CONFIDENTIAL

233/3 Inst. Sc.
CHEMISTRY
Practical
Paper 3
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THE KENYA NATIONAL EXAMINATIONS COUNCIL

Kenya Certificate of Secondary Education
CHEMISTRY
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 Chemistry to make adequate preparations for this year's Chemistry 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 candidates either directly or indirectly. The teacher in charge of Chemistry should* ***NOT*** *perform any of the experiments in the same room as the candidates nor make the results of the experiments available to the candidates or give any other information related to the experiments to the candidates. Doing so will constitute an examination irregularity which is punishable.*

This paper consists of 8 printed pages

Requirements

In addition to the fittings and apparatus found in a Chemistry laboratory, each candidate will require the following:

Oxalic acid

A

1. 4.5 g of solid **A** supplied in a boiling tube.
2. 110 cm^3 of solution **B** — Acidified potassium permanganate.
3. about 450 cm^3 of distilled water supplied in a wash bottle.
4. about 0.5 g of solid **E** supplied in a dry stoppered container.
5. about 0.5 g of solid **F** supplied in a dry stoppered container.
6. about 10 cm^3 of aqueous sodium sulphate supplied in a test-tube.
7. one burette 0 - 50 ml.
8. one pipette 25 ml.
9. one pipette filler.
10. one thermometer - 10°C - 110°C.
11. one 250 ml. volumetric flask.
12. two 250 ml. conical flasks.
13. one Bunsen burner.
14. one tripod stand and wire gauze.
15. 5 dry test-tubes.
16. one boiling tube.
17. 2 filter papers [Whatman No. 1 (125 mm)]
18. one filter funnel.
19. one test-tube holder.
20. one **metallic** spatula.
21. one 10 ml. measuring cylinder.
22. means of labelling.
23. one clean dropper.

B **Access to**

- 2M Sodium hydroxide supplied with a dropper.
- 2M hydrochloric acid.
- Bromine water supplied with a dropper.
- Phenolpthalein indicator supplied with a dropper.
- Wall clock.

NOTES

- Solution **B** is prepared by dissolving 9.48 g of solid **B** in about 400 cm^3 of 2M sulphuric **acid an** diluting to one litre of solution with distilled water.
- Aqueous sodium sulphate is prepared by dissolving 10 g of solid sodium sulphate and diluting v distilled water to one litre of solution.
- Bromine water is prepared by diluting **1 ml. of liquid bromine** with 100 cm^3 of distilled water fume cupboard.
- Solid **A** should be weighed **accurately** in a fume cupboard or a well ventilated room.

Solids **A**, **B**, **E**, and **F** will be supplied by the Kenya National Examinations Council.