Q-1- (0.2) g of saline solution consisting of mixing (Silver chloride and potassium nitrate) was passed through a cationic exchanger (H⁺ Form) and the collected solution from the column was calibrated against the sodium hydroxide base. If the flow volume of the burette was (20) ml, calculate:

1. The weight of Silver chloride in the sample?
2. The weight of potassium nitrate in the sample?
3. The Normality concentration of the sodium hydroxide?
4. PPM for potassium nitrate in the solution (5ml)?
5. Write the equations for this question?
6. PH for the come down solution from the column?

If you know the percentage of potassium chloride in the sample is 80% and the Atomic weight for (K = 39, N = 14, O = 16, Cl = 35.5, Ag = 108, Na = 23)
Q-2- (0.2) g of saline solution consisting of mixing (sodium chloride and sodium nitrate) was passed through a Anionic exchanger (OH⁻ Form) and the collected solution from the column was calibrated against the Hydrochloric acid. If the flow volume of the burette was (20) ml, calculate:

1. The weight of sodium chloride in the sample?
2. The weight of sodium nitrate in the sample?
3. The Normality concentration of the Hydrochloric acid?
4. PPM for sodium nitrate in the solution (5ml)?
5. Write the equations for this question?
6. PH for the come down solution from the column?

If you know the percentage of potassium chloride in the sample is 80% and the Atomic weight for (Na = 23, N = 14, O = 16, Cl = 35.5).
O-3- (0.5 ) g of the potassium chloride solution was transferred to the Anionic exchanger (OH- Form), if the volume of the come down solution from the Anionic exchanger was (10 )ml, which was calibrated with the Nitric acid. The volume of the Nitric acid was (12) ml.

Calculate:

1- The concentration of Nitric acid in ppm

2- The POH of the base that come down from Ion exchange column

3- Write the equation for this question

If you know the atomic weight for (K = 39 , Cl = 35.5 , N = 14 ,O =16 , H=1)

GOOD LUCK