



STAREHE GIRLS' CENTRE MOCK EXAMINATION 2025

MARKING SCHEME FORM 4 CHEMISTRY PRACTICAL

QUESTION 1

TABLE 1

- ✓ complete table CT **1 mk**
- ✓ decimal point D **1 mk**
- ✓ accuracy A (tied to school value) **1 mk**
- ✓ principal of averaging **1 mk**
- a) i) Average volume / final accuracy 1 (tied to school value)
NB theoretically expected value = 15.0 cm³

$$\text{ii) } \frac{1M \times 75 \text{ cm}^3}{250 \text{ cm}^3}$$

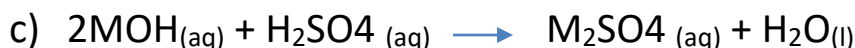
$$= 0.3M$$

½ mk

½ mk

$$\text{b) } \frac{\text{Ans in (b) above} \times \text{ans in (a) above}}{1000} = \text{ans}$$

½ mk



1mk

$$\text{d) Mole ratio} = 2:1$$

½ mk

$$\text{e) Moles of solution W} = 2 \times \text{ans in (iii)}$$

½ mk

$$\text{f) } \frac{\text{ans in b(i)} \times 1000}{25} = \text{ans}$$

½mk

g) $\frac{\text{ans in (i)} \times 600}{25}^{\frac{1}{2}} \text{mk} = \text{ans}^{\frac{1}{2}} \text{mk}$

h) $\frac{8.7}{\text{ans in b (iii)}}^{\frac{1}{2}} \text{mk} = \text{RFM OF MOH}^{\frac{1}{2}} \text{mk}$

i) $\text{RAM of metal M} = \text{RFM} - (16+1)^{\frac{1}{2}} \text{mk} = \text{ans}^{\frac{1}{2}} \text{mk}$

QUESTION 2

TABLE 2

- ✓ complete table CT **1mk**
- ✓ decimal point D **1mk**
- ✓ trend (increasing time) **1mk**

j) 1/t row completed **1mk**

a) Graph

k) Plotting **1mk**

l) Scale **1mk**

Straight line touching origin (0,0) **1mk**

b) Correctly read value from the graph **1mk**

c) Correct reciprocal of value read from the graph **1mk**

d) Rate at reaction increase with increase in concentration of the sodium thiosulphate because increase in concentration increases number of successful collisions

Question 3

i) **Solid Q**

a)

	Observation	inferences
i)	No white ppt formed $\frac{1}{2}$ mk	Ca^{2+} , Mg^{2+} , Pb^{2+} , Al^{3+} , Zn^{2+} Absent 1mk
ii)	Burns with a golden yellow flame $\frac{1}{2}$ mk	Na^{+} confirmed 1mk
iii)	White ppt formed $\frac{1}{2}$ mk	Cl^{-} , SO_4^{2-} , SO_3^{2-} , CO_3^{2-} 1mk
iv)	KMnO_4 decolorized $\frac{1}{2}$ mk	SO_3^{2-} , Confirmed 1mk
B(i)	Effervescence occurs $\frac{1}{2}$ mk	CO_3^{2-} , SO_3^{2-} 1mk
ii)	Yellow ppt formed $\frac{1}{2}$ mk	Pb^{2+} confirmed 1mk

ii) **Solid R**

	Observation	inferences
a	Burns with a yellow sooty flame $\frac{1}{2}$ mk	$=C = C =$, $\equiv C = C =$ @ $\frac{1}{2}$ mks
B(i)	Dissolves $\frac{1}{2}$ mk forming a colorless solution $\frac{1}{2}$ mk	Polar substance $\frac{1}{2}$ mk
ii)	KMNO ₄ decolorized $\frac{1}{2}$ mk	ROH, $=C = C =$, $\equiv C = C =$ 1mk
ii)	Effervescence $\frac{1}{2}$ mk	H ⁺ or RCOOH 1mk

