

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

033/2A

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

Time: 2:30 Hours

Friday, 07th November 2014 a.m.

Instructions

1. This paper consists of **two (2)** questions. Answer **all** the questions.
2. Each question carries **25** marks.
3. Except for diagrams which must be drawn in pencil, all writings should be in blue or black ink.
4. Calculators and cellular phone 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 **A₄**.

- (a) Perform an experiment using the reagents provided to identify the type of substance(s) present in the solution. Tabulate your results as shown in Table 1.

Table 1

Food tested	Procedure	Observations	Inference

- (b) State one function of the food substance(s) identified in 1 (a).
- (c) For the food substance(s) identified in 1(a), name one source in which each substance can be obtained.
- (d) One of the food substances contained in **A₄** is important for a child's development.
- Identify the food substance.
 - State the parts of the alimentary canal where digestion of this food substance takes place.
 - In each part, name the enzymes involved in the digestion.

2. You have been provided with specimens **P**, **Q** and **R**.

- (a) Study specimens **P** and **Q** carefully, then:
- Identify specimens **P** and **Q** using their common names.
 - Draw a well labelled diagram of specimen **Q** showing external structures.
 - Name the Kingdom and Class in which each specimen **P** and **Q** belongs.
 - Give four examples of plants for each Class you named in 2 (a) (iii).
 - State four distinctive features of the Classes in which specimens **P** and **Q** belongs.
- (b) State the importance of each specimen **P** and **Q**.
- (c) Observe the structure of specimen **R**.
- Give the name of specimen **R**.
 - Name the Class of an organism from which specimen **R** was obtained.
 - Explain the advantages of specimen **R** to the organism.