

This document must not be seen by the candidates whatsoever

CONFIDENTIAL INSTRUCTIONS TO SCHOOLS

In addition to the apparatus and fittings found in the chemistry laboratory, each candidate will require the following;

- 1. Exactly 3cm length of solid A
- 2. A bout 80cm³ of solution B
- 3. About 120cm of solution D
- 4. Means of labeling
- 5. One 50ml burette
- 6. One 25ml pipette
- 7. One pipette filler
- 8. Two 250ml conical flask
- 9. One 100ml clean beaker
- 10. One clean metallic spatula
- 11. One -10°C to 110°C thermometer
- 12. Six clean test tubes
- 13. One test tube holder
- 14. Two boiling tubes
- 15. One test tube holder
- 16. One 10ml measuring cylinder
- 17. One 250ml volumetric flask
- 18. A bout 1g of solid E
- 19. About 0.2g of solid F
- 20. About 1g of solid G
- 21. About 2cm³ of calcium hydroxide solution in stopped test tube.
- 22. Clean glass rod
- 23. A bout 1g of solid sodium carbonate.
- 24. A bout 500cm³ of distilled water in wash bottle.

Access to

- 1. Bunsen burner.
- 2. 2M aqueous sodium hydroxide with dropper
- 3. 2M aqueous ammonia supplied with dropper
- 4. 2M hydrochloric acid
- 5. Aqueous potassium dichromate (VI) supplied with dropper.
- 6. Methyl orange indicator supplied with dropper.
- 7. Phenolphthalein indicator supplied with dropper.



NOTES

- 1. Solution **B** is provided by adding 27cm3 of 98% concentrated sulphuric(vi) acid (sp gr 1.84) to 500cm3 of distilled water and making the solution 1 litre by adding more distilled water.
- 2. Solution **C** is provided by dissolving 12g of sodium hydroxide pellets in 500cm3 of distilled water and then adding more water to make 1 litre of the solution.
- 3. Calcium hydroxide solution is prepared by adding excess calcium hydroxide powder in cold distilled water and keeping the mixture overnight in a stopped container. The mixture is filtered in the morning of the experiment and supplied in a stopped test tube.