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)

Time: 2:30 Hours **Year: 2024**

Instructions

1. This paper consists of **two (2)** questions. Answer **all** the 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. You have been provided with solution **B**, specimen **R**, chemical reagents and the required apparatuses. Use them to respond to the following questions:

   (a) Prepare a solution by using specimen **B** and label it as Solution **B**. Outline the procedure you used to prepare it.

   (b) Use the reagents provided to identify the food substance(s) present in solutions **B** and **R**. Record your experimental results as shown in the following Table.

Food tested	Procedures	Observations	Inferences

   (c) (i) Explain the digestion process of the food substance(s) identified in solutions **B** and **R** from the beginning until the end product is formed.
   (ii) State the enzymes responsible for digestion of the food substance(s) identified in solutions **B** and **R** when reaches the small intestine.

   (d) State the function of each identified food substance(s) in solutions **B** and **R** to the human body.

   (e) Briefly explain the function of the following actions in the experiment:
   (i) boiling.
   (ii) cooling.

2. You have been provided with specimens S_1, S_2 and S_3. Observe them carefully, then answer the following questions.

   (a) List two observable features used to place specimens S_1 and S_2 under their respective Phyla.

   (b) Use the hand lens and the forceps to carefully observe the specimens S_1, S_2 and S_3, then identify the structure responsible for the following:
   (i) feeding
   (ii) sensitivity
   (iii) locomotion

   (c) Use the hand lens provided to observe specimen S_1:
   (i) State two features of the Class in which the specimen belongs.
   (ii) Identify three adaptive features of the specimen in its habitat.
   (iii) Explain two importance of the specimen.

   (d) Draw a diagram of specimen S_3 and label four parts.

   (e) Briefly explain two importance of the specimens S_1, S_2 and S_3 in the ecosystem.