

SERIES 34 EXAMS

**CHEMISTRY PAPER 3
MARKING SCHEME**

1. TABLE I
C.T - 3
D.P - 1
AC - 1
TR. 1
2. (i) GRAPH (6mrks)
Scale - $\frac{1}{2}$
Label - $\frac{1}{2}$
Plots - 1
Line - 1

(ii) and (iii) From graph (3mrks)
Table II (2mrks)

CT - 1
D.P - 1
AC - 1
P.A - 1
F.A - 1

Calculation

I Correct ans.

II $\frac{0.2 \sqrt{1}}{1000} \times 25 = 0.005 \text{ moles } \sqrt{1}$

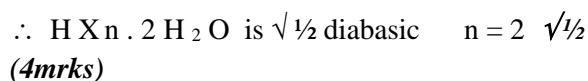
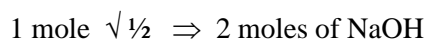
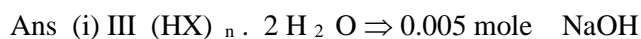
III 1 mole (HX) $n \cdot 2 \text{ H}_2\text{O} \Rightarrow 126$
x $\Rightarrow 4.5$

$$= \frac{4.5}{126} \sqrt{1/2}$$

$$= 0.0357 \text{ moles } \sqrt{1/2}$$

$$0.0357 \text{ mole} \xrightarrow{\text{Ans (2) I}} 250 \sqrt{1/2}$$

$$\frac{0.0357}{250} \times \text{Ans (i) I} = \text{correct ans. } \sqrt{1/2}$$



(a) Observation	Inferences
- White residue	- Insoluble and soluble
- Colourless solution	salts suspected
(1mrk)	(1mrk)

(i)	Observation	Inferences
	- White ppt Soluble in excess (1mrk)	Pb ²⁺ , Al ³⁺ , Zn ²⁺ suspected (1mrk)

(ii)	Observation	Inferences
	- No white ppt - No effervescence (1mrk)	Ba ²⁺ , Pb ²⁺ , Ca ²⁺ absent. CO ₃ ²⁻ absent (1mrk)

(iii)	Observation	Inferences
	White ppt (½ mrk)	SO ₄ ²⁻ present (½ mrk)

(b)	Observation	Inferences
	- Effervescence - Blue litmus turns red (1mrk)	CO ₃ ²⁻ present (½ mrk)

(i)	Observation	Inferences
	- White ppt dissolves in excess (1mrk)	Pb ²⁺ , Zn ²⁺ , Al ³⁺ present (1mrk)

(ii)	Observation	Inferences
	- White ppt dissolves in excess (1mrk)	- Zn ²⁺ present (1mrk)

3.	(a)	Observation	Inferences
		- burns with a blue flame✓	- C – OH suspected✓ 2

(1/2 mrk)

(1/2 mrk)

Observation	Inferences
- Purple potassium Manganode (VII) decolourised✓ (1mrk)	$\begin{array}{c} \diagdown \\ \text{C} = \text{C} \\ \diagup \end{array}$ - C≡C - R - OH (1mrk)

Observation	Inferences
Bromine water not decolourised✓ (1mrk)	$\begin{array}{c} \diagdown \\ \text{C} = \text{C} \\ \diagup \end{array}$, - C≡C - absent or R - OH present✓ (1mrk)

Observation	Inferences
No effervescence✓ (1/2 mrk)	$\begin{array}{c} \text{O} \\ \\ \text{C} \end{array}$ - OH absent R - OH confirmed (1/2 mrk)