

THE UNITED REPUBLIC OF TANZANIA
NATIONAL EXAMINATIONS COUNCIL OF TANZANIA
CERTIFICATE OF SECONDARY EDUCATION EXAMINATION

033/2C

BIOLOGY 2C
(ACTUAL PRACTICAL C)
(For Both School and Private Candidates)

Duration: 2:30 Hours

Year: 2025

Instructions

1. This paper consists of **two (2)** questions. Answer **all** questions.
2. Each question carries **twenty five (25)** marks.
3. All writings should be in **blue** or **black** ink, except diagrams which must be in pencil.
4. Communication devises and any unauthorized materials are **not** allowed in the examination room.
5. Write your **Examination Number** on every page of your answer booklet(s).



1. (a) You have been provided with solutions **A** and **B** which contain the mixture of different food substances. Carry out an experiment to identify the food substances present in each solution. Your experimental report should be tabulated as shown in Table 1.

Table 1: Identification of Food Substances in Solution **A** and **B**

Food tested	Procedure	Observation	Inference

- (b) Specimen **C** contains protein among others. Prepare the solution from it for Biuret test experiment then, state the procedure followed to prepare it.
- (c) Carry out the Biuret test to identify food substances present in specimen **C**. Your experimental report should be tabulated as shown in Table 2.

Table 2: Identification of Biuret Test for Food in Specimen **C**

Food Tested	Procedure	Observation	Inference

- (d) State the function(s) of each food substances identified in solutions **A**, **B** and specimen **C** to the human body.
- (e) "Sodium hydroxide" and "dilute hydrochloric acid" were important in some procedure of the experiments. Justify this statement.
2. You have been provided with specimens **W**, **X**, **Y** and **Z** obtained from different habitats. Carefully study them then, answer the following questions:
- (a) Identify the Kingdom, Phylum/Division and Class in which each specimen **W**, **X**, **Y** and **Z** belongs.
- (b) For each specimen **W**, **X**, **Y** and **Z**, state three visible features which are the characteristics of the respective Class it belongs.
- (c) Specimens **W** and **X** belongs to the same Kingdom and Phylum. Which characteristics they have in common to represent those groups?
- (d) For each specimen **W** and **Y** state two advantages and one disadvantage they have for other living organisms.