THE UNITED REPUBLIC OF TANZANIA

NATIONAL EXAMINATION COUNCIL

DIPLOMA IN SECONDARY EDUCATION EXAMINATION

733/2B **BIOLOGY 2B**

(ACTUAL PRACTICAL B)

Time: 3 Hour. **Wednesday 16/05/2001 a.m**

Instructions

1. This paper has three papers.
2. Answer **all** questions.
3. Question **1** contains 30 marks while question 2 and 3 have 10 marks each.
4. Mobile phones are not allowed inside the examination room.
5. Write your Examination Number on every page of your answer booklet.

1. Dissect the provided specimen M (a male or female guinea pig) to expose the digestive system.

   (a) Draw the dissected specimen M and label six parts that form the digestive system.

   (b) Use a hand lens to identify the organs responsible for the following functions:

   (i) Food movement from mouth to stomach

   (ii) Enzyme production in the mouth

   (iii) Bile secretion

   (c) Does the specimen have a gall bladder? Give a reason for your answer.

2. You are provided with specimen N. Follow these procedures:

   (i) Cut the specimen into two halves

   (ii) Crush one half using mortar and pestle, label the paste as test tube A

   (iii) Place the uncrushed half into test tube B

   (iv) Add 2 ml of 2% hydrogen peroxide to each test tube

   (v) Use a glowing splint to test for the gas produced

   (vi) Record your observations

   Questions:

   (a) What was the purpose of this experiment?

   (b) Which test tube served as a control and why?

   (c) What were the observations in test tubes A and B? Give reasons for each.

   (d) Name the substance in specimen N responsible for the reaction.

   (e) Write the chemical equation of the reaction.

   (f) Name the gas produced and explain how it was confirmed.

   (g) Give two deductions from this experiment.

3. Observe specimens D, E, F, G, and H. Then answer:

(a) List five observable similarities between specimens E and F.

(b) Give four economic uses of specimen G.

(c) Observe the lower surface of specimen D:

(i) Identify the structures present

(ii) State their functions

(d) Provide three features used to place specimens E, F, and G in the same phylum.