION

Item 5

Banana growing has become more popular in the Elgon region and it's generating a lot of income to farmers in Bugishu and surrounding areas. Mutonyi carried out seed bed preparation using a tractor to establish a banana plantation. She got banana suckers from a neighbour who was destroying his plantation because of banana wilt. She dug her planting holes at a spacing of 1.5 meters apart and at a depth of 32cm. upon planting Mutonyi removed all the leaves from the suckers but left the roots to quickly absorb nutrients after

planting. Some suckers established while others failed. Those that established were stunted and their leaves had chlorosis. Seven to nine suckers were left to grow per hole till maturity. There were unclear plants in the plantation growing together with the banana plants. In the dry spell, the soils become hard and develop cracks. He normally harvests his plants using a hand hoe after seeing that some fingers have started ripening. The recommended spacing for banana is '3M x 3M' and planting holes should be 1meter deep.

Task

As an agronomist, write a key note advice to Mutonyi on how best she can benefit from banana growing.

Item 6

Coffee is one of the important agricultural export crops that earns Uganda a lot of foreign exchange. A group of coffee farmers in Kyotera district in a farming organization called POWESA established a nursery bed with 2.5 meters wide. They put a shade on their nursery bed and retained it until the time of transplanting. They watered their nursery bed once a day due to shortage of water in their region. Both health and unhealth seedlings are transplanted to achieve an optimum population in their gardens. Farmers plant seedlings at a spacing of 4ft by 3.5ft in the seed bed. Some seedlings did not establish leaving gaps in the garden. Farmers use accaricides to control pests in their gardens. Some plants have six to eight branches but bear few berries. They harvest their coffee berries all of them at once when some show signs of ripening. Some farmers harvest by cutting down the tall branches with berries. The recommended spacing between coffee trees should be 2.5 to 3meters.

Task

Write an article for a newspaper guiding farmers in Kyotera on how to maximize profits from their project.

END