

5th Semester	RML5D005	Mineral Resources of India	L-T-P 3-0-0	3 Credits
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Module I: **(10 Hours)**
Importance of Mineral Resources for the Industry and Economy of a Nation. Mineral Resources: Expendable and Non-expendable minerals. Conservation of minerals. Metallic and non-metallic minerals, Essential, Critical and Strategic minerals.

Module II: **(8 Hours)**
Study of important Metallic and Non-metallic Mineral Deposits of India with reference to Origin. Mode of occurrence, Mineralogy, Distribution, Production, Process Flow-sheets, Uses and Trades in India. Metallic deposits: Iron, Manganese, Chromium, Copper, Lead and Zinc, Bauxite, Gold and other precious metals

Module III: **(6 Hours)**
Refractory minerals, Diamond, Beach sands. Minerals used in Glass, Cement and Ceramic industries. Minerals used in fertilizer industry, Minerals used as insulators,

Module IV: **(8 Hours)**
Structural and Building materials including Pigments and Fillers, Minerals used in chemical industry, Abrasive minerals, Industrial and manufacturing materials.

Module V: **(8 Hours)**
Fuel Minerals: Oil and Gas, Coal & Lignite. Definition, Composition, types and Ranks of Coals, Macerals and Lithotypes and their distribution.
Distribution and Mode of Occurrence of Radioactive Minerals

Books:

- [1] K.V.G.K. Gokhale & T.C.Rao, Ore Deposits of India, Thomson Press
- [2] S.Krishnaswamy, Indian Mineral Resources, South Asia Books
- [3] S.Deb, Industrial Minerals and Rocks of India, a handbook of economic geology; non-metallic minerals and constructional rocks including solid and liquid fuels, Allied Publishers