

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

733/2A

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

**Time: 3 Hour.**

**Tuesday 10/05/2005 a.m**

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**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.

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**1. Dissect specimen S (a cockroach) to expose reproductive and excretory parts.**

(a) (i) Draw and label two reproductive and two excretory parts.

(ii) Indicate the direction of movement of materials.

(b) (i) Explain how fertilization occurs in specimen S.

(ii) What excretory waste is commonly removed?

(c) (i) What is the sex of specimen S?

(ii) Provide three physical features to support your answer.

**2. Use solutions U and V to perform food tests.**

(a) (i) Record your results in this format:

Food Tested	Procedure	Observation	Inference

(b) (i) State the role of each food substance in human metabolism.

(ii) Which digestive juices act on the identified food substances?

(c) (i) What would happen if excess glucose is found in urine?

(ii) Why do athletes require a carbohydrate-rich diet?

**3. Observe specimens W, X and Y.**

(a) (i) List two observable features placing W in class dicotyledonae.

(ii) Mention three adaptive features of Y.

(b) (i) Observe the lower side of specimen X. What structures are seen?

(ii) State their function.

(c) Draw specimen W and label four parts.