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

BIOLOGY 1

Friday, 13th May 2011 a.m.

733/1

Time: 3 Hours

INSTRUCTIONS

1. This paper consists of sections A, B and C.
2. Answer **all** questions in sections A, **two (2)** questions from section B and **two (2)** questions from section C.
3. Section A carries 30 marks, section B carries 30 marks and section C carries 40 marks.
4. Cellular phones are **not** allowed in the examination room.
5. Write your **Examination Number** on every page of your answer booklet(s).

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2011

SECTION A (30 Marks)

Answer **all** questions in this section.

1. Outline three importance of studying Biology.

2. Distinguish between the following terms;

   (a) Homogametic sex and heterogametic sex.

   (b) Genetic engineering and biotechnology.

3. Briefly analyse three reasons why liverworts and Mosses have sometimes been described as amphibians of the plant world.

4. (a) What is meant by the term "active site" as applied in biochemistry?

   (b) What is the difference between enzymes and catalysts in their mode of action?

5. (a) Define the term "community".

   (b) Evaluate the usefulness of food web rather than food chain in studying ecology.

6. Outline three differences between a Biology teachers guide and Biology teachers manual.

   - fire outbreak.
   - burn by burners. — fainting

7. Give six predictions on what is likely to happen if laboratory rules and regulations are not adhered to.

8. Ten students from Matokeo secondary school sat for a Biology test and their scor were recorded as follows: 50, 30, 34, 44, 48, 60, 65, 70, 74 and 52. Calculate:

   (a) Mean

   (b) Range

   (c) Median.

9. List six qualities of a good Biology teacher.

   - Good listener
   - knowledge of content
   - responsibility
   - organization and management
   - T/L skills

10. Itemize three applications of Biology in genetic engineering.

SECTION B (30 Marks)

Answer **two (2)** questions from this section.

11. Discrimination and stigmatization towards people living with HIV/AIDS (PLWH have a profound effect on them. Discuss six ways which can be applied to c support the PLWHA.

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12. Write an essay on "global warming" using the following guidelines:

(a) Meaning of "global warming"

(b) Discuss any two ways in which human activities contribute to global warming

(c) Discuss three measures which can be taken to alleviate the consequences of global warming.

13. Account for seven features which have made arthropods the most successful group of the animal kingdom.

14. Describe the stages involved in the conversion of glucose to pyruvate.

SECTION C (40 Marks)

Answer **two (2)** questions from this section.

15. (a) Give five reasons, why assessment is an important exercise in the process of teaching and learning Biology?

(b) A table of specification is an important guide in test construction. Provide detailed explanation about its meaning, its features and its uses in Biology test construction.

16. Some Biology teachers argue that it is wastage of time and energy to design and assign practical work to students. Discuss this argument by presenting seven roles and five limitations of practical work.

17. (a) Give five features of learner centered biology instruction.

(b) Development of learning objectives and subject matter content are crucial factors to put into consideration when analyzing O-level Biology syllabus. Justify this statement.

18. Computer aided instructions in teaching and learning is currently accepted globally. Discuss its implementation in teaching and learning of Biology subject in Tanzanian school context by analyzing five strength and three weaknesses of this type of instruction.

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