

**Requirements for candidates.**

In additions to the fitting and apparatus that are commonly used in Chemistry laboratory each candidate requires:

1. 50m burette
2. 25ml pipette
3. 2 conical flasks
4. 100cm<sup>3</sup> of solution C
5. 100cm<sup>3</sup> of solution C<sub>2</sub>
6. White tile
7. Stand and Clamp
8. 5g of solid K (exactly)
9. 10ml measuring cylinder
10. 250ml glass beaker
11. 2 boiling tubes
12. Thermometer
13. Means of heating
14. Distilled water
15. 3g of solid F
16. 3g of solid P
17. Metallic spatula
18. Filter paper
19. Filter funnel
20. Stirring rod.

Access to:

1. 2M NaOH
2. 2M NH<sub>4</sub>OH
3. 0.25M Pb(NO<sub>3</sub>)<sub>2</sub>
4. 0.25M BaCl<sub>2</sub>
5. 2M HCL
6. Phenolphthalean
7. Concentrated H<sub>2</sub>SO<sub>4</sub>
8. Acidified KMnO<sub>4</sub>
9. Ethanol

**Preparation of solutions/solids**

Solid K – Potassium Chlorate (V)

- ii) Solution C<sub>1</sub> is prepared by dissolving 10.08g of oxalic acid in about 500cm<sup>3</sup> and making the solution to the mark of 1 litre.
- iii) Solution C<sub>2</sub> is prepared by dissolving 8g of NaOH pellets in about 500cm<sup>3</sup> of distilled water and make it to 1 litre
- iv) Solid F is a mixture of CuCO<sub>3</sub> and ZnSO<sub>4</sub> in the ratio of 4:3 by mass.
- v) Solid P is oxalic acid.