Confidential

Sukellemo Chemistry paper 3

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

- About $120cm^3$ of solution A
- About $120cm^3$ of solution B
- About $100cm^3$ of solution C
- One pipette 25.0 ml
- One pipette filler
- One volumetric flask 250ml
- One burette 0-50ml
- Two conical flasks
- 8 clean dry test tubes
- Test tube rack
- One thermometer -10 to 110^0 C
- Two boiling tubes
- About 0.5g of solid Y
- About o.5g of solid Z
- One blue and one red litmus paper
- One 10ml measuring cylinder
- About $500cm^3$ of distilled water in a wash bottle
- One test tube holder
- About 0.2g of solid sodium carbornate
- One blue and one red litmus papers
- One spatula
- 7 labels

Access to

- Methyl orange indicator
- Burnsen burner
- 2M aqeous ammonia supplied with a dropper
- 0.05M lead II nitrate solution supplied with a dropper
- 2M aqeous hydrochloric acid supplied with a dropper
- Acidified potassium manganate (VII) supplied with a drpper
- Acidified potassium dichromate (VI) supplied with a dropper.
- Bunsen burner

Preparations

1. Solution A is prepared by dissolving 50cm^3 of 1.84g/cm^3 (98%) cocentrated sulphuric VI acid in about 600cm^3 of distilled water and diluting to one litre of solution.
2. Solution B is prepared by dissolving 8.0g of anhydrous sodium carbonate in about 500cm^3 of distilled water and diluting to one litre of solution.
3. Solution C is prepared by dissolving 60.0g of sodium hydroxide pellets in about 700cm^3 of distilled water and diluting to one litre.
4. Acidified potassium dichromate VI is prepared by dissolving 25g of solid Potassium dichromate in 200cm^3 of 2M Sulphuric VI acid and diluting with distilled water to make one litre of solution
5. Acidified Potassium manganate (VII) is prepared by dissolving 3.2g of solid Potassium manganate (VII) in 200cm^3 in 200cm^3 of 2M sulphuric (VI) acid d diluting with distilled water to make one litre of solution.
6. Solid Y is a mixture of ammonium sulphate and hydrated aluminium sulphate in the ratio 1:1
7. Solid Z is glucose