**MWAKICAN JONT EXAM TEAM**

**233/3: CHEMISTRY PAPER 3 PRACTICAL CONFIDENTIAL**

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

1. About 100cm3 of 0.2m hydrochloric acid labelled solution S
2. Accurately weighed 2.4g of anhydrous sodium carbonate.
3. 250ml volumetric flask
4. 50ml measuring cylinder
5. Distilled water
6. 250ml empty beaker
7. Glass rod
8. About 50cm3 of 0.5m sulphuric (VI) acid labelled solution G
9. About 70cm3 of 1m sodium hydroxide solution labelled solution F
10. 10ml measuring cylinder
11. 100ml empty beaker
12. 0-110°C thermometer
13. One burette 0-50ml
14. one 25.0ml pipette
15. one pipette filler
16. retort stand
17. 2 labels
18. two conical flasks (250ml)
19. one boiling tube
20. six dry test tubes in a test tube rack
21. Methyl orange indicator
22. One filter funnel
23. a white tile
24. Metallic spatula
25. 1.5 g of solid C
26. 1g of solid P
27. About 0.5g anhydrous sodium carbonate.

**Access to**

1. Means of heating
2. 2m NaoH solution with a dropper
3. 2m ammonia solution with a dropper
4. 0.5m sodium chloride solution with a dropper
5. 1m sulphuric (VI) acid with a dropper

**NOTE**

1. Solid C is lead (ii) nitrate
2. Solid P is oxalic acid
3. solution F is sodium hydroxide solution prepared by dissolving 40g of it in 1 litre of solution
4. Solution S is 0.2m Hydrochloric acid prepared by dissolving 17.2cm3 of concentrated hydrochloric acid in 1 litre.
5. Solution G is 0.5m sulphuric (vi) acid prepared by dissolving 27.5cm3 of concentrated sulphuric (vi) acid in 1 litre of solution (Density 1.84g/cm3)
6. 0.5m sodium chloride solution is prepared by dissolving 29.25g of solid sodium chloride in 1 litre of solution