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AGRICULTURE
PAPER 1
July/August 2024
2 ½ hours



MASAKA DIOCESAN EXAMINATIONS BOARD
Uganda Certificate of Education
JOINT MOCK EXAMINATIONS 2024
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:

Answer all items in this section.

- Item 1.** At the annual general meeting of Kikakanya coffee SACCO, the meeting started with reactions from members, then the opening prayer, communication from the chairperson, anthems and lastly the communication from the chairperson. Coffee beans from SACCO members are sold at Shs. 7000 per kg to exporters who in return after a while import it back into the country as coffee powder. At this point they sell a kg of coffee powder at sh. 20,000. Some of the members have been informed from certain internet sites to always dry coffee beans on bare ground as it makes it have a good and pleasant aroma. When members' savings reached 3.4 billion, they thought of earning an interest on it through depositing it on current account with high expectations of interest at the end of two years.

Task

As an agri-business expert, write a circular that will benefit members of Kikakanya Coffee SACCO to operate efficiently and profitably.

- Item 2.** Upon observing several earthworms in a cultivated piece of land prior to planting seedlings, **Nantongo Joyce** sprayed them with Dudu pesticide. By evening, they were all dead. Two days later, she went on to plant her strawberries. She ensured to adequately irrigate her crops and by evening, the soils were completely dry as if not watered even on days when temperatures were average. After planting, she then collected soil samples from two spots on 5 hectares of her land for laboratory testing and analysis which were rejected by soil testing experts. When the soil scientists from NARO carried out soil sampling and testing by themselves, it was established that her soils had a pH of 12.5. Straw berries do best in slightly acidic soils. Whenever wind heavily blows, dust and silt particles are deposited in his fish pond leading to severe death.

Task

As a soil scientist, write a sensitization message to **Nantongo Joyce** to educate her on the status of her soil and the appropriate improvement practices.

SECTION B:

This section has two parts; I and II

PART I: CROP PRODUCTION

Answer one item from this part.

- Item 3.** Cassava is one of the common staple foods grown in different regions of Uganda. In the recent past, a professional agronomist has informed Wani that his piece of land at a recommended spacing would support 1,000 crop plants of cassava. Wani wishes to have about 2,000 crops in the same space as he sees this an opportunity to double the yield. Wani has also obtained another piece of land that he bought after negotiations with a friend at the bar. Wani and his friend were able to write the agreement and payments done immediately. In this newly bought piece of land, he intercropped it with cassava and sweet potatoes. He obtained cassava planting materials from cassava plants which were 4 months old and sweet potato vines that had a pale colour with black spots. A few cassava plants were able to emerge and grow with leaves observed to have rough patterns of square lines all over. At about four months old, he harvested the cassava by digging deep the soils with a forked hoe. All his tubers were thin and many were merely pieces characterized with greenish patches upon peeling.

Task

Describe suggestions to Wani that will enable him carry out productive farming.

- Item 4.** Through the “*mwanyi terimba*” programme of Buganda kingdom which focuses on efficient and profitable growing of coffee, several farmers were donated coffee cuttings. These were intercropped with eucalyptus trees as the farmer aimed at getting double profits. Ahebwa dug the planting holes at a depth equivalent to the height of his index finger and planted seedlings at a distance he determined by pacing with his feet. The distance was about 4 feet. The coffee plants were straight, had numerous branches both at the top and the lower parts with few and small sized coffee beans. His mature coffee bore coffee beans which were in various colours of yellow, green and red and this prompted him to harvest mixture of all the colours. Some of the coffee plants had rusty leaves and tiny black holes on the small branches. Other coffee trees had roots growing and protruded out of the soil and got exposed on the soil surface though soil erosion was well guarded against in this plantation.

Task

As an agronomist, write a message to Ahebwa advising him on how to improve the quality, productivity and value of his coffee production enterprise.

PART II: ANIMAL PRODUCTION

Answer one item from this part.

Item 5. Twinning is a highly desired characteristic in goat rearing. A women farmers' group in Mubende district has reared goats for the past 13 years their goats always give birth to a single kid consistently. In the neighborhood are goat farms where twinning is a normal occurrence. On a regular basis, by 7:30 a.m. All their goats are already in the pasture fields grazing. In the past two weeks seven kids have been reported dead in the fields with minor damages on the legs. These carcasses are then cut and sold to the nearby meat dealers for human consumption. As the droppings for some goats repeatedly contained segments and elongated cylindrical and mobile living organisms, they chose to isolate them from the entire herd. The building where goats are kept was formerly the local home kitchen which is about 10 by 10 feet in size. They are about 40 goats in number and during grazing they are usually seen coming into contact with stray dogs that always find their way into the farm. One day, some of their goats escaped and mixed with those of the neighborhood this raised quarrels and wrangles on determining actual ownership as all the claimed goats from either sides were black with white stripes.

Task

As the regional veterinary doctor, write guidelines the women farmers group should practice to fully benefit from their enterprise.

Item 6. Senior four students of **Kampala College S.S** visited a livestock farmer owning one of the biggest farms within the neighboring community. They were able to observe calves tied under a tree shade at night with rough hair coat and watery dung all over the place. The walls of the farm office were wet and those of the toilets slightly sinking into the ground. During spraying of his bulls against ticks, he began by spraying the head, rear, brisket, back and the belly in that order. He did this after the signs of rains had manifested and just after the spraying exercise, there was a heavy down pour. All his lactating cows were assembled in a collecting yard to select some for selling off or culling. Determining which ones to sell off was a hectic task for the farmer. On milking, one of the cows expressed discomfort and sudden movement whenever its teats were touched and the farmer ensured to observe for signs of any milk abnormalities by pouring some of the milk samples in his hands for close observation every after the actual milking.

Task

As a S.4 Agriculture student who was part of this visit, write a sensitization message to this livestock farmer for a sustainable and production livestock enterprise.

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