

COLLEGE OF ENGINEERING, PUNE
(An autonomous institute of Government of Maharashtra)

END SEMESTER EXAMINATION
(MT302) - (Extractive Metallurgy)

Programme: T.Y.B.Tech (Metallurgy and Material Science) Year: 2013-14
Duration: 3 Hrs. Max. Marks: 60

Instructions:

1. All questions are compulsory.
 2. Neat Diagrams must be drawn wherever necessary.
 3. Start answer of each question on new page.
-
-

Q.1	Draw an outline (flow chart) of various possible steps in a Hydrometallurgical process.	(5)
Q.2	Describe the flash smelting process used for extraction of Cu.	(5)
Q.3	Explain in detail Bayer's process.	(5)
Q.4	Discuss the chemistry of roasting and smelting operation carried out in Copper extraction.	(5)
Q.5	Explain in detail Dow's process.	(5)
Q.6	How are Lead and Zinc extracted simultaneously?	(5)
Q.7	Why is it necessary to extract Tin in 3 stages? Explain in brief dressing and refining of Tin.	(5)
Q.8	Draw a detailed flow sheet for Extraction of Nickel.	(5)
Q.9	How is refining of lead bullion carried out?	(5)
Q.10	A roaster calcine charged to a smelting furnace contains 27%FeS and 32%chalcopryrite. Assuming that FeS and chalcopryrite form the matte and excess sulphur joins the flue gases, Find the weight and grade of matte per ton calcine.	(5)
Q.11	Write short notes on : 1.Three layer process for refining of Aluminium 2.Slovent extraction 3.Extraction of Zirconium 4.reduction smelting of Lead concentrate	(10)