THE UNITED REPUBLIC OF TANZANIA
NATIONAL EXAMINATIONS COUNCIL OF TANZANIA
CERTIFICATE OF SECONDARY EDUCATION EXAMINATION 2023

032 CHEMISTRY ACTUAL PRACTICALS

A CHECKLIST OF CHEMICALS AND APPARATUSES

1.0 IMPORTANT

The National Examinations Council has prepared a checklist of apparatuses and chemicals for Chemistry Actual Practicals examination. As a Head of the school **make sure that all the apparatuses 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) 2023 Chemistry Practicals. The **03 Hours Practical Advance Instructions** will be provided.

2.0 LIST OF APPARATUSES AND CHEMICALS

In addition to the normal fitting of a Chemistry laboratory, the school must prepare the following apparatuses and chemicals for each candidate as will be prescribed in the 03 Hours Advance Instructions.

2.1 Apparatuses

- 1 burette (50 ml)
- 2 test tubes
- 1 pipette filler
- 1 pipette (20 ml or 25 ml)
- 1 conical flask (250 ml)
- 1 conical flask cork/rubber stopper
- 1 retort stand and a clamp
- 1 beaker (50 ml)
- 1 beaker (100 ml)
- 4 beakers (250 or 300 ml)
- 1 pyrex beaker (250 or 300 ml)
- 1 test tube rack
- 1 tripod stand
- 1 wire gauze
- 2 pcs of test tube holders
- 1 glass/plastic funnel (brim diameter which ranges from 50 to 100 mm)
- 1 stopwatch or stop clock
- 1 glass rod
- 1 measuring cylinder (10 ml) Add 10pc
- 1 measuring cylinder (50 ml) -11- -11-
- 1 measuring cylinder (100 ml)
- 1 thermometer (0 °C–100 °C)
- 1 heat source for sharing in the ratio of 1:4
- 4 g cotton wool
- 1 spatula
- 1 watch glass
- 1 A 4 white paper
- 10 cm length masking tape to be used for labelling
- 1 filter paper
- 2 both blue and red strips of litmus papers

2.2 Chemicals

- 1 g sulphuric acid
- 2 g hydrochloric acid
- 2 g hydrated oxalic acid
- 2.5 g potassium hydroxide
- 1 g acetic acid
- 3 g potassium permanganate
- 2 g sodium hydroxide
- 0.4 g of magnesium ribbon
- 2.0 g of magnesium carbonate
- 4 g hydrated sodium thiosulphate
- 4 g zinc nitrate
- 0.5 g silver nitrate

- 300 ml distilled water
- 0.5 g phenolphthalein indicator
- 0.5 g methyl orange indicator
- 4 g of ammonium chloride
- 2 g ammonium sulphate
- 4 g calcium carbonate
- 4 g zinc chloride
- 4 g iron (II) sulphate
- 2 g anhydrous sodium carbonate
- 3 g copper nitrate
- 2 g sodium chloride
- 0.5 g sodium hydrogen carbonate
- 4 g copper carbonate
- 2 g hydrogen peroxide
- 2 g nitric acid
- 2 ml ammonia solution
- 4 g iron (III) chloride
- 3 g calcium nitrate
- 0.5 g barium chloride
- 2.0 g potassium hexacyanoferrate (III) instead;
- 2 g copper (II) sulphate
- 0.5 g manganese (IV) dioxide
- 4 g copper (II) sulphate
- 4 g lead nitrate

3.0 OTHER REQUIREMENTS

3.1 Labels

Prepare a marker pen and masking tape for labelling chemicals and solutions.

3.2 Bench Reagents

Ensure that, all bench reagents are available and fresh.