

CONFIDENTIAL

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

1. One 50ml burette
2. 25ml pipette and pipette filler
3. Two 250ml conical flasks
4. Thermometer (-10°C – 110°C)
5. 3 labels
6. One 250cm³ volumetric flask
7. About 500cm³ of distilled water in a wash bottle
8. 100ml plastic beaker
9. 50ml measuring cylinder
10. 10ml measuring cylinder
11. 10mls of absolute ethanol
12. Filter funnel
13. Two filter papers
14. Two boiling tubes
15. 1 blue and 1 red litmus paper
16. About 150cm³ solution A
17. About 150 cm³ of solution B
18. About 70cm³ of solution C
19. 0.5g of solid E
20. 0.5g of solid F
21. Six test tubes in a rack
22. 12cm³ of 2M HCl
23. A dropper
24. Metallic spatula

Access to the following:

1. Acidified potassium manganate (VII) supplied with a dropper
2. Bunsen burner
3. Phenolphthalein indicator supplied with a dropper
4. 2M sulphuric (VI) acid supplied with a dropper
5. Bromine water supplied with a dropper
6. 2M NaOH supplied with a dropper
7. 2M aqueous ammonia supplied with a dropper
8. 2M hydrochloric acid
9. Aqueous lead (II) nitrate supplied with a dropper
10. Aqueous barium nitrate supplied with a dropper
11. Dilute nitric (V) acid

NOTES AND PREPARATIONS

1. **Solid E is Hydrated Ammonium Aluminium sulphate**
2. **Solid F is Benzoic Acid**
3. **Solution A:** measure about 500ml of distilled water and place in a one litre volumetric flask then add the 172cm³ of concentrated hydrochloric acid carefully and top up to the mark. (2M HCl)
4. **Solution B** is prepared by dissolving 80.0g of the Sodium hydroxide pellets in about 500cm³ of water then diluting to one litre. (2.0M NaOH)
5. **Solution C** is prepared by dissolving 25.0g of anhydrous citric acid, C₃H₅O(COOH)₃ R.F.M = 192 in about 500cm³ of water then diluting to one litre