THE UNITED REPUBLIC OF TANZANIA

NATIONAL EXAMINATIONS COUNCIL OF TANZANIA

ADVANCED CERTIFICATE OF SECONDARY EDUCATION

EXAMINATION

133/3C **BIOLOGY 3C**

(ACTUAL PRACTICAL C)

(For Both School and Private candidates)

Time: 3:20 Hours **Year: 2022**

Instructions

1. This paper consists of **three (3)** questions**.**
2. Answer **all** questions.
3. Question **one (1)** carries **20** marks, and the other **two (2),** carry **15** marks each.
4. Mathematical tables and non-programmable calculators may be used.
5. All writing must be in **blue** or **black** ink **except** drawing which must be in pencil
6. Cellular phones and any unauthorized materials are **not** allowed in the examination room.
7. Write your **Examination Number** on every page of your answer booklet (s).

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1. You are provided with the specimen **S**. Dissect it to fully display the viscera general.

Questions

(a) Draw a neat diagram of the dissection and label twelve (12) parts.

(b) (i) State the natural habitat of the specimen **S.**

(ii) Give five observable features which enable the specimen S to adapt its natural environment.

2. You are provided with solutions $\mathbf{C_1}$ and $\mathbf{C_2}$ which contained unknown food substances.

Questions

(a) Use the chemicals and reagents provided only to identify the food substances present in solutions $\mathbf{C_1}$ and $\mathbf{C_2}$, and tabulate their experimental work as shown in the table below:

Food tested	**Procedures**	**Observation**	**Inference**

(b) Explain the importance of the following in the experiments

(i) Neutralization process

(ii) Cooling process.

(c) State the factors affecting enzyme activities when digesting the food

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substances identified in 2(a).

3. You are provided with specimen **L**, **M, P** and **Q**.

Questions

(a) Give two observable features common to specimens **M, P** and **Q** at the Kingdom level.

(b) State the observable features which makes the specimen **P** and **Q** look different at Class level.

(c) Classify each of the specimens **l, M, P** and **Q** from the Phylum/Division to Class level.

(d) Give two importance of the specimen **L** to the organism from which it was taken.

(e) State where specimen **P** and **Q** are naturally found.

(f) Draw a well labelled diagram of specimen **M**.

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