

MINING GEOLOGY

Module – I

[8 Hours]

Process of formation of ore deposits, Major Indian mineral deposits (Iron, Manganese, Copper, Lead, Zinc) - distribution and mode of occurrence.

Module – II

[8 Hours]

Surface Mineral Exploration – Stages, Strategies, Types, techniques and recent developments; Basics of geophysical, geological and geochemical prospecting; Interpretation of exploration data; Sub-surface mineral exploration
Sampling – Techniques and types (Surface and drill cores)

Module – III

[8 Hours]

Concept of grade, Cut-off grade, Run-off-mine grade, thickness, orebody modelling, Concept of Mineral Resource / Ore Reserve, Estimation of resource with different techniques, UNFC classification system, Relevant Policy, Acts and Rules.

Module – IV

[10 Hours]

Coal Geology: Rank, characteristics and important constituents of coal; Classification and origin of coal; Chief characteristics of Indian coals; Geology of the principal coalfields of India.
Petroleum Geology: Concept of organic constituents of petroleum origin, migration, accumulation, concept of traps and important oil and gas basins of India.