

TRIAL ONE EVALUATION TEST CHEMISTRY PAPER 3 (PRACTICAL)

231/3

Marking scheme.

Table 1

	I	II	III
Final burette reading cm ³	25.0	25.0	25.0
Initial burette reading cm ³	0.0	0.0	0.0
Volume of solution N used	25.0	25.0	25.0

The marks are to be distributed as follows.

- Complete table (1mk)
- Incomplete table with 2 titration's done a ward (1mk)
- Incomplete table with 1 titration done award..... (½ mk)

Penalize

- Wrong arithmetic
- Inverted table
- Burette reading above 50 unless explained.
- Unrealistic titre value i.e values in number in hundreds or below 1.0cm³
- Penalize ½ mark for each to a maximum of ½ mark each to a maximum of ½ mark once.

- Use of decimals..... (1mk)
 - Accept only 1 or 2 decimal places used contently otherwise penalize FULLY and award 0 mark.
 - If the two decimal places are used the 2nd decimal place be either "0" or "5" otherwise penalize fully.
- Accuracy..... (1mk)

Compare the candidate titre value with the teachers value. (1mk)

Conditions

- If at least one of the titre value is within $\pm 0.1\text{cm}^3$ of the teachers value awrd.... (1mk)
- If no value is within ± 0.1 of the teachers value but at least one is within ± 0.2 of teachers value award (1mk)

Conditions

- i) If 3 consistent titration are done and only two consistent and average award (1mk)
- ii) If 3 titrations done and only two consistent and average award..... (1mk)
- iii) If only two titrations' done are consistently averaged award.....(1mk)
- iv) If three titres are possible but only two averaged award..... (0mk)
- v) If 3 inconsistent titres are averaged award.....(0mk)
- vi) If only 1 titration is done award.....(0mk)

d) Final answers..... (1mk)

Compare the candidate's correct average award.

- i) If within ± 0.1 of the teacher value award..... (1mk)
- ii) If no within ± 0.1 of the teachers value but within ± 0.2 award..... (½ mk)
- iii) If beyond ± 0.2 of the teacher's value award..... (0mk)

Calculation

(b) Moles of A used.

$$\text{Mol} = \frac{\text{moles}}{\text{vol in litre}}$$

$$\text{Moles} = \text{mol} \times \frac{\text{vol}}{1000}$$

$$= 1 \times \frac{25}{1000}$$

$$= 0.025 \text{ moles.}$$

c) Moles ratio 1:1

Moles of B = 0.025 moles.

$$\text{(a) Mol} = \frac{\text{moles}}{\text{vol in litres}}$$

$$= \frac{0.025}{25}$$

$$1000$$

$$= 1\text{m.}$$

PROCEDURE 2:

Table II condition to apply

Trend in temperature

Graph: condition to apply.

Answers

2. (a) Observation

- A colourless gas that turns moist red litmus paper blue.
- Moist blue litmus paper remain blue.
- Droplets of colourless liquid on cooler parts of the test-tube.

Inference

- Basic gas NH_4^+
- Z-hydrated salt.

(a) Observation

- Dissolve to form a solution.

Inference

- Soluble salt.

(i) Observation

- White ppt soluble in excess.

Inference

Zn^{2+} , Pb^{2+} , Al^{3+} present.

(ii) Observation

- White ppt insoluble in excess.

Inference

Pb^{2+} , Al^{3+} present.

(iii) Test

- Add solution of potassium iodide

Observation

- Yellow ppt.
- (iv) Observation
No yellow ppt

Inference
 Pb^{2+} absent.

- (v) Observation
White ppt.

Inference
 SO_4^{2-} Present

3. (a) observation

- solid melts and burns with sooty flame.

Inference.

$\text{C} = \text{C}$ - $\text{C} = \text{C}$ - Unsaturation.

(b) Observation

- Solid dissolves to form colourless solution.

Inference

- Polar compound.

- (i) Observation
Purple colour of potassium permanganate decolourised.

Inference

$\text{C} = \text{C}$ - $\text{C} = \text{C}$ - , ROH.

- (ii) Observation
- Pleasant smell.

Inference

RCOOH Present

Observation

(iii) Effervescence / bubbles

Inference

RCOOH, HT present

(iv) Observation

PH 4

Inference

- Weak acid

Inference .

- Weak acid.