GURUDAS COLLEGE

CHEMISTRY — GENERAL — PRACTICAL

2021

Subject-CEMG, SEM-I

Paper- CC/GE1

Time: 2 Hrs   **Full Marks: 30**

The figures in the margin indicate full marks.

1. For the estimation of the quantity of Na_2CO_3 and $NaHCO_3$ present separately in a given mixture sample in *g* :

(a) Write down the principle of estimation mentioning all the equations involved and derive the working formula.   10

(b) Using the following data calculate the strength of ~ (N/20) HCl solution :

(i) Supplied strength of standardized NaOH solution = (N/20)

(ii) Standardization of ~ (N/20) HCl solution by standardized NaOH solution   2½+2½

No. of Titrations	Volume of Std. NaOH taken (mL)	Burette Reading of HCl soln (mL)			
		Initial	Final	Difference	Average reading
1.	25	0	24.5	24.5	
2.	25	0	24.4	24.4	24.5
3.	25	0	24.6	24.6	

(c) Using the above data, calculate separately the amount of Na_2CO_3 and $NaHCO_3$ present in the given mixture sample in g by using the following specimen results.   5+5

(i) Table for estimation of Na_2CO_3 and $NaHCO_3$:

No. of Titrations	Volume of Stock solution taken (mL)	Burette Reading of HCl soln (mL)			
		Initial vol. of HCl needed (V_1) (mL)	Mean Initial vol. of HCl needed (V_1) (mL)	Final vol. of HCl needed (V_2) (mL)	Mean Final vol. of HCl needed (V_2) (mL)
1.	25	9.2		28.5	
2.	25	9.4	9.3	28.4	28.4
3.	25	9.3		28.3	

2. Laboratory Note Book.   5