

CBSE Chemistry Worksheets Class 12 on Chapter 6 General Principles and Processes of Isolation of Elements - Set 4

Q1. The first step in the extraction of copper from copper pyrites is-

- a.) reduction by carbon.
- b.) electrolysis of ore
- c.) roasting of ore in O_2
- d.) magnetic separation

Q2. The common impurity present in bauxite is-

- a.) CuO
- b.) ZnO
- c.) Fe_2O_3
- d.) Cr_2O_3

Q3. Which of the following ore is best concentrated by froth floatation method?

- a.) Magnetite
- b.) Siderite
- c.) Galena
- d.) Malachite

Q4. Which of the following is a mineral of iron?

- a.) Malachite
- b.) Cassiterite
- c.) Pyrolusite
- d.) Magnetite

Q5. Which of the following ore is concentrated by chemical leaching method?

- a.) Argentite
- b.) Galena
- c.) Copper glance
- d.) Cinnabar

Q6. What is gravity separation?

Q7. What is cupellation?

Q8. Why is the froth floatation method selected for the concentration of sulphide ores?

Q9. At a site, low-grade copper ores are available and zinc and iron scraps are also available. Which of the two scraps would be more suitable for reducing the leached copper ore and why?

Q10. (i) How is chemical reduction different from electrolytic reduction?

(ii) Name a metal each is obtained by—

(a) Electrolytic reduction

(b) Chemical reduction

Q11. Differentiate between “minerals” and “ores”.

Q12. Why is it advantageous to roast a sulphide ore to the oxide before reduction?

Q13. Thermite process is quite useful for repairing broken parts of machines. Explain.

Q14. Why is the extraction of copper from pyrite more difficult than that from its oxide through reduction?

Q15. How can you separate alumina from bauxite ore associated with silica? Give equations.

Q16. Explain the following:-

(i) Zinc but not copper is used for recovery of Ag from the complex $[\text{Ag}(\text{CN})_2]^-$.

(ii) Partial roasting of sulphide ore is done in the metallurgy of copper.

(iii) Extraction of Cu from pyrites is difficult than that from its oxide ore through reduction.

Q17. Explain the extraction of zinc.

Q18. Explain the following:

(a) Although thermodynamically feasible, in practice, magnesium metal is not used for the reduction of alumina in the metallurgy of aluminium. Why?

(b) Why is zinc and not copper used for the recovery of silver from the complex $[\text{Ag}(\text{CN})_2]^-$?

(c) The extraction of Au by leaching with NaCN involves both oxidation and reduction. Justify giving equations.

(d) Limestone is used in the manufacture of pig iron from haematite. Why?

Q19. In the blast furnace, the reduction of Fe_2O_3 by coke (C) and carbon monoxide (CO) takes place around 1073 K. With the help of Ellingham diagram explain which reducing agent converts Fe_2O_3 to Fe below and above 1073 K?

Q20. (i) Name the method of refining of metals such as Germanium.

- (ii) In the extraction of Al, impure Al_2O_3 is dissolved in conc. NaOH to form sodium aluminate and leaving impurities behind. What is the name of this process?
- (iii) What is the role of coke in the extraction of iron from its oxides?

