THE UNITED REPBLIC OF TANZANIA **DODOMA REGION**

FORM FOUR MOCK EXAMINATION AUGUST, 2023 **ACTUAL PRACTICAL**

CHEMISTRY 2B - MARKING SCHEME

SOLUTION

1 (a) (4MARKS)

Burette reading in cm ³	pilot	1	2	3
Final volume	25.50	50.00	25.00	50.00
Initial volume	00.00	25.00	00.00	25.00
Volume used	25.50	25.00	25.00	25.00

(b) (i) 25 cm³ of R required 25 cm³ of A

(1 MARK)

(ii) Yellow to orange

(1 MARK)

(iii)
$$2NaOH_{(aq)} + H_2SO_{4 (aq)}$$
 — Na $SO_{4 (aq)} + 2H_2O_{(aq)}$

(2 MARK)

(c) Given:

Volume of base $(V_b) = 25 \text{ cm}^3$

Volume of acid $(V_a) = 25 \text{cm}^3$

Concentration of base =4g/L(1 MARK)

Mole ratio of acid $(n_a) = 1$

Moles ratio of base $(n_b) = 2$

The molarity of base is given by

Molarity =
$$\frac{\text{concentration in g/L}}{\text{Molar mass}}$$

= $\frac{4g/L}{40g/\text{mol}}$ (2 MARK)
= $\frac{0.1M}{100}$ (1 MARK)

From the relation

2. (a)

Volume of M (cm ³)	Volume of N(cm3)	Volume of distilled water (cm³)	Time taken for the mark x to be obscured (seconds)
30	10	00	15
25	10	5	36
20	10	10	72
15	10	15	152
10	10	20	280

(2 MARKS)

(05 marks)

(ii) Volume is inversely proportion to time (03 marks)

$$(c)2HCl_{(aq)} + Na_2S2O_{3(aq)} 2NaCl_{(aq)} + S_{(s)} + SO_{2(aq)} + H2O_{(aq)} (03)$$

marks)

(d) Formation of sulphur (S) (02 marks)

(e) –Vulcanization of rubber

%Purity of sulphuric acid = 94%

- Manufacture of gunpowder
- -Manufacture of sulphuric acid
 - -Manufacture of medicine and fungicides (any two points @ 1mark

=02 marks)

3

(f) To investigate the effect of concentration to the rate of chemical reaction. (03 marks)