

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

**133/2**

**BIOLOGY 2**

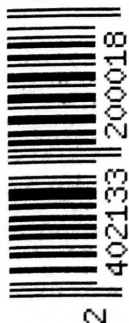
(For Both School and Private Candidates)

**Time: 3 Hours**

**Year : 2024**

**Instructions**

1. This paper consists of **six (6)** questions.
2. Answer **five (5)** questions.
3. Each question carries **twenty (20)** marks.
4. All writing must be in **blue** or **black** ink, **except** drawings which must be in pencil.
5. Communication devices and any unauthorised materials are not allowed in the examination room.
6. Write your **Examination Number** on every page of your answer booklet(s).



1. Identify four Classes of the Phylum to which a crab belongs and analyse four characteristics of each Class.
2. Describe four factors which determine the form in which nitrogenous wastes are eliminated in animals.
3. A viable bean seed was placed in the soil. After seven days the seed developed into seedling.
  - (a) Explain physiological process which led to the development of seedling.
  - (b) Analyse four external conditions that enabled the development of seedling.
4. (a) Account for six success of Mendel's work in genetics.
  - (b) The following table shows blood transfusion in relation to the Rhesus factor. Assess the compatibility of the blood by putting in each cell a tick (✓) if there is no agglutination or a cross (X) if agglutination will occur.

		Donor							
		A <sup>+</sup>	A <sup>-</sup>	B <sup>+</sup>	B <sup>-</sup>	AB <sup>+</sup>	AB <sup>-</sup>	O <sup>+</sup>	O <sup>-</sup>
Recipient	A <sup>+</sup>								
	A <sup>-</sup>								
	B <sup>+</sup>								
	B <sup>-</sup>								

5. Describe any four theories of origin of life.
6. Describe the following types of the world biomes based on their characteristics and distribution.
  - (a) Chapparal
  - (b) Tropical Savannah
  - (c) Grassland
  - (d) Desert