

**INSTRUCTIONS TO SCHOOLS**

The information contained in this paper is to enable the head to the school and the teacher(s) in charge of chemistry to make adequate prepare for this years chemistry practical examinations. NO ONE ELSE should have access to this paper of 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 to the experiment in the same room as the candidates or 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 examinational irregularity which is punishable.

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

1. 2.0g Solid V weight accurately
2. A burette.
3. About 0.2g of solid sodium carbonate
4. 200ml glass beaker.
5. A thermometer
6. test tube holder
7. About 1.0g solid W
8. sixdry test tubes in a test tube rack.
9. A metallic spatula.
10. About 1.0g Solid X
11. .2 blue and red litmus papers
12. . Two dry boiling tubes
13. About 500cm<sup>3</sup> distilled water supplied in a wash bottle.

**B Access to.**

1. 2M sodium hydroxide solution with a dropper
2. 2M ammonia solution with a dropper
3. Barium nitrate solution. With a dropper
4. Bunsen burner
5. Acidified KMnO<sub>4</sub> solution with a dropper
6. Bromine water with a dropper
7. Universal indicator solution with PH chart 1.0-14.0 range
8. 0.5M H<sub>2</sub>SO<sub>4</sub> solution with a dropper.

**NOTES:**

1. Solid V is  $\text{KClO}_3$
2. Solid W is hydrated ammonium aluminum sulphate
3. X Solid malleic acid
4. Bromine water is made taking 2ml. bromine liquid and topping up to one litre with distilled water. **(liquid bromine is very poisonous)**
5.  $\text{KMnO}_4$  solution is made by dissolving 1.58g in 400ml. of 2.0M  $\text{H}_2\text{SO}_4$  then topping up with distilled water to one litre.
6. **Teacher to do experiments and fill table 1**