THE UNITED REPUBLIC OF TANZANIA

NATIONAL EXAMINATIONS COUNCIL OF TANZANIA

ADVANCED CERTIFICATE OF SECONDARY EDUCATION EXAMINATION

133/3B **BIOLOGY 3B**

ACTUAL PRACTICAL B

(For Both School and Private Candidates)

Duration : 3:30 Hours **Year : 2025**

Instructions

1. This paper consists of **three (3)** questions.
2. Answer **all** questions.
3. Question **one (1)** carries **twenty (20)** marks and other **two (2)**, carries **fifteen (15)** marks each.
4. All writings should be in **blue** or **black** ink, **except** for drawings which must be drawn in pencil.
5. Communication devices and any unauthorised materials are **not** allowed in the examination room.
6. Write your **Examination Number** on every page of your answer booklet(s).

1. You have been provided with specimen **Q**. Dissect it in a usual way to fully display the *digestive system* to your right-hand.
   Leave your dissection properly displayed for Assessment.

   (a) Draw a neat diagram of the dissected specimen and label ten parts.
   (b) Provide two functions performed by
      (i) the fore gut
      (ii) the mid gut of the digestive system.
   (c) Explain briefly why the hind gut must remain intact in the lifespan of the cockroach.
   (d) Explain one advantage and disadvantage of cockroaches to human beings.

2. You have been provided with solution $\mathbf{S_1}$ and solution $\mathbf{S_2}$.
   (a) Identify the food substances present in solution $\mathbf{S_1}$ and $\mathbf{S_2}$ and write an experimental report in a tabular form using, format provided.

Food Tested	**Procedure**	**Observation**	**Inference**

   (b) Explain the basis of the test for each positive result obtained in 2(a).
   (c) Give reasons why boiling was important in some procedures of the experiment.

3. You have been provided with specimens **J**, **K**, and **L**. Study them carefully and then answer the following questions:
   (a) Identify the specimens **J**, **K**, and **I** by their common names
   (b) Explain how does each of the specimen **J** and **K** adapted to its habitat by giving two points,
   (c) (i) Classify each of the specimen **J** and **K** to class level

(ii) Give two reasons as to why specimen **J** and **K** placed in the classes they Belong

(d) Give two points in what ways do specimens **K** and **L** differ