

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

733/2A

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

Time: 3 Hours

Thursday, 07th May 2015 a.m.

Instructions

1. This paper consists of **three (3)** questions.
2. Answer **all** questions.
3. Question number 1 carries 40 marks and the rest carry 30 marks each.
4. Cellular phones are **not** allowed in the examination room.
5. Write your **Examination Number** on every page of your answer booklet(s).

1. You are provided with specimen **R**. Carry out dissection to display the digestive system.
 - (a) Draw a large diagram of your dissection and label only the structures related to the system displayed.
 - (b) Classify specimen **R** to class level.
 - (c) Briefly describe two adaptations of specimen **R** to its mode of life.
 - (d) Give four reasons why Biologists use specimen **R** for dissection instead of other larger animals.

(e) **Leave your dissection properly displayed for assessment.**

2. During Terminal Examinations Mr. Uwezo prepared four solutions for his students each containing **one pure** food substance. At the end of the examination he discovered that the labels provided to the solutions were interchanged as follows:

Solution **P** Glucose.
 Solution **M** Sucrose.
 Solution **Y** Protein.
 Solution **X** Starch.

- (a) Design and conduct an experiment to identify the correct food substance present in each solution by using the reagents provided. Present your report in the following format:

FOOD TESTED	PROCEDURE	OBSERVATION	INFERENCE

- (b) One of the food substance contained in one of the four solutions, its storage in the body is influenced by a hormone so that it should not occur in excess.
 - (i) Name the food substance concerned.
 - (ii) Name the hormone involved.
 - (iii) In which form is the food substance stored?
 - (iv) Where in the body is the food substance stored?
 - (v) Where does the digestion of the food substance take place?
- (c) Among the food substances identified in (a), one is mostly recommended to elders.
 - (i) Name the food substance recommended.
 - (ii) What will happen if a child aged below five years lacks such food substance in her meals.
 - (iii) Suggest three source of the food substance.

3.

You have been provided with specimens **K₁**, **K₂**, **S₁** and **S₂**.

- (a) Give three similarities and three differences between **K₁** and **K₂**.
- (b) Carefully cut specimen **K₁** longitudinally into two equal parts. With the cut surface facing uppermost, draw and label all the observable structures of the specimen.
- (c) Open specimen **K₂** longitudinally into two halves. ✓
 - (i) Draw a large labeled diagram of the two halves. ✓
 - (ii) Suggest the mechanisms of propagation and dispersal for the plant from which specimen **K₂** was collected. ✓
- (d) With the aid of a hand lens, carefully study specimen **S₁** and **S₂**.
 - (i) Identify each specimen by its common name.
 - (ii) State how specimen **S₁** is adapted to its mode of feeding.
 - (iii) Draw and label specimen **S₂** as seen by using a hand lens.
 - (iv) Suggest the possible habitat for specimen **S₂**.
 - (v) State how specimen **S₂** is adapted to its habitat.
 - (vi) Classify specimens **S₁** and **S₂** to class level.