**MWAKICAN JOINT EVALUATION – TERM II 2017**

**233/3 CHEMISTRY PAPER 3 (PRACTICAL)**

**FORM THREE CONFIDENTIAL**

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

1. About 100cm3 of 0.1M hydrochloric acid labeled solution R.
2. Accurately weighed 2.65g of anhydrous sodium carbonate.
3. 250ml volumetric flask.
4. 100ml measuring cylinder.
5. 250ml empty glass beaker.
6. 500ml Distilled water.
7. Glass rod
8. 2 labels
9. One burette (0.50ml)
10. One 25.0ml pipette
11. Pipette filler
12. One filter funnel
13. Retort stand
14. Methyl orange indicator
15. Two conical flasks (250ml)
16. White tile
17. 6 dry test tubes
18. 1 boiling tube
19. Metallic spatula
20. 1.5g of solid M.
21. 1g of solid J.
22. 1.5 g of solid A.
23. About 0.2g of sodium hydrogen carbonate.
24. 2 red and 2 blue litmus papers.
25. 10 ml measuring cylinder.

**Access to:-**

1. Means of heating
2. 2M ammonia solution with a dropper
3. 0.2M Lead(II) nitrate solution.
4. Acidified potassium manganate (VII) with a dropper.
5. Universal indicator solution.
6. Standard PH chart.

**NOTE**

1. Solid M is a mixture of Zinc Sulphate and Ammonium Sulphate in the ratio 1:1.
2. Solid J is hydrated Copper (II) sulphate.
3. Solid A is oxalic acid.
4. Solution R is 0.125m hydrochloric acid prepared by dissolving 10.75cm3 of concentrated hydrochloric acid in 1 litre.
5. 0.2m Lead (II) nitrate is prepared by dissolving 66.2g of Lead (II) nitrate in 1 litre of solution.
6. 2M ammonia solution is prepared by dissolving 112cm3 of concentrated ammonia solution in 1 litre.
7. Acidified potassium manganate (VII) is prepared by dissolving 3.2g of potassium manganate (VII) in about 600cm3 of 2M Sulphuric (VI) acid and diluting to one litre of solution.