

(Long Answer Type Questions) 5 Marks each

Q1. Define hybridization. Explain sp^3 hybridization in detail with example.

OR

State and explain law of multiple proportion with at least two examples.

Q2. Explain the mechanism of electrophilic substitution reaction in benzene.

OR

Explain: 1) Friedal craft alkylation 2) Sulphonation 3) Nitration

Q3. (a) Boron shows abnormal properties in its group. Give reasons.

(a) Complete the reaction $CaCO_3 \xrightarrow{A}$

(b) Give the uses of sodium bicarbonate

OR

Explain preparation of sodium carbonate by ammonia solvay process.

Q4. Explain VSEPR Theory. Give structures of NH_3 , H_2O and CH_4 on basis of this theory.

OR

Define conformation and explain conformation of ethane in detail.

(Short Answer Type Questions) 3 Marks each

Q5. Define the following terms:

1. Hess Law 2. Standard Enthalpy of formation 3. Entropy

Q6. Calculate the PH of a solution having $[H_3O]^+$ of 10^{-3} .

Q7. Write three properties of lithium which differ from rest members of group 1.

Q8. State and explain Heisenberg's Uncertainty Principle.

Q9. State and explain common ion effect with examples.

Q10. Define silicates. Explain its types.

Q11. Draw the molecular orbital diagram N_2 calculate bond order.

Q12. Convert 1-bromopropane to propene.

(Very Short Answer Type Questions) 2 Marks each

Q13. Why is the electron gain enthalpy of chlorine more negative than fluorine?

Q14. Why first ionization enthalpy of nitrogen is more than oxygen?

Q15. Silicon shown higher covalency than carbon why?

Q16. Draw the structure of Diborane.

Q17. Calculate Oxidation no. of Mn in $KMnO_4$.

Q18. State and explain inductive effect.

Q19. Explain the isotopes of Hydrogen with diagram.

Q20. What are the effects of depletion of Ozone layer.

Kanani
(best chemistry)

