

**SHIVAJI COLLEGE, UNIVERSITY OF DELHI**  
**DEPARTMENT OF CHEMISTRY**  
**INTERNAL ASSIGNMENT (Academic Year 2023-24)**

**Name of the Course:** B.Sc. (H) Chemistry

**Semester:** II

**Name of the Paper:** Chemistry of s- and p-Block Elements

**Unique Paper Code:** 21720111201

**Faculty Name:** Dr. Sunil Yadav

**Last Date of Submission:** 30.04.2024

**Maximum Marks:** 12

1. Give the principle and procedure of Mond's Process.
2. No reductant is required for the extraction of metal from HgO and Ag<sub>2</sub>O. Explain.
3. Using Ellingham diagram, explain why the slope of most of the lines move in upward direction with increase in temperature.
4. Which type of metals can be purified by Zone refining process? Explain its principle and procedure with diagram.
5. Describe the chief modes of occurrence of metals based on standard electrode potentials.
6. What is Vapour Phase Refining? Discuss any one method.
7. Carbon can be a good reducing agent over a wide range of temperature, explain with Ellingham diagram.
8. Explain using Ellingham diagram, why metal oxides are unstable at high temperatures. Why in some cases does the slope of line in the diagram change abruptly?
9. What is hydrometallurgy? Describe using chemical reaction the cyanide method for the extraction of Ag.
10. In Ellingham diagram, the graphs for metal to metal oxide all slope upwards.
11. Carbon is capable of reducing all Metal oxide provided the temperature of reduction is sufficiently high however the use of carbon as reducing agent become impractical for metal oxide towards the bottom of Ellingham diagram comment and also explain why most of the lines slope upwards in the Ellingham diagram.
12. As rubidium is added in liquid ammonia gradually, a blue coloured solution is obtained initially, but with more addition of rubidium, a bronze colored layer is formed, which floats on blue colored solution.

