

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

033/2B

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

Time: 2:30 Hours

Friday, 10th November 2017 a.m.

Instructions

1. This paper consists of **two (2)** questions. Answer **all** questions.
2. Each question carries 25 marks.
3. Except for diagrams which must be drawn in pencil, all writings must be in blue or black ink.
4. Calculators, 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. (a) You are provided with specimen **K**. Prepare a solution from the specimen **K** and label it as solution **S₁**.
- (i) Outline procedures you used to prepare the solution.
- (ii) Use the reagents provided to test all types of carbohydrates in the solution **S₁**. Record your experimental results as shown in Table 1.

Table 1

Food Tested	Procedure	Observation	Inference

- (b) Name the type of food substance(s) identified in solution **S₁**.
- (c) Name three parts of the alimentary canal where digestion process of the food substance identified in solution **S₁** starts until the end product of digestion is formed.
- (d) For each part named in (c):
- (i) Mention the gland(s) involved in the digestion of the food identified in **S₁**.
- (ii) Give the name of the secretion produced by each gland named in (i).
- (iii) Name the enzymes contained in each secretion named in (ii).
- Tabulate your answer for part (d) (i) to ((iii) as shown in the Table 2.

Table 2

Part of the alimentary canal	(i)	(ii)	(iii)
	Gland	Secretion	Enzyme

2. You are provided with specimens **L**, **M**, **N** and **P**.
- (a) (i) Identify each specimen **L**, **M**, **N** and **P** by using their common name.
- (ii) Observe the specimens **M**, **N** and **P** carefully, then classify each specimen to its respective group from Kingdom to Class level.
- (b) (i) State four observable features which prompted you and other scientists to place specimen **L** in the Class Mammalia.
- (ii) Give the reasons to why specimen **N** was formally placed in the Phylum you mentioned in (a)(ii)?
- (c) Draw a diagram of specimen **P** and label the structures involved in locomotion only.
- (d) With an example, explain why most of the members belonging to the Kingdom in which specimen **L** belongs are of advantages to other living organisms.