

**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**

**Thursday, 14<sup>th</sup> November 2013 a.m.**

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**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 phones 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 specimens  $S_1$  and  $S_2$  for food substances identification.
- (a) Explain how you will prepare specimens  $S_1$  and  $S_2$  for identification of food substances they contain.
- (b) Carry out food test experiments to establish the food substances present in specimen  $S_1$  and  $S_2$ . Tabulate your experimental work as shown in the table below:

Food tested	Procedure	Observations	Inference

- (c) For the food substance identified in (b) above:
- Name the end products of their digestion.
  - State the part of the body where excess end products in (i) are stored.
  - State the function in the human body of each food substance identified in (b).
  - Mention the enzymes responsible for their digestion.
  - Name the medium under which the digestion of food substances in  $S_1$  is favourable.
  - Name the part of alimentary canal in which absorption of the food substances identified in (b) above takes place.

2. You have been provided with specimens  $K_1$ ,  $K_2$ ,  $X_1$  and  $X_2$ .

- (a) Study carefully specimens  $K_1$  and  $K_2$  then:
- Identify specimens  $K_1$  and  $K_2$  by their common names.
  - Name the habitats for each of specimen  $K_1$  and  $K_2$ .
  - Briefly explain the features which enable specimen  $K_1$  to survive in its habitat.
  - What terms are used to describe these organisms in relation to water economy?
  - Suggest the mode of reproduction of specimen  $K_2$ . Give reason to support your answer.
- (b) Study carefully specimens  $X_1$  and  $X_2$  then:
- Identify specimens  $X_1$  and  $X_2$  by their common names.
  - Classify specimen  $X_1$  to class level.
  - State the features used to place specimens  $X_1$  and  $X_2$  in their respective kingdom.
  - Write down the advantages and disadvantages of each specimen  $X_1$  and  $X_2$ .