

GUJARAT TECHNOLOGICAL UNIVERSITY
BE SEM-V Examination-Nov/Dec.-2011

Subject code: 152102**Date: 24/11/2011****Subject Name: Non ferrous extractive metallurgy****Time: 2.30 pm -5.00 pm****Total marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Define Ore and Minerals. Give important Minerals/Ores for different non ferrous metals like Al, Cu, Ni, Pb, Zn, Ag, Au, Sn, Mg, Pt **12**
- (b) Application of Al **02**

- Q.2** (a) Explain pyro metallurgical extraction of copper. **07**
- (b) Short note on production of Alunina. **07**

OR

- (b) Write in detail about pyro metallurgical route for extraction of zinc. **07**

- Q.3** (a) Draw flow diagram of recovery of precious metal from anode slime of copper. **05**

- (b) Explain Manufacturing of Electrode in Al extraction. **05**
- © Short note on non ferrous metallurgical industries. **04**

OR

- Q.3** (a) Which Ores are available for Gold extraction? Where mines for Gold can be located? Explain any one method for extraction of Gold. **07**
- (b) Write in detail about pyro metallurgical route for extraction of lead. **07**

- Q.4** (a) Short note on extraction of Tin. **07**
- (b) Short note on Hall and Heroult's process. **07**

OR

- Q.4** (a) Explain ferric chloride leaching of copper concentrate. **04**
- Q.4** (b) Discuss pyro metallurgical extraction of Ni. **07**
- © Application of Lead. **03**

- Q.5** (a) Discuss refining of Tin. **07**
- (b) Explain electrolytic extraction and refining of Mg. **07**

OR

- Q.5** (a) Short note on Dow process. **05**
- (b) What are different methods available for extraction of Silver? Explain any two of it in detail. **09**
