THE UNITED REPUBLIC OF TANZANIA
NATIONAL EXAMINATIONS COUNCIL OF TANZANIA

032 CHEMISTRY ACTUAL PRACTICALS FOR ORDINARY LEVEL OF SECONDARY EDUCATION

1.0 IMPORTANT

The National Examinations Council has prepared a checklist of apparati and chemicals for Chemistry Actual Practicals. As a Head of the school **make sure that all the apparati and chemicals indicated in this checklist are available** in the school laboratory. Some of these will be used for Certificate of Secondary Education Examination (CSEE) 2018 Chemistry practicals. There **will be no one month** Advance Instructions which will be provided for Chemistry practicals. However, 24 Hours Advance Instructions will be provided.

2.0 LIST OF APPARATI AND CHEMICALS

In addition to the normal **fittings** and **reagents** in a **CSE** Chemistry laboratory, each candidate will require some of the listed apparati and chemicals as will be prescribed in the 24 hours advance instructions.

2.1 Apparati

- 1 pipette (20 cm^3 or 25 cm^3)
- 1 burette (50 cm^3)
- 3 titration flasks
- 1 beaker (100 cm^3)
- 2 beakers (250 or 300 cm^3)
- 1 spatula
- stirrer
- 4 test tubes (pyrex)
- 1 Petri dish/watch glass
- 1 measuring cylinder (100 cm^3)
- 1 measuring cylinder (10 cm^3)
- 1 stopwatch/clock
- 1 heat source/burner
- 1 test tube holder
- 1 test tube rack
- 1 Qualitative Analysis Guidance sheet
- 1 thermometer (0 – 100 °C).
- 1 sheet (A4) white plain paper

2.2 Chemicals

- 500 cm^3 of distilled water
- 3 g sodium hydroxide (NaOH)
- 3 g sodium chloride (NaCl)
- 3 g sodium thiosulphate ($Na_2S_2O_3$)
- 10 cm^3 methyl orange indicator (MO).
- 10 cm^3 phenolphthalein indicator (POP)
- 3 g lead nitrate ($Pb(NO_3)_2$)
- 3 g copper carbonate ($CuCO_3$)
- 3 g calcium chloride ($CaCl_2.6H_2O$)
- 3 g ammonium chloride (NH_4Cl)
- 3g ammonium hydroxide (NH_4OH)
- 2 g sulphuric acid (H_2SO_4)
- 3 g calcium carbonate ($CaCO_3$)
- 2 g hydrochloric acid (HCl)
- 3 g anhydrous sodium carbonate (Na_2CO_3)
- 2 g nitric acid (HNO_3)
- 2 g oxalic acid ($(COOH)2.2H_2O$)
- 3 g potassium hydroxide (KOH)
- 3 g zinc sulphate ($ZnSO_4.7H_2O$)
- 3 g copper(II) sulphate ($CuSO_4.5H_2O$)
- 3 g lead chloride ($PbCl_2$)

- 3 g sodium hydrogen carbonate ($NaHCO_3$).
- 3 g potassium ferrocyanide
- 3 g silver nitrate ($AgNO_3$)
- 3 g magnesium sulphate ($MgSO_4$)
- 3 g barium chloride ($BaCl_2$)
- 3 g potassium dichromate.