Candidate's name: ..... Signature: .....

P530/2
BIOLOGY PRACTICAL
PAPER 2
NOV,2025
2HRS 30MIN

DIOCESE OF WEST ANKOLE

S.6 ENTRANCE EXAMINATIONS 2026

BIOLOGY PRACTICAL

PAPER 2

2HRS 30MIN

INSTRUCTIONS TO CANDIDATES

This paper consists of **two items**.

Answer all the questions.

Write the answers in the spaces provided.

No additional sheets of paper should be inserted in this booklet.

You are not allowed to start working within the first 15 minutes. You are advised to use this time to read through the paper and ensure that you have all the apparatus, chemicals and specimens you require.

For examiner's use only		
items	**Scores**	**Examiner's signature**
1		
2		
TOTAL		

ITEM ONE

Ahmed is a hardworking farmer in Uganda. Every day his job demands a lot of physical effort to complete his short intense work. He relies on his breakfast to give him quick energy boost to last him through busy morning hours until he can take a break. Ahmed has observed that when he feeds on certain type of food, he feels hungry very fast, tired and weak before he completes his most important tasks but feels more energetic after a long time.

However, on days when his breakfast is on another food, he quickly feels energetic, full, and strong to work steadily and efficiently though short lived, even when he has consumed same amount.

Ahmed needs to be helped to understand the differences in his body after taking certain type of food so he can make better choices for his daily meals and ensure he has enough energy for his farm work.

You are provided with solutions **A** and **B** which were prepared from foods, Ahmed uses for breakfast.

Task:

a) Design and carry out an investigation to.

i) determine food composition of solutions **A** and **B**.

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ii) explain why Ahmed feels strong so fast and ready to work when fed on one type of the foods.

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b) Based on your results,

i) which food type should be better choice for his energy demands. Explain your answer.

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ii) Which two properties were exhibited by active substance?

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c) How were errors minimized in your experiment?

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ITEM TWO:

Mr. Okello, an onion farmer in coastal Uganda, faces a critical challenge. His crops are wilting, show stunted growth, and have reduced bulb sizes despite consistent irrigation. He previously relied on a spring and seasonal stream, but due to a driedup spring and increased demand from a nearby industrial project, Mr. Okello is now using two new water sources, Solution **M** and Solution **N**. He suspects one is the cause and needs to understand why. He has sought your team for plant physiologists for help. You are provided with solutions **M** and **N**, along with healthy onion bulb/ specimen **Q**.

Task:

a) Design and carry out an investigation to show the units that make up the leaves of Specimen **Q**.

i) Procedures.

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ii) Draw and label any three adjacent units.

iii) Describe the structure of the units.

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b) Design and carry out an investigation to show effect of Solution **M** and Solution **N** samples on units of onion bulbs.

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c) Draw and label one unit in each case as revealed by your experiment.

d) Based on your results, explain the causes of challenge faced by farmer's onions.

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e) state the ecological significance of tissues as observed from solutions **M** and **N** in life cycle of herbaceous plants.

i) From Solution **M**

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ii) From Solution **N**

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END