G.D. Goenka Public School
info@gdgoenkajhajjar.com

# LAB ACTIVITIES OF CHEMISTRY (2024-25)
# XI

| Month | Practical/Activity to be conducted |
|---|---|
| April | **Characterization and Purification of Chemical Substances**<br>1. To determine the melting point of an organic compound.<br>2. To determine the boiling point of an organic compound.<br>3. To observe the crystallization of impure sample of any one of the following: Alum, Copper Sulphate and Benzoic Acid. |
| May | **Quantitative Estimation**<br>4. To understand the use of a mechanical balance/electronic balance.<br>5. To prepare a standard solution of oxalic acid.<br>6. To determine the strength of a given solution of sodium hydroxide by titrating it against a standard solution of oxalic acid.<br>7. To prepare a standard solution of sodium carbonate.<br>8. To determine the strength of a given solution of hydrochloric acid by titrating it against standard sodium carbonate solution. |
| July | **Qualitative Analysis**<br>9. To determine one cation in a given salt.<br>Cations- $Pb^{2+}$, $Cu^{2+}$, $As^{3+}$, $Al^{3+}$, $Fe^{3+}$, $Mn^{2+}$, $Ni^{2+}$, $Zn^{2+}$, $Co^{2+}$, $Ca^{2+}$, $Sr^{2+}$, $Ba^{2+}$, $Mg^{2+}$, $NH4^{+}$. |
| August | **Qualitative Analysis**<br>10. To determine one anion in a given salt.<br>Anions – $CO3^{2-}$, $S^{2-}$, $NO2^{-}$ , $SO3^{2-}$, $SO4^{2-}$, $NO3^{-}$ , $Cl^{-}$, $Br^{-}$, $I^{-}$, $PO4^{3-}$, $CH3COO^{-}$. |
| October | **Experiments based on pH**<br>11. To compare the pH of solutions of strong and weak acids of the same concentration and study the pH change in the titration of a strong base using a universal indicator.<br>12. To study the pH change by common ion in the case of weak acids and weak bases. |
| November | **Chemical Equilibrium**<br>13. To study the shift in equilibrium between ferric ions and thiocyanate ions by increasing the concentration of either of the ions. |
| December | 14. To investigate the foaming capacity of different washing soaps and the effect of the addition of sodium carbonate to them.<br>15. To check the bacterial contamination in drinking water by testing sulphide ions. |
| January | 16. To determine the strength of a given solution of sodium hydroxide bytitrating it against a standard solution of oxalic acid. (Revision.)<br>**Qualitative Analysis**<br>17. To determine one cation in a given salt. (Revision.)<br>Cations- $Pb^{2+}$, $Cu^{2+}$, $As^{3+}$, $Al^{3+}$, $Fe^{3+}$, $Mn^{2+}$, $Ni^{2+}$, $Zn^{2+}$, $Co^{2+}$, $Ca^{2+}$, $Sr^{2+}$, $Ba^{2+}$, $Mg^{2+}$, $NH4^{+}$.<br>18. To determine one anion in a given salt. (Revision.)<br>Anions – $CO3^{2-}$, $S^{2-}$, $NO^{2-}$ , $SO3^{2-}$, $SO4^{2-}$, $NO^{3-}$ , $Cl^{-}$, $Br^{-}$, $I^{-}$, $PO4^{3-}$, $CH3COO^{-}$. |