**2020 FORM 4 TERM 1 ENRTY EXAMS**

**FORM 4 CHEMISTRY PP. 3 (CONFIDENTIAL)**

**Each student is provided with:**

1. 100cm3 solution W, 0.1M HCL
2. Solid E
3. Solid Y
4. 250ml volumetric flask
5. 500 ml Distilled water
6. 1 pipette
7. 1 burette
8. 2 conical flasks
9. 1pipette filler
10. 1 label
11. 1 stand clamp and boss
12. 1 white tile
13. 1 filter funnel
14. 2 boiling tubes
15. 6 test tubes in a test tube rack
16. 10cm3 measuring cylinder
17. About0.5g of sodium carbonate

**Access to:**

1. Means of heating
2. 2M NaOH solution with a dropper
3. 2M NH4OH solution with a dropper
4. 0.1M lead (II) nitrate solution with a dropper
5. Acidified potassium manganate (VII) solution with a dropper
6. 1M HCl solution with a dropper
7. Universal indicator
8. PH chart.

**NB: methyl orange indicator**

* Solid E is 2.86g of Na2CO3 . 10H2O weighed accurately.
* Solid Y is about 2.0g of ZnSO4 crystals
* Solid X is about 2.0g of oxalic acid
* 2M ammonia solution is prepared by dissolving 112cm3 of concentrated ammonia solution in 1 litre.
* 2M sodium hydroxide solution is prepared by dissolving 80g of sodium hydroxide in 1 litre.
* Acidified potassium manganate (VII) is prepared by dissolving 3.2g of potassium manganate (VII) in 600cm3 of 2M sulphuric (VI) acid and diluting to a litre.

* 0.1M hydrochloric acid is prepared by dissolving 8.6cm3 of concentrated hydrochloric acid in 1000cm3 of water.