Conductivity Measurements: Effect of Ion Mobility and Concentration

S. No.	Concentration	Specific conductance (or) Conductivity mS/cm	Temperature
1	0.1M HCl	37.52	298 K
2	0.1M LiCl	10.75	298 K
3	0.1M NaCl	12.28	298 K
4	0.1M KCl	14.21	298 K

S. No.	Volume of NaCl (mL)	Concentration (C)	Specific conductance (or) conductivity mS/cm	Temperature
1	100 mL	0.1000 M	12.28	298 K
2	100 + 20 mL	0.0833 M	10.27	298 K
3	120 + 20 mL	0.0714 M	8.89	298 K
4	140 + 20 mL	0.0625 M	7.86	298 K
5	160 + 20 mL	0.0556 M	7.01	298 K
6	180 + 20 mL	0.0500 M	6.38	298 K

Questions: (Please answer below question in 2 or 3 sentences)

1. Explain the effect of dilution on molar conductance of an electrolyte.

2. Will the conductivity of 0.1 M acetic acid be the same as that of 0.1 M hydrochloric acid? Explain

3. Explain the effect of temperature on conductivity of an electrolyte.