**SCHOOL BASED FORM 4 EXAMINATION 2019**

**233/3**

**CHEMISTRY PRACTICAL CONFIDENTIAL**

**JULY/AUGUST 2019**

**CONFIDENTIAL**

**FORM 4**

In addition to the normal laboratory fittings and apparatus, each candidate should have the following;

1. 50 cm 3 of solution Q
2. 100 cm3 of solution R
3. 250 ml volumetric flask
4. 250 ml conical flask (2)
5. 50 ml measuring cylinder
6. 50 ml burette
7. 25 ml pipette
8. One white tile
9. Complete stand
10. Solid B
11. 1 boiling tube
12. Test tube holder
13. Thermometer (-10 to 1100C)
14. Solid W
15. 10 ml measuring cylinder
16. 5 test tube in a rack
17. Solution F
18. 500 ml distilled water
19. 0.2 g sodium hydrogen carbonate
20. 1 label

**Access to;**

1. Source of heat
2. 2 M sodium hydroxide solution with a dropper.
3. 2 M aqueous ammonia with a dropper.
4. 0.25 M sodium sulphate solution with a dropper.
5. 0.1 M potassium Iodide with a dropper.
6. Acidified Potassium Manganate (VII) with a dropper.
7. Universal indicator solution with a dropper.
8. Phenolphthalein indicator
9. pH chart

**GENERAL NOTES**

1. Solution Q is prepared by adding 172cm3 of concentrated hydrochloric acid in 600cm3 of distilled water and then topping up to one litre.
2. Solution R is prepared by dissolving 10 grams of sodium hydroxide and 2 grams of sodium nitrate in about 500cm3 of distilled water and making up to one litre.
3. Solid B is exactly 4.5g potassium chlorate, KClO3
4. Solid W is about 0.3 g lead (II) nitrate.
5. Solution F, about 100cm3 of 2 M ethanoic. (acetic acid)