

CBSE Class 12 Chemistry Chapter 6 General Principles and Processes of Isolation of Elements Worksheet – Set– 3

Q1. The iron produced in the blast furnace is called-

- a.) pig iron
- b.) wrought iron
- c.) cast iron
- d.) steel

Q2. 100% copper is obtained from crude copper by:

- a.) zone refining method
- b.) electrorefining
- c.) liquation
- d.) None of the above

Q3. Commercial zinc is refined by:

- a.) amalgamation
- b.) poling
- c.) carbon reduction
- d.) All of the above

Q4. Unwanted material with ore is called as ____.

- a.) Gangue
- b.) Rust
- c.) Slag
- d.) Silica

Q5. Cinnabar is an ore of:

- a.) Hg
- b.) Cu
- c.) Pb
- d.) Zn

Q6. Give equations for the industrial extraction of zinc from calamine.

Q7. (a) Give one example of each of the following:

- (i) Acid flux
- (ii) Basic flux

(b) What happens when-

- (i) Cu_2O undergoes self-reduction in a silica line converter.
- (ii) Haematite oxidises carbon to carbon monoxide.

Q8. Differentiate between flux and slag.

Q9. What are froth stabilizers? Give two examples.

Q10. Define leaching.

Q11. State the principles of the following methods of refining crude metals-

- (i) Zone refining
- (ii) Liquation method
- (iii) Chromatographic method

Q12. Give reasons:

- a) Copper matte is put in silica lined converter.
- b) Cryolite is added to alumina during electrolytic reduction.
- c) Pine oil is used in the froth floatation process.

Q13. Why are the graphite electrodes in the extraction of 'aluminium' by the Hall-Heroult process need to be changed frequently?

Q14. Copper can be extracted by hydrometallurgy but not zinc. Explain?

Q15. What is German silver? Write its use.

Q16. The choice of a reducing agent in a particular case depends on the thermodynamic factor. How far do you agree with this statement? Support your opinion with two examples.

Q17. Describe the principle controlling each of the following processes :

- (i) Preparation of cast iron from pig iron.
- (ii) Preparation of pure alumina (Al_2O_3) from bauxite ore.

Q18. (i) The extraction of gold by leaching with NaCN involves both oxidation and reduction. Justify giving chemical equations.

- (ii) Name the method used for removing gangue from sulphide ores.
- (iii) How is wrought iron different from steel?

Q19. In the extraction of aluminium-

- (i) Name the process of concentration of bauxite.
- (ii) Write the cathode reaction in electrolytic reduction of alumina.
- (iii) Write the function and chemical formula of cryolite.
- (iv) Write a chemical equation for the action of heat on aluminium hydroxide.
- (v) Why is it necessary to replace anodes from time to time?

Q20. Mention the role of the following:

- (i) SiO_2 in the extraction of Cu from copper matte.
- (ii) CaCO_3 in the metallurgy of Fe.
- (iii) CO in the metallurgy of iron.
- (iv) I_2 in the purification of zirconium.
- (v) NaCN in the extraction of gold from gold ore.

