

527/1
AGRICULTURE
Paper 1
July/August 2024
2½ hours



WAKISSHA JOINT MOCK EXAMINATIONS

Uganda Certificate of Education

AGRICULTURE

Paper 1

Theory

2 hours 30 minutes

INSTRUCTIONS TO CANDIDATES:

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

*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)/sheets provided.*

SECTION A

SOIL SCIENCE AND VALUE ADDITION

Answer all items in this section.

Item 1

Opamba and other dairy farmers in Wakiso district are happy with the profits they make yearly. They sell their milk in the city daily and keep their money collections after sale in their homes. Individual farmers rent rooms expensively per month and the electricity bills per individual are also high.

The milk sales have drastically declined due to a number of complaints raised by customers.

These farmers transport their milk in jerricans while carrying them on their heads to their operating individual rooms which are very hot.

The milk has a bad flavor and has hairs in it also.

The milk goes bad on boiling.

Opamba wanted to buy a milk cooling tank for his business but does not have enough money.

Task;

Advise the farmers above on how they can benefit from the milk production profitably.

Item 2

In Masaka district, farmers grow their maize for home consumption and income. In a season, they harvest over 1200 bags in different hectares of land. This motivated them to grow maize continuously on this land.

After harvesting, they burn the maize stalks and all other vegetation in preparation for the next planting season.

However, this year, their harvest has dropped to less than 800 bags due to a number of unknown reasons. One farmer visited his maize garden and observed that the field was too dry and plants had stunted growth.

The maize plants had different colours on the leaves, small cobs and he realized that the top soil had been washed away on the gentle slope down to the valley.

Task

Suggest to the farmers the different practices they can employ on their land for better maize yields.

SECTION B

This section has **two** parts, **I** and **II**

PART I: ANIMAL PRODUCTION

Answer one item from this part.

Item 3

Livestock production is one of the lucrative enterprises in Uganda. Dr. Olga is a dairy farmer who keeps four Fressian cows under stall feeding (zero grazing). Her structure is always muddy and the skins of the animals have standing hairs. She feeds her animals entirely on forage. Two of her cows calved down a pair of male twin calves each. She is worried because male animals eat a lot of feeds, takes time to mature and does not sell them when they are still young. She has been advised to feed her animals on balanced rations. She therefore wants to come out with her own mixed feeds using the ingredients, she has bought but she does not know how to mix them. She bought 20 % crude protein to use, maize bran containing 10 % crude protein and cotton seed cake containing 50 % crude protein. She wants to make a ration of 500 kgs.

Task;

Guide Dr. Olga on what to do to get high production from her farm.

Item 4

Almost 78.9 % of Uganda's population is engaged in agriculture activities especially animal rearing, though about 43.2 % of the population is involved in subsistence agriculture. The farmers rear traditional breeds which mature slowly and give low yields of milk and meat.

They practice traditional grazing systems in poorly managed pastures and in-breeding is common. Farmers move with their animals looking for pasture and quality water.

All these have resulted into poor yields and low GDP to the country. The government has therefore come up with programmes like Parish Development Model (PDM) to support these farmers to boost animals production.

Task;

Make a clear briefing to the farmers on how they can solve the above challenges.

PART II: CROP PRODUCTION

Answer one item from this part.

Item 5

Sandra's father picked interest in growing beans after watching harvest money Expo on one of the television channels.

However, it was amidst planting season, so he decides to just slash his garden area and immediately started planting using a hoe with a blunt blade. He ordered for the planting materials from one of the leading agricultural produce supplier in the city.

When he received the seeds, they were tiny, wrinkled and had holes but he was not bothered.

The bean seeds were mixed with other seeds from wild plants that germinated before the beans.

A few bean seeds germinated and he had to buy more other seeds for planting.

She used a non- selective herbicide to remove un wanted plants. She had no harvests that season.

Task;

Give advice to Sandra's father on what he should do next season of planting beans.

Item 6

Busega horticulture co-operative farmers decided to grow vegetables. They had arguments among themselves on the procedures they should follow when growing vegetables.

Some members advised that they plant seeds directly into the soil. Others said sterilizing the soil was a waste of time while others opted to use herbicides in clearing the area to save time. While other members also suggested that they should buy ripe tomatoes, squeeze out the seeds and then plant.

Later on, they agreed that they should buy seeds and plant directly in the main garden. A few seeds germinated but were slender with mottled leaves and weak stems.

Task;

Advise the farmers on the basic principles they would follow to produce vegetables.

END