1. **Table 1** — 5 marks

Distributed as follows

A	**Complete Table**	1 mark
	Complete Table with 3 titrations	1 mark
	Incomplete Table with 2 titrations	½ mark
	Incomplete Table with 1 titration	0 mark
B	**Decimal**	1 mark
	(Tied to the 1st and 2nd row only)	
	Accept one or two decimal places used consistently otherwise penalize fully.	
C	**Accuracy**	1 mark
	If any value of the student is within	
i.	± 0.1 cm^3 of school value	1 mark
ii.	± 0.2 cm^3 of school value	½mark
iii.	Beyond ± 0.2 cm^3 of school value.	0 mark
D	**Principle of averaging**	1 mark
	Values averaged must be within ± 0.2 cm^3 of each other otherwise penalize fu	
E	**Final accuracy**	1 mark
	Compare the candidate's correct averaged value and if within	
i.	± 0.1 cm^{3}of school value	1 mark
ii.	± 0.2 cm^3 of school value	½ mark
iii.	Beyond ± 0.2 cm^3 of school value	0 mark

b) $\frac{averaged\ volume \times 0.1}{1000}$ √½=correct answer√½

c) $\frac{Correct\ answer\ in\ (b) above}{2}$ √½= correct answer√½

d) $If\ 25cm^3 \rightarrow Ansin(c)$

$1000cm^3 \rightarrow \frac{1000 \times ans\ in\ (c)}{25}$ √½

= intermediate answer

if intermediate answer →6.5

$1mole \rightarrow \frac{1 \times 6.5}{int\ ermediate\ answer}$ √1

= correct answer√½

(e) $RFM\ of\ H_2O = 18$ √½

$2 + 88 + 18x = answer\ in\ (d)\ above$

$18x = answer\ in (d) above - 90$

$x = \frac{answer\ in (d) above - 90}{18}$ √1

= Correct answer √½

2. **Table 2** 4 marks

Distributed as follows A Complete Table 2 marks

Completer Table with 6 to 7 reading 2 marks

Incomplete Table with 5 to 4 reading 1 mark

Incomplete Table with 3 to 2 reading ½ mark

Incomplete Table with one reading 0 mark B Decimals ½ mark

Accept whole numbers or one decimal place used consistently for ½ mark C Accuracy ½ mark

Compare the students value at test tube one for the height of precipitate with the school value at test tube 1 and if with+ 2.0mm height award ½ mark otherwise penalize fully.

D Trend 1 mark Award one mark for a continuous rise followed by a constant otherwise penalize fully.

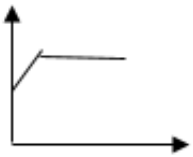
GRAPH 3 marks A Labelling of both axis even without units ½ mark B Scale ½ mark

Area occupied by the graph should be atleast 6½ squares in y axis by 9 squares in x axis otherwise penalize fully.

C Plotting 1 mark 6 to 7 correctly plotted points 1 mark. 5 to 4 correctly plotted points ½ mark Less than 4 correctly plotted points 0 mark

D Shape 1 mark

Accept a rise and then a constant joint by a straight edge



(b) Accept correct showing for ½mark and correct reading for ½ mark

3.

a) i)

Observation	**Inference**	
-Colourless liquid forms on the cooler parts of the test tube√1	hydrated salt√½	
-White fumes with HCl√½	NH_4^+ present√½	(3)
-Solid sublimes√½/white sublimate √½		

ii)

Observation	**Inferences**	
(I) White precipitates √½insoluble in excess√½	Pb^{2+} √½or Al^{3+} present√½	(2)
(II) **Observation**	**Inferences**	
No white precipitate√½	Al^{3+} present√½or Pb^{2+} absent√½	
No effervescence √½	CO_3^{2-} or SO_3^{2-} absent√1	(3)
(III) **Observation**	**Inference**	
White precipitates √½ insoluble on boiling√½	SO_4^{2-} present√1	2

(I) **Observation** Melts and burns with a sooty/smoky flame√1	**Inferences** C=C / -C ≡ C- present 1	2
(II) i) **Observation** Bromine water decolourised√1	**Inferences** C=C or −C≡C− present √1	2
ii) **Observation** $KMnO_4$ is decolourised√1	**Inferences** C= C or −C≡C− Present √1	2
iii) **Observation** Effervescence/Bubbles/fizzling√1	**Inferences** H^+/H_3O^+ present√1	2
iv) **Procedure used** -Place 3 drops of universal indicator√½ into the solution. -Match the colour obtained with the pH chart and note the pH value √½ -pH value 4,5 or 6√1	**Inferences** Solution is weakly acidic√1	3