1. State the Principles involved in writing the electronic configuration of atoms Explain them with example and necessary diagram.
2. Explain the classification of elements into S, P, d, f blocks present in the periodic table.
3. Define hybridisation of atomic orbitals? Explain the Sp^3 and Sp^2 hybridisations with respect to ethane and ethylene molecules?
4. Explain with example positional and functional isomerisms.
5. What is allotrophy? Explain the Structure of anyone of the Crystalline forms of Carbon.
6. Explain the stages with equations that are involved in the production of an hydrous magnesium chloride from carnallite.
7. How Hydrogen peroxide renovates the old spoiled oil paintings Explain it with relevent reaction.
8. Explain Boyle's and Charle's Lawas basing on the postulates of kinetic molecular theory of gases.
9. Name two gases which are responsible for global warning
10. What is hyperol? Give its formula.
11. What is ammonal and give its use?
12. Define RMS Velocity? If the RMS Velocity of CO_2 gas is 4.4×10^4 Cm/Sec. At a given tempereture, find the RMS Velocity of Ethane
13. Write any four postulates of kinetic molecular theory of gases.
14. Explain electrolytic method of preparation of hydrogen peroxide.
15. Explain the structure of diborane on the basis of VBT
16. Explain (a) position Isomerism and (b) functional group Isomerism with one example for each of them.
17. Explain (a) Wurtz reaction and (b) Friedel- Craft's alkylation with one example for each of them.
18. What are Quantum Numbers? Explain the significance of the four quantum numbers associated with an electron.
19. Define first and second ionisation potentials. Why the second ionisation potential of an element is always greater than it's first ionisation potential?
20. Explain any four factors that affect the ionisation potential of an element.