

**THE UNITED REPUBLIC OF TANZANIA
NATIONAL EXAMINATIONS COUNCIL OF TANZANIA
DIPLOMA IN SECONDARY EDUCATION EXAMINATION**

733/2A

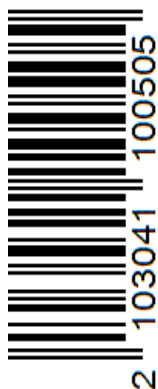
**BIOLOGY 2A
(ACTUAL PRACTICAL 2A)**

Time: 3 Hours

Year: 2022

Instructions

1. This paper consists of **three (3)** questions.
2. Answer **all** questions.
3. Question number **one (1)** carries **twenty (20)** marks and the rest carry **fifteen (15)** marks each.
4. Cellular phones 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. Dissect specimen C (a male or female cockroach) in the usual way to display the reproductive and excretory systems. The candidates were supposed to respond to the following questions:

- (a) Draw a well-labelled diagram of dissected specimen C to show two parts that form each of the reproductive and excretory systems.
- (b) What function does each of the two reproductive parts labelled in 1(a) have?
- (c) What is the sex of specimen C? Give three evidences.
- (d) Observe the thread like structures present in specimen C and state why they are so numerous

2. You are provided with solutions P and Q and answer the following questions:

- (a) Use the reagent provided to carry out the biochemical test to identify classes of food contained in solution P and Q. Tabulate your results as shown in the following table:

Food Test	Procedure	Observation	Inference

- (b) State three functions of the food substance(s) identified in solution P and Q in human body.
- (c) (i) What digestive enzyme is responsible for digestion of food substance identified in solution Q in the duodenum?
- (ii) Give the end product of digestion carried by the enzyme identified in (c) (i).
- (d) What nutritional disease is caused by the defficiency of food substance contained in solution Q to human?

3. You are provided the specimens labelled **L**, **M**, **N**, **O** and **R**. Observe the specimens carefully and answer the questions that follow:

- (a) With what observable features would you place the specimens **M**, **N** and **R** in their

respective classes? Give two points for each.

(b) Which observable features help the specimen **O** to be an agent of pollination?

Give two points.

(c) Draw a diagram of specimen N and label the locomotive structures.