THE UNITED REPUBLIC OF TANZANIA
NATIONAL EXAMINATIONS COUNCIL OF TANZANIA
CERTIFICATE OF SECONDARY EDUCATION EXAMINATION 2024

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) Chemistry practicals. The **03 Hours Practical Advance Instructions** will be provided.

2.0 LIST OF APPARATUSES AND CHEMICALS

In addition to the normal fittings and reagents in the 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)
- 1 pipette (20 ml or 25 ml)
- 7 boiling test tubes
- 1 pipette filler
- 3 conical flasks (250 ml)
- 1 conical flask cork/rubber stopper
- 1 retort stand and a clamp
- 1 pyrex beaker (250 ml)
- 1 beaker (50 ml)
- 1 beaker (100 ml)
- 2 beakers (250 ml or 300 ml)
- 1 A_4 white paper
- masking tape to be used as labels / two labels
- 1 wire gauze
- 1 white tile
- 1 wash bottle
- 1 glass /plastic dropper
- 1 glass/plastic funnel (brim diameter which ranges from 50 to 100 mm)
- 1 stopwatch or stopclock
- 1 measuring cylinder (10 ml)
- 1 measuring cylinder (50 ml)
- 1 glass rod
- 1 measuring cylinder (150 ml) for sharing in the ratio of 1:2
- 1 thermometer (0 °C–100 °C)
- 1 heat source for sharing in the ratio of 1:4
- 4 g cotton wool
- 1 test tube rack
- 1 watch glass
- 1 tripod stand
- 2 strips of both red and blue litmus papers
- 10 cm of nichrome /platinum wire
- 1 filter paper
- 1 test tube brush

2.2 Chemicals

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

- 3 g anhydrous sodium carbonate
- 300 cm^3 distilled water
- 0.5 g phenolphthalein indicator
- 0.5 g methyl orange indicator
- 4 g ammonium chloride
- 2 g ammonium sulphate
- 4 g calcium carbonate
- 4 g zinc chloride
- 6 g iron (II) sulphate
- 1 g potassium hydroxide
- 4 g copper carbonate
- 4 g lead nitrate
- 4 g potassium dichromate
- 4 g ammonium oxalate
- 2 g copper tunings
- 0.5 g silver nitrate
- 2 g hydrogen peroxide
- 2 g nitric acid
- 2 cm^3 ammonia solution
- 4 g iron (III) chloride
- 3 g calcium nitrate
- 0.5 g barium chloride
- 2.0 g potassium hexacyanoferrate (III)
- 3 g copper nitrate
- 2 g sodium carbonate decahydrate
- 4 g sodium chloride
- 4 g copper (II) sulphate
- 2 g potassium hexacyanoferrate(II)

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.