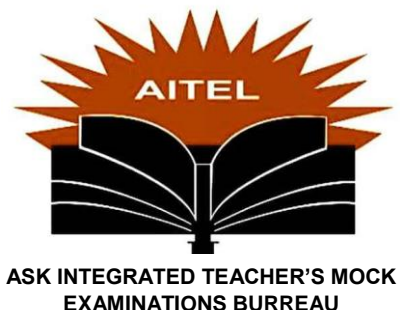


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AGRICULTURE
PAPER 1
JULY/AUG 2024
2hours 30 min



AITEL JOINT 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 B 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

Upon securing a loan from Pride Micro-finance, Peter secured a piece of land where he chose to establish a tomato garden on one hectare. He selected a suitable place for nursery bed and planted seeds by broadcasting, after a week, the seedling had emerged and were much crowded as some were still seen on the soil surface still intact. During the time of transplanting, he pulled the seedlings using his finger one at a time from the soil around mid-day of a sunny day. Seedling were well placed in the planting holes at a distance of 2X2 meters and after a week a few dried up and died. Tomato plants were later observed with tiny rooting stems, small bruised and rotten fruits which had holes on them. He decide to break off some branches on the plants which were not bearing fruits at fruiting stage. Together with his wife they harvested their tomatoes when the garden was fully ripe with some tomatoes that had started rotting in the field. In order to ease transportation of the tomatoes fruits to the store, he transported them in a wheel barrow that had just collected manure from the cattle kraal.

Task.

What advice would you give Peter concerning his tomato production?

Item 2.

Mr. Musoke is a livestock farmer in Mulanda village Tororo. His animals often escape and destroy the neighbors' crops. This created a lot of tension between Mr. Musoke and his neighbors to the extent that Uganda police was involved to settle the matter and the police recommendation was that Mr. Musoke should enclose his farm land with a barbed wire. He wrote to the district land office requesting for a surveyor. The district sent a team of surveyors to Mr. Musoke's farm who established the following specifications of Mr. Musoke. The farm has a rectangular piece of land measuring 1500m by 600m, a four strand perimeter barbed wire fence should be constructed. The length of each roll of barbed wire is 600m and the expected spacing between posts is 5m and no gate should be provided, each post is sold at 500/= one roll of the barbed wire is 60000/= labour is 500000/=, 84 staples make up 1kg, the cost of each kg of staple is 10000/=, transport of materials is 100000/=

Task.

You have been contacted by Mr. Musoke to establish a budget for the fencing activity.

SECTION B

This section has two parts I and II

PART I: SOIL AND CROP SCIENCE

Answer only one (1) question in this part.

Item 3.

In Adekokwok Sub County most people used to earn from agricultural activities and there was other social benefits that people were getting from agriculture. Now days the community of adekokwok have started facing a serious problem like famine because the soil that use to be black in color is now brown, soil that farmers used not to apply fertilizers and have good harvest now cannot produce any crop without fertilizer, maize when planted now days becomes very short with little yield, Living organism population in the soil has also reduce greatly and soil that use to be soft in now hard. Other farmers thought the problems they are facing might have been caused by soil born pest and they over use pesticides that were non selective and nearby farms dealing in bees reported great loss because bees were dying in large numbers. During land survey, it was also discovered that most wetland that use to have steep valleys are become almost flat now and water channels get blocked so often and always results to flooding that at times also can clam life. One day after flooded water reaching one of the garden that was sprayed with DDT got mixed up with a nearby fish pond water, all the fish in that pond were reported dead. Farmers are now seeking for your advice and guidance.

Task.

What advice would you give farmers about the possible cause and solution to the above stated problems they are facing?

Item. 4.

Farms currently employs more than 1 million young Ugandans in various related farm activities and it reduce he problem of unemployment among youth. Every year more than 100 farm workers dies mainly because of chemical use. And this has caused fear and panic among farming societies of Uganda. Farm workers and managers always reports some of the following signs eye irritation, skin rushes, fever, vomiting, difficult breathing and diarrhea”. In some part of the country in one of the farm, LC reported a case of fighting between farm workers and farm owner because of payment related issues. During live TV interview held by NBS, one farm manager by the name of Dayana who was earlier accused of beating a farm worker said, “if am paying my workers every day, then they should work daily too regardless of their health status”. This has also caused fear to the community and most educated people now opted for outside farm work in developed countries like Dubai, Canada claiming that chemical they use in Uganda are fake and are killing people also that

farm owners in Uganda are people hired to kill the helpless poor. Government of Uganda through its ministries has assigned you to do the investigation on what is killing farm workers and how they are treated by their employers

Task.

Write a your finding to the government indication the cause of death, farm workers condition and what should be done to solve the identified problems

PART II: ANIMAL SCIENCE.

Answer only one (1) question in this part.

Item 5

Farming is one of the jobs people can do to earn a living if carried out correctly. Eastern Uganda has continuously registered low yields in crops and animal production Government of Uganda alongside food and agriculture organization (FAO) conducted research on the farming activities and practices in eastern Uganda. This was basically done through field visits/farm visits whereby the officials went to the farms directly and observed how the farmers were carrying out different practices. They visited both crop farms and livestock production farms. The objective of the research was to help develop ways through which productivity of crops and animals in eastern region can be improved. Officials reported that the farmers plant their crops by scattering them at random on the field, the crops were overcrowded, some farmers were seen still planting yet the rainy season was coming to an end, gardens had weeds and most crop had dry leaves, with powder like substances, big grasshoppers were also seen eating leaves leaving only stems on some crop plants, the soils were bare and very exhausted due to continuous cultivation, farmers used cut jerry cans for applying water to crops in the nursery bed, and were using knives for removing the seedling from the nursery bed during transplanting, some kept seeds for the last harvest to be used for planting in the next season and most of these seeds when planted does not germinate, they go to the garden on barefoot with torn cloths, some were using ropes for measuring the width of the nursery bed on the farm, they store their produce on the floor which makes the produce to rot. During drying they spread the produce on the ground causing contamination of the produce with soil leading to low prices. The animals are small with slow growth rate, some were observed with swollen stomach scratching their bodies on walls and trees. The animals were being grazed on short dry grass which animals were not eating, animals were being milked from the kraals full of cow dung and milk was smelling dung, animals were seen drinking dirty water and while others gave cows water containing soap after

washing clothes. Farmers were also seen using dirty containers for carrying milk and they were left open, others added water to the milk, they used eyes for measuring milk while selling. Feeds for birds were being poured on the ground and the birds were also taking water from the dirty saucepans. There was no record keeping either by the farmers. Farmer works reported that they walk long distance and they paid late which demotivates them.

Task. What advice would you give to farmers in eastern Uganda in order to increase on the productivity?

Item 6.

- a) Mr. Otto a farmer from Dokolo district is about to receive poultry birds from one of the organization he registered with and he prefers birds that lay eggs. In his areas there are a lot of thieves, poor roads, and electric power has not reach his location and water is also a challenge to the community he stays. In the preparation to receive chicks, he constructed poultry house in swamp and flood covered his poultry house. When he called poultry consultant of the district. His phone accidentally fell into water. After few days the organization sent a representative to do a survey in Mr. Otto's farm before they deliver the birds and the representative upon seeing what was on the farm he concluded by saying "we can't give you our birds unless you do they needful".

Task. Write a note to Mr. Otto indicating what things are needed for him to receive birds

- b) Farmers from Dokolo upon receiving the birds and feeding them and doing all the needful later they started seeing birds eating their eggs, birds that use to lay hard shelled eggs are now laying eggs with soft shell. One farmer reported to other member that his birds were having green diarrhea, others were having very scaly legs while others could not move but could stand with eyes closed. Most farmers were losing at least one bird. Farmers are not happy now and they have called for a meeting to share ideas so as to solve their problems and you are invited to help address the farmers

Task.

You have been given opportunity to address the farmers. Give your presentation inform of a short notes.

END

