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

NOVEMBER 2018

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 UNAUTHORIZED PERSONS EITHER DIRECTLY OR INDIRECTLY.
- 1.2 NOTE THAT YOU WILL **NOT** BE ALLOWED TO OPEN THE ENVELOPE CONTAINING THE QUESTION PAPERS BEFORE THE TIME OF COMMENCEMENT OF THE EXAMINATION.

2.0 PREPARATION AND LABELLING OF CHEMICALS AND APPARATI

2.1: Question 1

Prepare the following:

- 0.5 M sulphuric acid, label it **X** and allow 150 cm³ per candidate.
- 0.1 M of sodium hydroxide, label it **Y** and allow 150 cm³ per candidate.
- Methyl orange indicator for sharing, label it **MO**.
- Burette, pipette, titration flask, measuring cylinder (100 cm³) and stirrer.

2.2: Question 2

Prepare the following:

- 0.25 M Na₂S₂O₃; label it **H₁** and provide each candidate with 50 cm³.
- 2 M HCl; label it **H₂** and provide each candidate with 50 cm³.
- Distilled water.
- A white plain paper draw a cross (**X**) on it, uniformly to all candidates.
- Stop watch/clock; 250 cm³ beaker; 100 cm³ beaker; 10 cm³ measuring cylinder and source of heat.

2.3: Question 3

Provide the following;

- 3 g anhydrous sodium carbonate (Na₂CO₃) for each candidate, label it **N**.
- Distilled water.
- Bench reagents for sharing including lime water, sodium hydroxide solution and magnesium sulphate solution. Label them by their names.
- Test tubes, spatula; source of heat.

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

Laboratory Technician or Head of Chemistry Department should perform experiments on Question 1 and 2 during the **last thirty (30) minutes of the examination time**. The experimental data must be recorded in the form in page 3 of these instructions and submit to the Council together with the candidates' scripts (Answer booklets).