

CHRISTIAN SOCIAL SERVICES COMMISSION (CSSC)
NORTHERN ZONE JOINT EXAMINATIONS SYNDICATE (NZ-JES)



FORM SIX PRE-NATIONAL EXAMINATIONS 2026

131/2

BIOLOGY 2

Time: 3:00 Hours

Thursday, 26th February 2026 a.m

Instructions

1. This paper consists of **six (6)** questions.
2. Answer **five (5)** questions.
3. **All** drawings should be done using pencil and **all** writing should be in blue / black pen.
4. Cellular phones are **not** allowed in examination room.
5. Write your **examination number** on each page of your answer booklet(s).

Answer five (5) questions in this paper

1. (a) With examples, explain how mycology and its application can be an important step towards industrial revolution in Tanzania.

(b) In three points briefly explain how bryophytes as early plants have managed to overcome various challenges in the terrestrial habitat.
2. (a) With two examples per each describe how positive feedback mechanism differs from negative feedback mechanism.

(b) Describe with assistance of diagram four reasons for how mammalian loop of Henle is made to undergo counter current multiplier system.
3. You have been appointed by your school to compete for the prize to be gifted for the students who will best address the concept of seed dormancy in SCIENCE ACADAMIC DAY at JNICC Hall Dar es Salaam in front of Madam President Samia Suluhu Hassan. Design the work basing on the types of seed dormancy and ways to overcome them for the maximum seed germination so as to create the greater chance to win the competition.
4. (a) Outline factors that lead to Mendel's success and failure in his work of inheritance.

(b) (i) In white leghorn fowl, plumage colour is controlled by two sets of genes, including the following; White (W) is dominant over other colours (w), Black (B) is dominant over brown colour (b).
The heterozygous F_1 genotype WwBb is white. Account for this type of gene interaction and show the genotypic ratio of F_2 generation.

(ii) What is probability of getting leghorn fowl plumage with white colour in F_2 generation.
5. (a) Discuss the impact of Eutrophication in ecosystem.

(b) With examples describe the inverted pyramid of feeding relationship.
6. Explain the mechanism of that brings speciation.