

III B.Tech II Semester Supplementary Examinations, April/May 2005
NON FERROUS EXTRACTIVE METALLURGY
(Metallurgy & Material Technology)

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. (a) Explain the differences between general roasting and flash roasting.
(b) How is sulphur removed in conventional roasting and matte smelting of copper ore?
(c) Explain the flash smelting techniques in copper extraction process.
2. Explain the production of zinc by electrolysis process & refining process.
3. (a) What are the important ores of lead?. Mention places where lead ore deposits occur in India. List out the main applications of lead.
(b) What are the important steps in the production of lead from its sulphide ores by pyrometallurgical process? Explain them.
4. (a) Discuss Bayer process employed at HINDALCO for the production of alumina with the help of flow sheet.
(b) Explain ALCOA process for the production of aluminium.
5. (a) Discuss the electrolytic refining of Magnesium and Titanium.
(b) What are the problems arise during eletrowinning of Magnesium extraction.
6. (a) Discuss upgrading of Ilmenite ores.
(b) Discuss various ores , properties & applications of Titanium
7. Briefly discuss the following:
(a) Refining of Uranium.
(b) Physical beneficiation of Uranium ores.
8. Give the details of occurrence of ores and location of their industries with production capacities for the following metals in India.
(a) Nickel
(b) Gold.
(c) Tungsten.
