CONFIDENTIAL INSTRUCTIONS

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

1. About 120cm^3 of solution A
2. About 120cm^3 of solution B
3. About 100cm^3 of solution C
4. One pipette 25ml
5. One volumetric flask 250ml
6. One burette 0 – 50ml
7. 8 clean dry test tubes
8. Two conical flasks
9. One test tube rack
10. One thermometer -10^oC to 110^oC
11. Two boiling tubes
12. Six labels
13. One glass rod
14. 10cm^3 of liquid F (absolute ethanol)
15. 0.5g of solid E (hydrated aluminium ammonium sulphate) in a stopper container.
16. One watch glass
17. One clean metallic/wooden spatula
18. Two clean droppers
19. One 10ml measuring cylinder
20. 500ml distilled water
21. Wall clock

Access to

1. methyl orange indicator supplied with a dropper
2. Bunsen burner
3. 2M aqueous ammonia + dropper
4. 2M hydrochloric acid
5. 0.2M lead (II) nitrate
6. 0.2M acidified potassium manganite (VII)
7. 0.2M acidified potassium dichromate (VI)

CONFIDENTIAL INSTRUCTIONS NOTES

1. Solution A is prepared by dissolving 50cm^3 of 1.84g/cm^3 (98%) concentrated sulphur (vi) acid in about 600cm^3 of distilled water and diluting to one litre of solution.

2. Solution B is prepared by dissolving 8g of solid B (hydrated sodium carbonate) in about 500cm^3 of distilled water and diluting to one litre.

3. Solution C is prepared by dissolving 60g of sodium hydroxide pellets (not pearls) in about 700cm^3 of distilled water and diluting to one litre of solution.