Sub: Science Practicals (Std. IX)

Experiment No. 1

Aim: To find the pH of the given solutions using pH paper.

Procedure: Take small quantity of the given sample in a test tube. Dip the pH paper in the solution. Observe the colour developed and note the pH in the observation table. Repeat the procedure for other samples.

Observation Table

Sr. No	Sample	Colour Produced	Approximate pH
1	Dilute HCl	Red	Less than 7
2	Dilute solution of NaOH	Blue	More than 7
3	Water	No change	7
4	Dilute solution of $NaHCO_3$	Greenish blue	More than 7

Interference:

(1) Acid samples (with pH less than 7) → **Dilute HCl**

(2) Basic samples (with pH more than 7) → **Dilute solution of NaOH, Dilute solution of $NaHCO_3$**

(3) Neutral samples (with pH = 7) → **Water**

Experiment No. 2

Aim: To verify Ohm's law.

(To study the dependence of current (I) on potential difference (V) across a resistor and determine its resistance.)

Apparatus: A resistor, a rheostat, dry cell or battery eliminator, a plug key, a voltmeter, ammeter and connecting wires.

Observation Table

Sr. No	P.D. in volt (V)	P.D. in mV	Current in mA	R (Resistance)= V/ I
1	1	1000	100	10 ohms
2	2	2000	200	10 ohms
3	3	3000	300	10 ohms
4	4	4000	400	10 ohms

Inference / Conclusion

1. The potential difference is directly proportional to the current through the conductor.

2. As the potential difference increases, the current increases proportionally, confirming Ohm's law.

Circuit Diagram