

CONFIDENTIAL

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

NOVEMBER 2015

032/2A

**CHEMISTRY 2A
(ACTUAL PRACTICAL A)**

ADVANCE INSTRUCTIONS

1.0 IMPORTANT

- 1.1 GREAT CARE MUST BE TAKEN **NOT** TO DIVULGE THESE INSTRUCTIONS TO BOTH CANDIDATES AND UNAUTHORIZED PERSONS EITHER DIRECTLY OR INDIRECTLY.
- 1.2 NOTE THAT YOU WILL **NOT** BE ALLOWED TO OPEN THE ENVELOPE CONTAINING THE QUESTION PAPER BEFORE THE TIME OF COMMENCEMENT OF THE EXAMINATION.
- 1.3 24 HOURS ADVANCE INSTRUCTIONS FOR THIS PAPER WILL BE PROVIDED.

2.0 In addition to the normal fittings and reagents in a normal CSE Chemistry laboratory, each candidate will require the following:

2.1 Apparatuses:

- 1 pipette (20 cm³ or 25 cm³)
- 1 burette (50 cm³)
- 3 titration flasks
- 2 beakers (250 or 300 cm³)
- 1 spatula
- 2 test tubes (pyrex)
- 2 Petri dishes/watch glasses
- Measuring cylinder
- 1 Qualitative Analysis Guidance sheet.
- 100 cm³ beaker
- 1 stopwatch
- 1 heat source/burner
- 1 test tube holder
- 10 cm³ measuring cylinder

2.2 Chemicals:

- 4 g hydrochloric acid
- 3 g ammonium chloride
- 0.1 g potassium ferrocyanide
- 10 cm³ methyl orange indicator.
- 3 g lead (II) nitrate (Pb(NO₃)₂).
- 600 cm³ distilled water.
- 10 cm³ phenolphthalein (POP) indicator
- 3 g anhydrous sodium carbonate
- 0.1 g manganese dioxide (MnO₂)
- 3 g lead (II) chloride (PbCl₂)
- 2 g sodium thiosulphate (Na₂S₂O₃)