**AUTUMN BREAK HOLIDAYS HOMEWORK CHEMISTRY XI**

1. Practice any two Chemistry sample paper for half yearly exam

2. Write notes on following topics:

*Molarity and Molality, Limiting reagent with two solved examples. Heisenberg uncertainty principle, Afbau law, Pauli’s exclusion principle, Hund’s maximum multiplicity law, Dual nature of matter, Bohr’s postulates on atomic model.*

*Modern periodic table and its salient features*

*Electronegativity, electron gain enthalpy, Dipole moment, Bond order, First law of thermodynamics, enthalpy and entropy,*

*Hybridization and structures of PCl5, ClF3, SF4, CH4, NH3, H2O,*

*VSEPR and MOT postulates*

3. Prepare an Investigatory project involving laboratory testing and collecting information from other sources.

**A few suggested Projects**

• Checking the bacterial contamination in drinking water by testing sulphide ion

• Study of the methods of purification of water

• Testing the hardness, presence of Iron, Fluoride, Chloride, etc., depending upon the regional Variation in drinking water and study of causes of presence of these ions above permissible limit.

• Investigation of the foaming capacity of different washing soaps and the effect of addition of Sodium carbonate on it

• Study the acidity of different samples of tea leaves.

• Determination of the rate of evaporation of different liquids Study the effect of acids and bases on the tensile strength of fibers.

• Study of acidity of fruit and vegetable juices.