

231/3 (b) Inst. Sc.
BIOLOGY
Paper 3
PRACTICAL
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THE KENYA NATIONAL EXAMINATIONS COUNCIL
Kenya Certificate of Secondary Education
BIOLOGY
Paper 3
PRACTICAL

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 in charge of Biology should NOT perform any of the experiments or give any information related to these instructions to the candidates.

This paper consists of 3 printed pages.

Each candidate will require the following:

- 2 ml of solution S, supplied in a test tube.
- 2 ml of solution T, supplied in a test tube.
- 2 ml of solution U, supplied in a test tube.
- 6 ml of solution X, supplied in a test tube.
- 2 ml of solution Y, supplied in a test tube.

30-60
120
180 →

1. **Preparation of solution S (for every 50 candidates and in multiples of 50).**

Put ALL the substance S in 100 ml of distilled water. Stir to obtain a homogeneous mixture. Add water to make total volume 120 ml. Label this as solution S. Stir before issuing to candidates. Solution S should be prepared on the morning of the examination day.

2. **Preparation of solution T (for every 25 candidates and in multiples of 25).**

Put ALL the substance T in 50 ml of distilled water. Stir to dissolve. Add water to make total volume 60 ml. Label this as solution T.

3. **Preparation of solution U (for every 25 candidates and in multiples of 25).**

Put ALL the substance U in 50 ml of distilled water. Stir to obtain a homogeneous mixture. Add water to make total volume 60 ml. Label this as solution U. Stir before issuing to candidates. Solution U should be prepared on the morning of the examination day.

4. **Preparation of solution X (for every 10 candidates and in multiples of 10).**

Put ALL the substance X in 50 ml of distilled water **immediately** after opening the container. Stir to dissolve. Add water to make total volume 70 ml. Label this as solution X.

5. **Preparation of solution Y (for every 50 candidates and in multiples of 50).**

Put ALL the substance Y in 120 ml of distilled water. Stir to dissolve. Add water to make total volume 150 ml. Label this as solution Y.

10 Candi - 70 ml
20 - 140 - 80
210 56 @ ml
280
350

Note:

1. The materials provided are enough for the number of candidates in the centre.

For example: Substance S

For every 50 candidates means if a school has 1, 2, 3 etc up to 50 candidates the solution will be prepared for 50 candidates.

2. In multiples of 50 means schools with more than 50 but less than 100 candidates are provided with twice the amount of the substance but **MUST** put the substance in twice the amount of water. Schools with more than 100 but less than 150 candidates are provided with three times the amount of the substance but **MUST** put the substance in three times the amount of water etc.

For example:

For up to 50 candidates pour all the substance in 100 ml of water and make total volume 120 ml.

Between 50 and 100 candidates pour all the substance in 200 ml of water and make total volume 240 ml.

Between 100 and 150 candidates pour all the substance in 300 ml of water and make total volume 360 ml etc.

The materials packed are for 50, 100, 150, 200, 250, 300, etc. candidates

The same will apply for materials packed for 10 and 25 candidates.

3. **Avoid spillage/waste because there is no allowance given to cater for spillage/waste.**