**FORM THREE**

**CHEMISTRY**

**PAPER 3/ PRACTICAL**

**MARKING SCHEME**

**QUESTION 1**

Tables I and II

* Complete table
* Decimals
* Accuracy

Each table is 3marks

b) Average volume for table 1 is about 12.5cm3.

c) i) Moles of solution N is 25cm3

=

ii) Mole ratio 1:5

Moles of H =x0.0005=0.0001

iii) Concentration of H in moles per litre

= 0.008M

e) Average volume for table II is about 18.2cm3

f) i) Number of moles of solution H used

ans in =

ii) Moles of x in 25cm3 solution

Mole ration H:X = 2:5

=

=

= 0.000364

iii) Concentration of x in moles per litre

= Ans in

=

= 0.01456

**Question 2a**

|  |  |  |
| --- | --- | --- |
|  | **Observations** | **Inferences** |
|  | White solid dissolves to form a colourless solution. | Cu2+, Fe2+, Fe3+ absent |
|  | White ppt, soluble in excess | Zn2+, Pb2+ or Al3+ present |
|  | White ppt, insoluble in excess | Pb2+ or Al3+ present  Zn2+ absent |
|  | No white ppt | Al3+ present  Pb2+ absent |

(1mk each)

**Question 2b**

|  |  |
| --- | --- |
| **Solid** | **Colour of flame** |
| Sodium chloride | Golden yellow |
| Potassium chloride | Blue/purple/lilac |
| Calcium chloride | Red |
| Y | Blue/purple/lilac |

(½mk each)

1. Cation present in Y is K+. (1mk)

**Question 3**

|  |  |
| --- | --- |
| **Observations** | **Inferences** |
| 1. Solid dissolves to form a colourless solution | Solid F is polar |
| 1. PH= 5.0 | Solution is weakly acidic |
| 1. Effervescence/bubbles of a colourlessgas | C:\Users\USER\Pictures\Capture.PNG |
| 1. Orange/yellow bromine water is decolourised | C:\Users\USER\Pictures\Capture a.PNG |
| 1. Purple acidified potassium manganite (VII) is decolourised | C:\Users\USER\Pictures\Capture b.PNG |