

NAME:.....

SIGNATURE:..... STUDENT NUMBER.....

553/2

BIOLOGY PAPER 2

(PRACTICAL)

FEB/MARCH 2024

2 HOURS

**UGANDA CERTIFICATE OF LOWER SECONDARY EDUCATION
COMPETENCE BASED ASSESMENT**

SENIOR FOUR

BIOLOGY PRACTICAL

TIME: 1 ½ hours

Instructions to candidates:

- *This paper consists of one item*
- *Answers should be written in the spaces provided*
- *Your work should be clearly presented and tidy. Dirty work will lead to loss of marks*
- *Your answers should be precise and concise*

FOR EXAMINERS' USE ONLY

ITEM	TOTAL MARKS	ACTUAL MARKS
1	45	

ITEM ONE

Mariam, a three-year-old girl, is always sickly, failed to gain any weight and is always tired and crying. During her 6-monthly visit to the hospital, the doctor wanted to know the food she has been feeding on, and a sample was brought to him. He labeled it **P**. He recommended a different food material for Mariam for the next months and gave her month the sample labeled **Q**.

During their next visit to the hospital, Mariam's health had greatly improved and she had gained at least 5kgs of weight.

Task: you are provided with samples of food solutions **P** and **Q**. You are required to investigate the nature of these food substances to determine why solution **Q** was able to promote Mariam's recovery and explain why this food combination is good for growing children

Your response should include the following

- Aim of the experiment
- Hypothesis
- Risks and precautions
- Materials and apparatus used
- Procedure
- Presentation of results
- Conclusion

[illegible]

[illegible]

Advance information.

Solution P is 2% starch solution (made by dissolving 2 grams of starch in 100cm³ of water, heat to 70°C, cool and filter.)

Solution Q is made by mixing the following solutions in a ratio of 1:1:1

- 2% starch solution (prepared as above)
- 1% egg white solution (made by dissolving 1cm³ of egg white in 100cm³ of water, heat to 70°C, cool and filter)
- Fresh, undiluted juice from ripe orange

Food test reagents provided.

- Iodine solution
- Benedict's reagent
- DCPIP
- NaOH
- HCl only.