



CHEMISTRY

BOOKS - BETTER CHOICE PUBLICATION

GENERAL PRINCIPLES AND PROCESS OF ISOLATION OF ELEMENTS

Question Bank 6 1 Occurrence Of Metals

1. What is difference between minerals and ores?



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2. (a) Define mineral. (b) Define Ore.



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3. Give important ores of calcium and magnesium.



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4. Name an ore of iron which is magnetic in nature.



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5. Give an important ore of each of Aluminium and Copper.



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6. Give two ores of Zinc.



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7. Define the following:

Metallurgy



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8. Define the following:

Gangue



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9. Explain thermal reduction, gravity separation in extraction of metals.



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10. What is Hydrometallurgy ?



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11. What is Aluminothermy ?



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12. Define the following:

Electrometallurgy



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13. Name the metal used as a reducing agent in aluminothermic process.



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14. Which is better reducing agent at temperature 983 K, C or Co?



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Question Bank 6 2 Concentration Of Ores

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



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2. What is hydrometallurgy process ?



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3. What is the role of leaching in the extraction of aluminium ? Write all the chemical reactions involved in it.



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4. Sulphide ores are concentrated by froth floatation process.



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



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6. Explain calcination, magnetic separation in extraction of metals.



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7. Explain gravity separation (or hydraulic washing) in extraction of metals.



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1. Differentiate roasting and calcination



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2. (a) What is calcination ?

(b) What is roasting?



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3. Define calcination and roasting.



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4. What is smelting ?



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5. Which is the cheapest and most abundant reducing agent which is used in the extraction of metals ?



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6. State and explain the terms flux and slag.



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7. (a) Define slag. (b) What is flux. How is it useful?



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8. State and explain the terms flux and slag.



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9. The process of employed for the concentration of sulphide ore is



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10. Write one difference between gangue and flux.



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



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12. State the role of silica in the metallurgy of copper.



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13. Why copper matte its put in silica lined converter ?



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14. How is Cast iron different from Pig iron ?



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15. Write the name of purest form of iron.



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16. Which metal is extracted from haematite ?



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



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18. Which method of refining is used when a metal of high degree of purity is needed ?



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Question Bank 6 4 Thermodynamic Principles Of Metallurgy

1. Why is the extraction of copper from pyrites more difficult than that from its oxide ore through reduction?



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2. Why is the reduction of a metal oxide easier if the metal formed is in liquid state at the temperature of reduction?



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3. Why can't aluminium be reduced by carbon ?



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Question Bank 6 5 Electro Chemical Principles Of Metallurgy

1. What is the role of cryolite in the metallurgy of aluminium ?



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2. Describe the Hall-Heroult's process for the extraction of aluminium from alumina. Draw a labelled diagram for the process.



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3. What is the role of graphite in the electrometallurgy of aluminium ?



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4. Describe the Hall-Heroult's process for the extraction of aluminium from alumina. Draw a labelled diagram for the process.



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



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Question Bank 6 6 Oxidation Reduction

1. Name the process from which chlorine is obtained as a bye-product. What will happen if an aqueous solution of NaCl is subjected to electrolysis?



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2. Describe the method of refining of nickel.



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3. Explain Mond's process used for refining of nickel.



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4. What is meant by the term “chromatography”?



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5. Write a short note on electrolytic refining of copper.



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6. Write a short note on electrolytic refining of copper.



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7. Outline the principle of refining of metals by electrolytic refining.



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8. Name the common elements present in the anode mud in electrolytic refining of copper.

Why are they so present ?



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9. Explain: Column chromatography.



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



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11. Write short note on van Arkel method of refining of metals.



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12. Explain liquation process for the refining of metals.



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13. Explain distillation for the refining of metals.



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14. Outline the principles involved in the following methods of refining of metals.

Zone refining.



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15. Outline the principles involved in the following methods of refining of metals.

Vapour phase refining.



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