THE UNITED REPUBLIC OF TANZANIA

NATIONAL EXAMINATION COUNCIL

DIPLOMA IN SECONDARY EDUCATION EXAMINATION

733/1 **BIOLOGY 1**

Time: 3 Hour. **Tuesday 08/05/2006 a.m**

Instructions

1. This paper has Section A, B and C.
2. Answer **all** questions from Section A and **two (2)** questions from Section B and C each.
3. Section A and B carry 30 marks each and Section C carries 40 marks.
4. Mobile phones are not allowed inside the examination room.
5. Write your Examination Number on every page of your answer booklet.

SECTION A (40 Marks)

Answer all questions in this section.

1. Define homeostasis and give four examples in humans.
2. List four differences between prokaryotic and eukaryotic cells.
3. State four factors that influence enzyme activity.
4. Outline four components of blood and their functions.
5. Mention four structural adaptations of plant roots for absorption.
6. State four functions of the human liver.
7. List four routes through which water is lost from the body.
8. Give four examples of non-communicable diseases and their causes.
9. State four advantages of classroom demonstrations in Biology teaching.
10. Mention four features of an effective learning objective.

SECTION B (30 Marks)

Answer two questions in this section.

11. Discuss the carbon cycle and its importance to ecosystems.
12. Describe the human respiratory system and explain gas exchange.
13. Explain the structure, function, and adaptations of the nephron in kidneys.
14. Discuss five types of asexual reproduction in plants with examples.

SECTION C (30 Marks)

Answer two questions in this section.

15. During a microteaching on transpiration, learners give contrasting explanations. Explain six reflective steps to guide their conceptual clarity.
16. A lab assistant breaks a reagent bottle before a dissection class. Describe six actions you would take to manage safety, maintain lesson flow, and support learners.
17. You observe inconsistent student performance in a quiz on genetics. Propose six steps to diagnose the problem and strengthen understanding.
18. Electricity fails halfway through practical enzyme demonstration. Outline six adaptive strategies to continue the lesson effectively.