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

1. *15.0cm^3 of solution BA1*
2. *About 50.0cm^3 of solution BA2*
3. *About 110.0cm^3 solution BA3*
4. *One 50.0ml burette.*
5. *One 25.0ml pipette.*
6. *One Stop watch*
7. *One pipette filler.*
8. *Two 250ml conical flasks.*
9. *One complete retort stand*
10. *One white tile*
11. *One filter funnel+ filter paper*
12. *One 100ml volumetric flask*
13. *Three labels.*
14. *One 100ml measuring cylinder*
15. *One clean dropper*
16. *One <u>metallic</u> spatula*
17. *One 500ml wash bottle with distilled water*
18. *One test-tube rack + 6 test-tubes + 2 boiling tubes*
19. *Both Red and Blue litmus papers*
20. *About 130cm^3 of solution**BA5**.*
21. *Magnesium ribbon(5 pieces of 1.5cm each)*
22. *About 0.5g of solid **BA6**, supplied in a Stoppered container.*
23. *About 0.1g of solid **BA7**, supplied in a stoppered container.*

a) <u>**Access To:**</u>

1. *Bunsen burner*
2. *One test-tube holder*
3. *Tripod stand and wire gauze*
4. *2M $NH_4OH_{(aq)}$, provided with a dropper*
5. *2M $HNO_{3(aq)}$, provided with a dropper*
6. *1M Acidified $BaCl_{2(aq)}$, provided with a dropper*
7. *Solid $NaHCO_3$ supplied in a stoppered container*
8. *0.5M potassium Iodide solution, supplied with a dropper.*
9. *Acidified $KMnO_4$ solution, provided with a dropper*
10. *Methyl orange indicator solution supplied with a dropper.*
11. *Phenolphthalein indicator solution supplied with a dropper.*

Note:

a)

i. *Acidified potassium manganate (VII) solution is prepared by dissolving 3.16g of solid potassium manganate (VII) in about 600cm³ of 2M sulphuric (VI) acid and adding distilled water to make 1 litre.*

ii. *Solid BA7 is Maleic acid crystals.*

iii. *Solid BA6 is a mixture of $ZnSO_4$/ $PbCO_3$ in the ratio of 1:1 to make 0.5g.*

iv. *Solution BA5 which is 130 cc of $2M H_2SO_{4(aq)}$*

v. *Solution BA3 which is 110cc. of 0.0678M $NaOH_{(aq)}$.*

vi. *Solution BA2 which is 50cc of 0.0384M Oxalic acid*

vii. *Solution BA1 which is 30cc. of 1.25M $HCl_{(aq)}$*

b) **On the day of the Practical Examination, the teacher concerned with the exam MUST do question 1 and 2 as per the instructions given in the question paper in order to complete Table 1, 2 and 3 for EACH practical session.**

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