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

133/3A

BIOLOGY 3A
ACTUAL PRACTICAL A
(For Both School and Private Candidates)

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

Instructions

1. This paper consists of **three (3)** questions.
2. Answer **all** the questions.
3. Question **one (1)** carries **twenty (20)** marks and the 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 C_1. Dissect it in a usual way to fully display the *viscera in situ*.
Leave your dissection properly displayed for assessment.

(a) Draw a neat diagram of your dissection and label ten parts.

(b) (i) From the parts you labeled in 1 (a), identify two associate organs attached to the digestive system of specimen C_1.
(ii) Suggest one role played by each organ identified in 1 (b) (i).

(c) Draw the digestive system of specimen C_1 and label its main parts and the associate organs.

(d) (i) Which structure is responsible for deamination process in specimen C_1?
(ii) Apart from deamination process, give other two functions performed by the structure you named in 1 (d) (i).

2. You have been provided with solution P_1.

(a) Using chemical reagent provided, carry out biochemical experiments to identify the food substances present in solution P_1. Your experimental report should be tabulated as shown in the Table.

Food Tested	Procedure	Observation	Inference

(b) Suggest two natural sources from which each food substance identified in 2 (a) could have been extracted.

(c) Identify one characteristic of each food substance identified in 2 (a).

(d) Name one enzyme and secretion which facilitate digestion of each food substance identified in 2 (a).

3. You have been provided with specimens **E**, **F**, **G**, **H** and **I** obtained from different habitat. carefully study them, then answer the following questions:

(a) (i) Identify the specimens **E**, **F**, **G**, **H** and **I** by their common names.
(ii) Give the habitat of each specimen **E** and **H**.

(b) (i) To which common hierarchy does the specimens **E**, **F**, **G**, **H** and **I** belong?
(ii) Give two advantages and disadvantages of the members belonging to the hierarchy in 3 (b) (i) to human being.

(c) (i) Closely observe the specimens **E**, **F**, **G**, **H** and **I** and then, place them in their respective classes.
(ii) Account for three observable characteristics feature of specimen **H** at class level.