

**THE UNITED REPUBLIC OF TANZANIA**  
**NATIONAL EXAMINATIONS COUNCIL OF TANZANIA**  
**DIPLOMA IN SECONDARY EDUCATION EXAMINATION**

**733/1**

**BIOLOGY 1**

**Time: 3 Hours**

**Year: 2022**

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**Instructions**

1. This paper consists of sections **A** and **B** with a total of **fourteen (14)** questions.
2. Answer **all** questions.
3. Section **A** carries **forty (40)** marks, and section **B** carry **sixty (60)** marks.
4. Cellular phones and any unauthorized materials are **not** allowed in the examination room.
5. Write your **Examination Number** on every page of your answer booklet (s).

## SECTION A (40 Marks)

Answer **all** questions in this section

1. Give four differences between active and passive body immunity.
2. Briefly explain two challenges which made Tanzanian government ban the use of plastic bags in the society.
3. Use four points to justify the statement that “Despite the large size of a mango tree, it is grouped in the same class with a bean plant.”
4. Given the statement, “Although the process of respiration is concerned with energy production in the body, it requires some energy especially in its initial sub-stage.
  - (a) Give two reasons as to why energy is required.
  - (b) Identify two sub-stages that follow after the sub-stage in which energy is required.
5. Give two ways in which the induced fit model of enzyme action explains the effects of non-competitive inhibitor better than the lock and key model.
6. (a) Prepare 1% of Iodine solution
  - (a) Prepare 50% from 95% of alcohol.
7. Given the statement that: Second year student teachers were planning for a microteaching activity. Identify four requirements to prepare before the microteaching activity.
8. Briefly explain four ways to be employed in the biology subject to encourage curiosity and creativity during the teaching and learning process.
9. Given the statement, “Form One students want to buy additional books to supplement available text books. Give advice for them to get quality books by using four points.
10. Given the statement “A team of biology teachers were preparing for marking a biology examination.” Give four general principles to be followed during the

actual marking process.

### **SECTION B (60 Marks)**

Answer **all** questions from this section

11. Given the statement “You have been invited as a guest speaker to the Tanzania Youth Alliance against STD’s meeting.” Recommend six strategies that they will address to help the youth in their mission.
12. (a) Carry out genetic crosses and show the possible blood group of children whose parents were heterozygous: father being blood group A and the mother being blood group B.  
(b) Find the probability that both twins would have blood group A if the parents have non- identical twins.
13. Given a list of mushroom, pine branch, ascaris worms, mosses, centipedes and lizard to be prepared for the National Examination, explain how they would collect and preserve each of the organisms before the examination.
14. Given the statement “Amina was accidentally bitten by a snake as she was cleaning the college surroundings and started screaming for help.” Give (using six points) a critical analysis of the assistance she required before being taken to hospital.