

THE KENYA NATIONAL EXAMINATIONS COUNCIL  
Kenya Certificate of Secondary Education

231/3(a) **Inst. Sch.**

**BIOLOGY —  
(PRACTICAL)**

**Paper 3**



**Apr. 2021**

**INSTRUCTIONS TO SCHOOLS**

The information contained in this paper is to enable the head of the school and the teacher in charge of Biology to make adequate preparations for this year's Biology Practical examination.

**No one else** should have access to this paper or acquire knowledge of its contents. Great care **must** be taken to ensure that the information herein does **not** reach the candidate either directly or indirectly. The teacher or laboratory technician in charge of Biology should **not** perform any of the experiments or give any information related to these instructions to the candidates.



**These instructions consist of 2 printed pages.**



1. Besides other laboratory fittings and apparatus, each candidate would require the following:

(a) Apparatus:

- A scalpel;
- A white tile;
- Three test tubes;
- A 10 ml measuring cylinder;
- Means of labelling, three per candidate;
- A dropper;
- A hand lens;
- A white tile;
- A piece of tissue paper.

(b) Specimens:

- Three-weeks' old bean seedling;
- Three-weeks' old maize seedling;
- A medium-sized fish (about 12 cm long tilapia/trout);
- A twig with cones and leaves (of any tree species);
- Half of a piece of fresh irish potato;
- A mature fern leaf.

(c) Each examination centre will be required to provide the following:

- Hydrogen peroxide (about 12 ml for every candidate).
- Hydrochloric acid (about 8 cm<sup>3</sup> of concentrated acid for 4000 candidates).

(d) Solutions E, F, G and H.

Preparation of these solutions would require distilled water, about 100 ml for every candidate.

(e) Instructions on the preparation and some of the reagents needed for their preparation would be provided at a later date by the Kenya National Examinations Council.

2. The school/examination centre should make adequate arrangements to provide the specified materials/requirements for the examination.

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