

REGINA PACIS HIGH SCHOOL – MUKONO
Uganda Advanced Certificate of Education
PRINCIPLES AND PRACTICES OF AGRICULTURE

Paper 1
(Theory)

2 HOURS

INSTRUCTIONS:

- *ATTEMPT **ALL** ITEMS IN THIS PAPER*

Item 1

Ssubi mixed farm planted one acre of Aromatic supa rice using pure, certified seed obtained from an approved company .land preparation and planting were completed at the recommended time. Crop management practices were implemented uniformly across the entire field in accordance with the advice of the area agronomist.

During the growing season, one section of the field retained standing water for prolonged periods while another section drained rapidly and remained comparatively dry.

Differences in plant growth and performance were observed between the two sections. At maturity, some panicles were grey while others were purple, although only grey color seed had been planted.

Researchers collected data from representative plants in each section. The measurements and yield records are represented below;

Table showing field data collected by researchers.

Parameter	section A	section B
Root length	26cm	19cm
Stem density	148stems/m ²	112stems/m ²
Leaf area	415cm ²	355cm ²
Yield	6.1t/ha	4.1t/ha

Tasks:

- a) Explain how the difference in the field observations influence the rice yield at Ssubi mixed farm.

Item 2

Nabirye is a fish farmer near Lake Kyoga where she rears tilapia and catfish followed by selling them when they are fresh. During periods of high harvest, she experiences heavy losses because fresh fish spoils before reaching distant markets. Fish prices also fall whenever many farmers harvest at the same time. Most customers in nearby towns prefer ready-to-cook fish products. Recently, a supermarket chain, several schools and hotels expressed interest in buying fish sausages if she could supply them consistently. Nabirye would like to take advantage of this opportunity to increase her income. She sells fish individually without working with other fish farmers. The fish are graded according to weight by

visual examination for better pricing. She packs her fish in clear and clean used food containers. Most of her sales are made through middlemen who connect him to other consumers. She transports fish in clean basins to nearby towns.

Unsold fish is stored near the fire place in the kitchen. She advertises her products using word of mouth throughout the entire area for simplicity. She relies on boda-boda men for market information and prevailing prices in different markets. As a result, her fish products attract few customers and her profits remain low.

Tasks:

- a) Guide Nabirye on how she can process fish sausages for sale to the supermarkets, schools and hotels.
- b) Explain the measures Nabirye should take to improve the marketing and profitability of her fish products

Item 3

Mr. Mukasa is a livestock farmer in Kasangalabi village where he acquired land measuring 260m by 70m and would like to make a barbed wire fence with five strands of wire and only one gate. The posts are to be spaced 4m apart, 1 roll of wire is 400m long. Each roll of wire costs shs. 125,000 while staples cost shs. 4,500 per kg, each treated pole costs shs. 8,000.

Tasks:

- a) What criterion should Mukasa follow when erecting such a fence on his farm land indicating tools to be used
- b) Guide Mukasa on how to calculate the following;
 - i. Number of posts.
 - ii. Number of rolls of wire to be used.
 - iii. Kgs of staples to use if one kg of staples contains 150 staples.
 - iv. Total cost of fencing materials to be used.