P515/1
AGRICULTURE
(THEORY)
JULY/AUG 2026
3HOURS

# PROVINCIAL EXAMINATIONS AGENCY (PEA)
# COUHEIA MOCK EXAMINATIONS 2026
## Uganda Advanced Certificate Of Education
## AGRICULTURE
## PAPER 1 (THEORY)
## TIME: 3HOURS

**INSTRUCTIONS TO CANDIDATES:**

- This examination paper consists of **two** sections; **A** and **B**. It has **six** items.
- Section **A** has **two compulsory items**.
- Section B has two parts; **I** and **II**. Respond to one item from **each part**.
- Respond to **four** examination items **in all**.
- All items carry **equal scores** and any additional item will **not** be scored.

**PTO**



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## SECTION A

*Attempt all the two items in this section.*

## VALUE ADDITION AND AGRICULTURE BIOLOGY

### ITEM ONE (VALUE ADDITION)

John is a livestock farmer who rears goats and cattle in his village. He usually sells fresh meat to consumers at the nearby trading center at a low price per kilogram. Most times, the meat is not bought on the same day and some of it gets spoiled due to lack of proper preservation facilities. He stores the meat in a simple wooden structure without refrigeration, which exposes it to flies and contamination. Recently, John took a loan from a local money lender at a high interest rate of 25% per annum to expand his livestock business. However, due to losses from spoiled meat and low market prices, he is finding it difficult to repay the loan, and the money lender is threatening to take his animals. John has heard that in urban areas, farmers earn more money by processing meat into products such as sausages, smoked meat, and dried meat. Customers from a nearby town have approached him requesting processed meat products, but John lacks the knowledge and skills to prepare them. He also seeks your advice on how to improve the marketing of his meat products.

**TASK**

a. Guide John on how he can prepare sausages as a value-added meat product to supply to customers in the nearby town.
b. Advise John on how he can improve the marketing of his meat and meat products from his farm. (Include reasons for your advice.)

### ITEM TWO (AGRICULTURE BIOLOGY)

An Agriculture teacher in a secondary school in Masaka carried out an experiment to demonstrate osmosis using Irish potato strips. Two equal-sized potato strips were prepared. One strip was placed in a concentrated salt solution, while the other was placed in clean water. After some time, students observed that the potato strip in salt solution became soft and flexible, while the one in clean water became firm and stiff. One student, Jacob, suggested that the changes were due to diffusion of salt into the potato. Another student, Doreen, argued that the movement involved water and not salt. The teacher further explained that similar processes occur in plant and animal cells, but students found it difficult to relate the experiment to real-life situations.

**TASK**

a. Explain the changes observed in the potato strips.
b. Guide the students on how osmosis is important in living organisms.

## SECTION B

### Part I

Choose only **one** item in this section.

## ANIMAL PRODUCTION



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**ITEM THREE**

Peter is a farmer who keeps cattle for both milk and beef production in his village. He uses local breeds which produce poor quality milk and also grow slowly. His animals graze freely on natural pastures, which become scarce during the dry season. As a result, the cattle lose weight and milk production declines significantly. Peter does not provide supplementary feeds or clean water regularly, and the animals often drink from a nearby swamp. He also lacks a proper housing system, exposing the cattle to harsh weather conditions. In addition, diseases such as tick-borne infections frequently affect his herd because he rarely sprays or dips the animals. Recently, Peter obtained a loan from a microfinance institution to improve his farm, but due to low productivity and high mortality rates, he is struggling to repay it. He has heard that other farmers practicing improved cattle management are earning more from milk and beef production. He now seeks your advice on how to improve the productivity and management of his cattle.

**TASK**

a. Explain the causes of the low productivity of animals on peter's farm.
b. Analyse the practices peter can carry out to overcome all the challenges he encounters on his farm.

**ITEM FOUR**

Sarah is a farmer who keeps poultry, mainly local chickens, for both eggs and meat production in her village. She allows the birds to scavenge for most of their feed, with little supplementation. As a result, egg production is low and the birds grow slowly. She houses the chickens in a poorly ventilated structure made of old timber and leaking iron sheets. The house is overcrowded and not regularly cleaned, leading to the accumulation of droppings. Many birds show signs of diseases such as coughing, diarrhea, and weakness, but Sarah does not follow a proper vaccination or treatment program. Predators such as dogs and hawks often attack the birds, causing losses. In addition, Sarah collects eggs irregularly, and some get broken or eaten by the birds. She sells eggs and live birds at low prices in the nearby trading center. Sarah has heard that farmers using improved poultry management practices are earning more profits. She now seeks your advice on how to improve her poultry production.

**TASK**

a. Evaluate the causes of losses to Sarah.
b. Advise Sarah on how she can improve her farm's productivity to increase profits.

**Part II**

Choose only **one** item in this section.

**CROP PRODUCTION**



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**ITEM FIVE**

James is a farmer who grows maize and beans on his farm. During harvesting, he uproots the crops at any time without considering the stage of maturity. As a result, some of the grains are immature while others are over-dried and shatter in the field, leading to losses. After harvesting, James heaps the produce on bare ground before transporting it home. He dries the grains directly on the soil along the roadside, where they are exposed to dust, animals, and contamination. Sometimes it rains unexpectedly, and the produce gets wet again. He stores the dried grains in old sacks in a poorly ventilated store. The store is not cleaned regularly and is often infested with pests such as rats and weevils. Over time, much of the grain is damaged, develops mould, and loses quality, making it fetch low prices on the market. James has noticed that other farmers who follow proper harvesting and post-harvest handling practices are able to maintain high-quality produce and earn better income. He now seeks your advice on how to improve his harvesting and handling of crops.

**TASK**

a. Explain to James the proper handling and management practices he should adopt to reduce losses on his farm.
b. Explain to James the effects of his practices on the general productivity of his farm.

**ITEM SIX**

David is a farmer who grows tomatoes on a small piece of land near his home. He uses uncertified seeds saved from previous harvests, which results in poor germination and uneven crop growth. He raises seedlings directly in the garden without a proper nursery bed. David transplants the seedlings at any time of the day without watering them, causing many to wilt and die. He does not apply fertilizers or organic manure, leading to weak plants with low yields. Weeds are not controlled regularly, and they compete with the tomato plants for nutrients, water, light and space. The crop is frequently attacked by pests such as aphids and diseases like blight, but David does not follow any proper control measures. He irrigates the crop irregularly, sometimes overwatering and at other times leaving the plants dry for long periods. During harvesting, he picks tomatoes at all stages of maturity and handles them roughly, leading to bruising and spoilage. As a result, his produce fetches low prices on the market. David has observed that other farmers who follow improved tomato production practices obtain higher yields and better-quality fruits. He now seeks your advice on how to improve his tomato production.

**TASK**

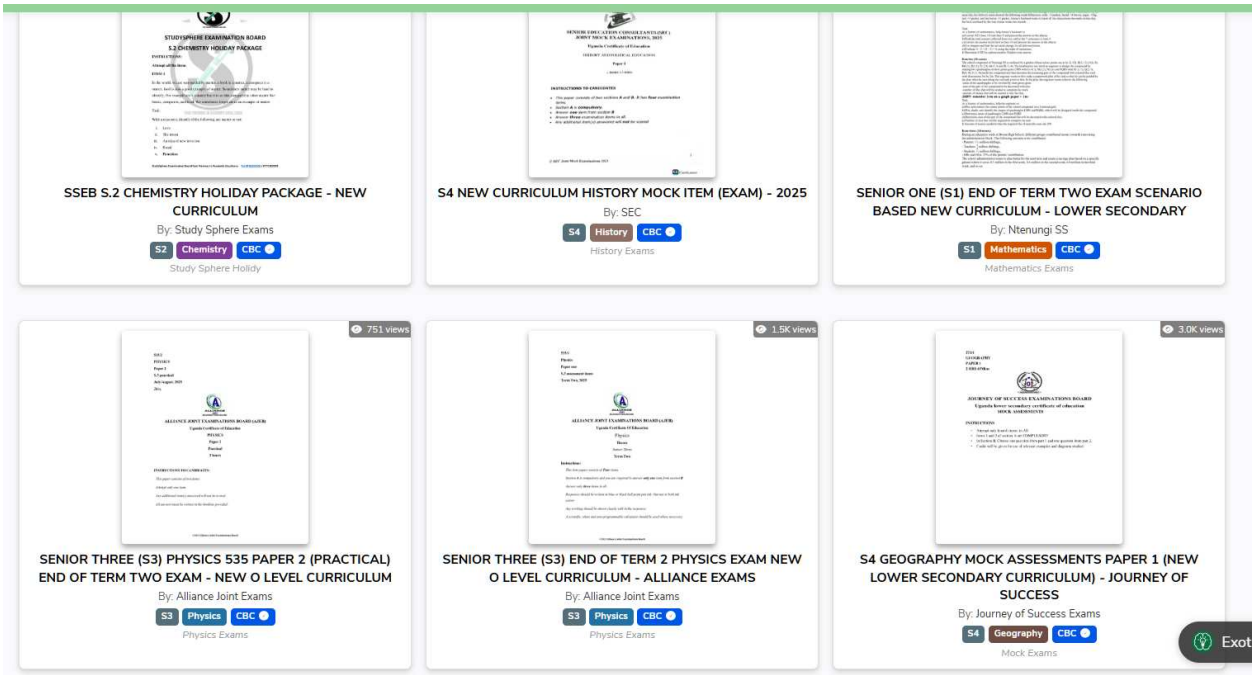
a. Analyse the causes of the low productivity on David's farm.
b. Explain to David the improved agronomic practices he should adopt for successful tomato production and maximise profit.

**SUCCESS**



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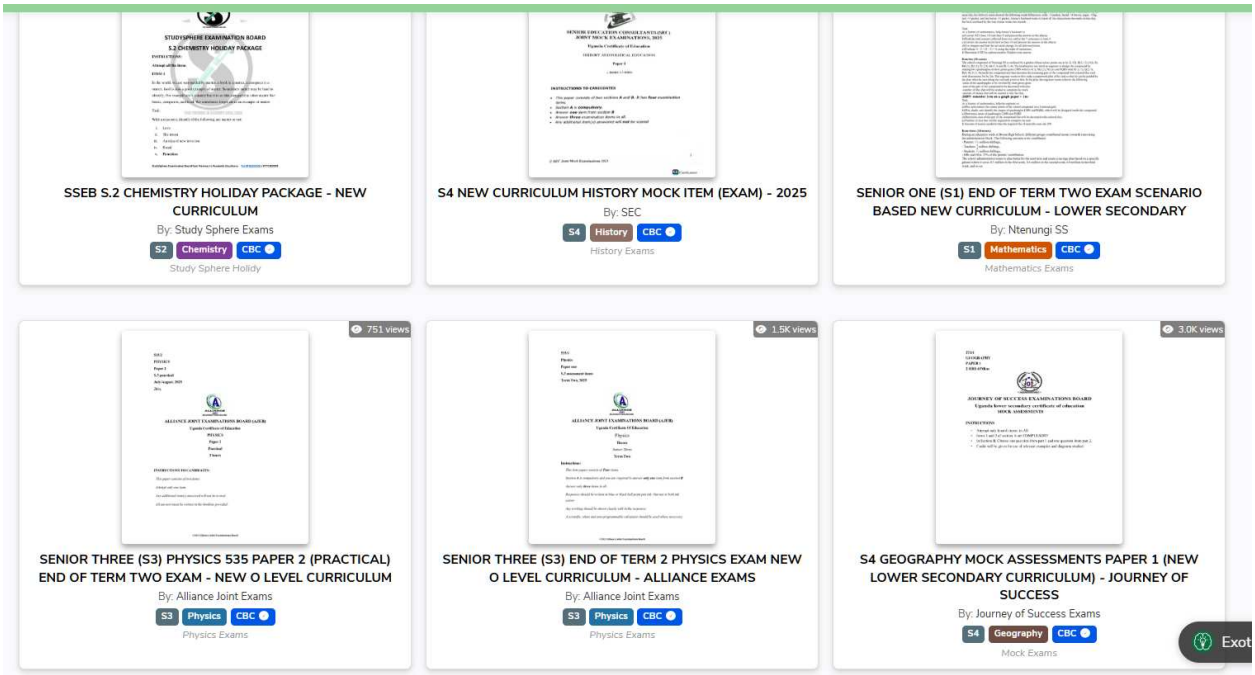
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