

THE UNITED REPUBLIC OF TANZANIA
NATIONAL EXAMINATIONS COUNCIL
ADVANCED CERTIFICATE OF SECONDARY EDUCATION
EXAMINATION

133/2

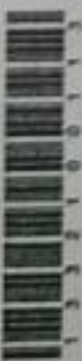
BIOLOGY 2
(For Both School and Private Candidates)

Time: 3 Hours

Tuesday, 19th February 2013 p.m.

Instructions

1. This paper consists of **eight (8)** questions in sections A, B, C and D.
2. Answer **five (5)** questions by choosing at least **one (1)** question from each section.
3. Each question carries **twenty (20)** marks.
4. Cellular phones are **not** allowed in the examination room.
5. Write your **Examination Number** on every page of your answer booklet(s).



SECTION A

- By using suitable examples, explain the economic importance of bacteria.
 - Give four reasons to justify the class in which tick belongs.
- With illustrations, describe the main events of bacteriophage replication in bacteria.

SECTION B

- Describe the process of protein synthesis in plants.
- Explain eight causes of variation in living things.

SECTION C

- What advantages do animals living in arid conditions have on the excretion of uric acid as a nitrogenous waste.
 - Explain how animals in terrestrial environment overcome their osmotic problems.
- By using the relevant curve, describe the growth pattern in arthropods.
 - Differentiate allometric growth from isometric growth. Give one example in each case.
 - Describe the types, location, role and effects of meristematic cells.

SECTION D

- Use four appropriate theories to explain the origin of life and for each theory point out the strengths and weaknesses.
- Explain five effects of eutrophication in the ecosystem.
 - Describe five problems of eutrophication faced by human societies.