

233/3

**CHEMISTRY****PAPER 3****CONFIDENTIAL**

In addition to the apparatus and the fitting found in a chemistry laboratory, each candidate will required the following

1. About 70cm<sup>3</sup> of solution P.
2. About 80cm<sup>3</sup> of sodium hydroxide
3. Exactly 7.5 cm solid R,(May be fold twice)
4. One thermometer -10°C + 110°C
5. One stop watch / clock
6. One 100ml beaker
7. One burette 0 – 50ml
8. One pipette 25ml and a pipette filler
9. One volumetric flask 250 ml
10. About 500cm<sup>3</sup> of distilled water supplied in a wash bottle
11. One label or means of labeling
12. Two conical flasks
13. About 1g of solid S.
14. Five clean dry test – tube in a test tube rack.
15. One blue and one red litmus paper.
16. One boiling tube
17. One spatula
18. One test – tube holder

**Access to :**

1. Bunsen burner
2. 2M sodium hydroxide provided with a dropper
3. Phenolphthalein indicator supplied with a dropper
4. Lead (II) nitrate solution supplied with a dropper
5. Barium nitrate solution supplied with a dropper
6. Hydrogen peroxide supplied with a dropper
7. 2M Nitric (v) acid

**NOTE**

1. Solution P is prepared by adding exactly 27.2 cm<sup>3</sup> of concentrated sulphuric (VI) acid of specific gravity ( density) 1.84g / cm<sup>3</sup> to about 600cm<sup>3</sup> of distilled water and diluting to one litre of solution
2. Sodium hydroxide is prepared by dissolving exactly 10g of sodium pellets in about 800cm<sup>3</sup> of distilled water and diluting to one litre of solution
3. Solid R is exactly 7.5cm magnesium ribbon
4. Lead (II) Nitrate solution is prepared by dissolving 33.1g of lead (II) Nitrate solid to 1 litre of distilled water
5. Barium Nitrate solution is prepared by dissolving 26.1g of Barium Nitrate in 1 litre of distilled water.
6. Hydrogen peroxide should be is 20v/v
7. 2M Nitric (V) acid is prepared by dissolving 134cm<sup>3</sup> of concentrated Nitric (V) acid of specific gravity 1.42 g/cm<sup>3</sup> to about 600cm<sup>3</sup> of distilled and diluting to 1 litre of solution
8. 2M sodium hydroxide solution is prepared by dissolving 80g of sodium hydroxide pellets to about 800cm<sup>3</sup> of distilled water and diluting to 1 litre of solution
9. Solid S is about 1g of Ammonium Ferrous sulphate hexahydrate(NH<sub>4</sub>) SO<sub>4</sub>.FeSO<sub>4</sub>6H<sub>2</sub>O  
The quantity of volumes of solution of 2M sodium hydroxide, Lead (II) Nitrate, Barium Nitrate and , 2M Nitric (V) acid to be prepared depend on the number of candidates in the institution.