



**Department of Chemistry**  
**Shyam Lal College (Delhi University)**  
**Inorganic Chemistry Assignment,**  
**B.Sc. Physical Science (CBCS), IVth Semester**  
**By : Dr. Reeta Sharma**

**UNIT – I**

1. Discuss the slope of CO gas in Ellingham diagram.
2. What is Bessemerization?
3. What is Quaternation?
4. Differentiate between mineral and ore.
5. Describe Hydrometallurgy.
6. Write short notes on – (i) Parting Process           (ii) Mond's Process

**UNIT – II**

7. Which alkaline earth metal is present in our bones?
8. What is effective nuclear charge ( $Z_{eff}$ )?
9. How ionization energy differs from electron affinity?
10. Explain – Size of cation is smaller than its parent atom while size of anion is bigger than its parent atom.
11. Define allotropy. What are various allotropes of carbon?
12. Explain – Graphite is soft while diamond is hard.
13. What is inert pair effect? Explain.
14. Explain diagonal relationship between elements of group 13 and 14 of periodic table.

**UNIT – III**

15. What are hydrides? How are they classified?
16. Explain – Why Boron compounds are electron deficient.
17. Nitrogen does not form pentahalides whereas phosphorus forms  $PCl_5$ . Explain.
18. Give the structure and bonding in diborane molecule.
19. Arrange HF, HCl, HBr and HI in order of increasing acid strength.
20. Name and draw the structure of following anions –  $S_2O_6^{2-}$ ,  $S_2O_7^{2-}$  and  $S_2O_8^{2-}$