

**233/3**  
**Chemistry Paper 3**  
**Practical**

**CONFIDENTIAL**

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

- Solution M – 0.156M  $\text{H}_2\text{SO}_4$  acid.  
N – 0.5M NaOH solution.
- Solid S – Mg metal powder. (0.1872g accurately weighed)
- 100ml measuring cylinder.
- 50ml measuring cylinder.
- Stirring rod 1.
- Thermometer 1.
- 100ml plastic beaker 2.
- Stop watch 1.
- Dropper 1.
- Pipette (25ml) 1.
- Burette (0 – 50ml) 1.
- Conical flasks 3.
- Labels 2.

**ACCESS TO:**

- Solid F Butanoic acid.
- Solid J 1g of Mg metal powder.
- 0.5g of sodium carbonate.
- 1 boiling tube.
- 5 test tubes.
- 200ml – distilled water in a wash bottle.

**NB: Bench solutions**

1. Phenolphthalein indicator supplied with a dropper.
2. Bromine water (prepared in fume chamber and supplied with a dropper).
3. Universal indicator supplied with dropper
4. pH – chart pH metre
5. Acidified Potassium manganate (VII) supplied with dropper.
6. Source of heat.