



# CHEMISTRY

## BOOKS - OMEGA PUBLICATION

### GENERAL PRINCIPLES AND PROCESSES OF ISOLATION OF ELEMENTS

#### Questions

1. The most abundant element in the earth's crust is:



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2. Why do some metals occur in native state ?



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3. What is difference between minerals and ores?



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4. All the ores are minerals but all the minerals are not ores. Justify the statement.



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5. Write one ore of aluminium with formula.



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6. Name two ores of magnesium.



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7. Write the name of one ore of iron.



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8. Write the name of one ore of : copper.



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9. Write the name of one ore of : Mercury.



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**10. Define metallurgy.**



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**11. What is weathering of ore ?**



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**12. Write one difference between gangue and flux.**



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**13.** What is meant by gravity separation ?



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**14.** Write short note on magnetic separation. Name one ore which can be concentrated by magnetic separation.



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**15.** What is the role of depressant in froth floatation process ?



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**16.** Explain the method of froth floatation process of concentrating sulphide ore.



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**17.** What is leaching ? Explain with the help of an example.



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**18.** Define the term levigation used in extraction of metals.



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**19.** Define calcination and roasting.





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**20. What is meant by smelting ?**



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**21. Distinguish between flux and slag.**



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22. Write the IUPAC Name of  
 $\text{CH}_3\text{CH}_2\text{CH}=\text{CHCOOH}$



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23. State and explain the terms flux and slag.



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24. What is gangue ?



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**25.** what is pyrometallurgy ?



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**26.** Write chemical reactions taking place in the extraction of zinc from zinc blende.



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**27.** Write down the reactions taking place in different zones in the blast furnace during the extraction of iron.



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**28.** State the role of silica in the metallurgy of copper.



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**29.** What is the role of cryolite in the metallurgy of aluminium ?



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**30.** What is the role of graphite in the electrometallurgy of aluminium ?



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**31.** How aluminium is extracted from its ore by Hall - Heroult's process ?



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**32.** What is refining ?



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**33.** How metals having low melting points are separated from their impurities ?



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**34.** Write a short note on electrolytic refining of copper.



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**35.** Write a short note on electrolytic refining of copper.



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**36.** How is copper purified by electro - refining ?



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**37.** What is Blister copper?



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**38.** Draw a neat and labelled diagram for zone refining of metals.







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**39.** Write short note on 'Liquation'.



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**40.** Name the method used for refining metals which are used as semiconductor In electronic devices.



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**41.** What is the principle of zone refining ?



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**42.** Which methods are usually employed for purifying germanium.



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**43.** Describe Mond process.



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**44.** Which methods are usually employed for purifying Nickel.



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**45.** Explain Van Arkel method.



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**46.** What is Aluminothermy ?



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**47.** Preparation of pure alumina ( $Al_2O_3$ ) from bauxide ore.



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**48.** What is meant by hydrometallurgy ?



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**49.** Draw a neat and labelled diagram for the refining of aluminium by Hoop's electrolytic method.



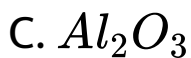
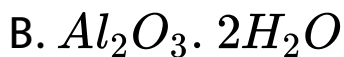
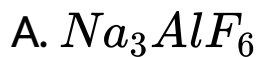
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**50.** Why can't aluminium be reduced by carbon ?



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1. An ore of aluminium is



D.

**Answer: B**



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2. Which of the following is used as a depressant in froth floatation process ?

- A. Amyl xanthate
- B. Pine oil
- C. Copper sulphate
- D. sodium cyanide

**Answer: D**



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3. The reducing agent used in thermite process is

A. magnesium

B. chromium

C. aluminium

D. iron

**Answer: C**



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4. Cupellation process is used in the metallurgy of

A. Cu

B. Ag

C. Al

D. Fe

**Answer: B**



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5. Which of the following is not an ore ?

A. Bauxite

B. Malachite

C. Zinc blende

D. Pig iron.

**Answer: D**



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6. Electrolytic reduction method is used in the ex- traction of

A. higher electronegative elements

B. highly electropositive elements

C. transition metals

D. noble metals.

**Answer: B**



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7. The main function of roasting is

A. to remove the volatile matter

B. oxidation

C. reduction

D. to make slag.

**Answer: B**



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8. In blast furnace, iron oxide is reduced by

A. silica

B. CO

C. C

D. lime stone.

**Answer: B**



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**9. Cassiterite is an ore of**

A. Mn

B. Ni

C. Sb

D. Sn.

**Answer: D**



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**10.** The process of converting hydrated alumina into anhydrous alumina is called

A. roasting

B. smelting

C. dressing

D. calcination

**Answer: D**



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**11.** The chemical formula of copper pyrite is:

$\text{CuFeS}_2$ ,  $\text{Cu}_2\text{S}$ ,  $\text{Cu}_2\text{O}$ ,  $\text{CuCO}_3 \cdot \text{Cu}(\text{OH})_2$

A.  $\text{CuFeS}_2$

B.  $Cu_2S$

C.  $Cu_2O$

D.  $CuCO_3 \cdot Cu(OH)_2$

**Answer: A**



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**12. Malachite is an ore of,**

A. iron

B. zinc



C. copper

D. mercury

**Answer: C**



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