

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

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

SECTION B

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

SECTION C

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

SECTION D

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