THE UNITED REPUBLIC OF TANZANIA
NATIONAL EXAMINATIONS COUNCIL OF TANZANIA
CERTIFICATE OF SECONDARY EDUCATION EXAMINATION
NOVEMBER 2019

032/2A   **CHEMISTRY 2A**
ACTUAL PRACTICAL A

24 HOURS ADVANCE INSTRUCTIONS

1.0 IMPORTANT

1.1 GREAT CARE MUST BE TAKEN **NOT** TO DIVULGE THESE INSTRUCTIONS TO BOTH CANDIDATES AND TO UNAUTHORIZED PERSONS EITHER DIRECTLY OR INDIRECTLY.

1.2 MAKE SURE THAT THE CANDIDATES ARE PROVIDED WITH CHEMICALS AND APPARATUSES AS INDICATED IN THESE ADVANCE INSTRUCTIONS ONLY AND **NOT** OTHERWISE.

2.0 PREPARATION AND LABELLING OF CHEMICALS AND APPARATUSES

2.1 Question 1

- Prepare 0.1 M NaOH solution and label it **AA**, allow 150 cm^3 per candidate.
- Prepare 0.1 M HCl solution and label it **BB**, allow 150 cm^3 per candidate.
- Provide each candidate with methyl orange (**MO**).
- Provide each candidate with 1 burette, 1 conical flask, 1 pipette (20 cm^3 or 25 cm^3), 1 white tile, 1 retort stand and a clamp.

2.2 Question 2

- Provide each candidate with 7 boiling test tubes and a test tube rack.
- Provide 3 g $CuCO_3$ per candidate label it **V**.
- Provide 200 cm^3 distilled water per candidate.
- Provide concentrated H_2SO_4 on the front bench, to be monitored closely.
- Provide dilute HCl, $FeSO_4$, $Ca(OH)_2$, NH_3 solution, $MgSO_4$ solution and NaOH as bench reagents.
- Provide 2 strips of both blue and red of litmus paper.
- Provide heat source for sharing in the ratio of 1:4.

3.0 NOTE TO EXAMINATIONS SUPERVISOR AND LABORATORY TECHNICIAN/HEAD OF CHEMISTRY DEPARTMENT

Laboratory technician/teacher/Head of Chemistry Department should perform an experiment of Question 1 during **the last 30 minutes of the last session of the examination**. The experimental data must be recorded in the form in page 2 of these instructions and enclosed **together with the candidates' scripts** (Answer booklets) for submission to the Examinations Council.