THE UNITED REPUBLIC OF TANZANIA

NATIONAL EXAMINATION COUNCIL

DIPLOMA IN SECONDARY EDUCATION EXAMINATION

733/2A **BIOLOGY 2A**

(ACTUAL PRACTICAL A)

Time: 3 Hour. **16/05/2000 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 Q in the usual way to expose both the digestive and excretory systems. Then answer the following:

(a) Draw a well-labelled diagram of dissected specimen Q showing three parts of the digestive system and three parts of the excretory system.

(b) State the function of each labelled part of the excretory system.

(c) Determine the sex of specimen Q. Give three observable features to support your answer.

(d) State why Malpighian tubules are numerous in specimen Q.

2. You are provided with solution F and G. Perform the following:

(a) Use appropriate reagents to test for food substances in solutions F and G. Record your results in the table below:

Food Tested	Procedure	Observation	Inference

(b) List three roles of the food substance(s) found in solution F and G in the human body.

(c) (i) State the enzyme responsible for digestion of the food substance identified in solution G in the ileum.

(ii) What is the end product of digestion by the enzyme stated in (c)(i)?

3. You are provided with specimen H. Carry out the procedures below and answer the questions:

(a) Cut specimen H into small pieces.

(b) Mix with sand in a mortar and grind thoroughly.

(c) Divide into two test tubes: Test Tube M and Test Tube N.

(d) Add 2 ml of hydrogen peroxide into both tubes.

(e) Boil the contents in Test Tube N before adding hydrogen peroxide.

(f) Use a glowing splint to test the gas evolved.

Questions:

(a) What was the aim of this experiment?

(b) Which test tube served as the control?

(c) What changes were observed in each test tube? Give reasons.

(d) Identify the substance in specimen H responsible for the observed change.

(e) Write the chemical equation of the reaction.

(f) Name the gas evolved and explain how it was identified.

(g) Give two deductions that can be made from this experiment.