

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

**733/2B**

**BIOLOGY 2B**  
**(ACTUAL PRACTICAL 2B)**

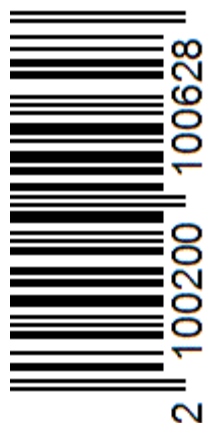
**Time: 3 Hours**

**Year: 2023**

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**Instructions**

1. This paper consists of **three (3)** questions.
2. Answer **all** questions.
3. Question number **one (1)** carries **twenty (20)** marks and the rest carry **fifteen (15)** marks each.
4. 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. Dissect the provided specimen **B** in the usual way to display the digestive system and respond to the following questions:
  - a) Draw a diagram of a dissected specimen **B** and label six parts that forms the digestive system.
  - b) Carefully observe the dissected specimen **B** by using hand lens and identify the structure that carry out each of the following functions:
    - i) Transfer of food from mouth to the stomach
    - ii) Production of ptyalin enzyme
    - iii) Secretion of bile.
  - c) Does specimen B have a gall bladder or not? Give a reason for your response.
2. You are provided with specimen D, carry out an experiment using the following procedures:

#### Procedures

- a) Cut the specimen D into two halves.
- b) Place one half into a mortar and grind using pestle to make a paste
- c) Place the paste into the test tube and label it as test tube X.
- d) Place the other half into another test tube and label it as test tube Y
- e) Add 2mls of 2%  $H_2O_2$  solution into each of the test tube X and Y and note the changes.
- f) Take a wooden splint and test the evolution of gas in each of the test tubes. Record your observation.

#### Questions

- a) (i) What was the aim of this experiment?  
(ii) Which test tube acted as a control experiment?
- b) Why was specimen D grounded?

- c) (i) What did you observe after adding 2% hydrogen peroxide solution into each of the test tube X and Y? Give reason for each observation.
- (ii) Suggest the name of the substance contained in specimen **D** which was responsible for the changes noted in one of the test tubes in procedure (e).
- (iii) Write the chemical equation for the reaction which occurred after adding 2 % of hydrogen peroxide solution which caused the observed changes in one of the test tube in procedure (e).
- d) Name the gas evolved in this experiment. Give reasons for your answer.
- e) What deductions can be made in this experiment? Give two points.
3. You are provided with specimens **A**, **F**, **C**, **G** and **E** , observe carefully and answer the following questions:
- a) What are the observable features shared by specimen **C** and **E**? Give five points.
- b) How is specimen **F** important for industrial development? Give four points.
- c) Observe the lower surface of the specimen A and answer the following questions.
- (i) Identify the structures found on the lower side.
- (ii) What is the function of the structure identified in (c) (i)?
- d) What are the observable features used to place specimen **C**, **G** and **E** to their phylum? Give three points.