

4 th Semester	RML4D002	Mining Methods and Unit Operations	L-T-P 3-0-0	3 CREDITS
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MODULE-I (10 hours)

Surface Mining: Deposits amenable to surface mining; Box Cut: Objectives, types parameter and methods, Production benches- objectives, formation and bench parameters, Unit operations and associated equipments, Classification of surface mining systems.

MODULE-II (10 hours)

Underground Coal Mining: Deposits amenable to underground coal mining classification of underground coal mining methods, Board and Pillar methods – general description and applications and merits and demerits, selection of panel size, operation involved and associated equipment.

MODULE-III (10 hours)

Longwall methods-type and their general description, applicability, merits and demerits, selection of face length and panel length, operations involved and associated equipments, Methods for mining steeply inclined seams and thick seams, hydraulic mining.

MODULE-IV (08 hours)

Underground metal mining: Deposits amenable to underground metal mining, shape size & position of drifts and cross cuts, Raises and Winzes, classification of underground metal mining methods,

MODULE-V (08 hours)

Stoping methods – general description, applicability, operations involved and associated equipments for room and pillar mining, stope and piellar mining, shrinkage, stoping, sub-level stoping, cut and fill stoping, VCR methods, Sub-level caving and caving.

Books:

- Elements of mining technology by D. J. Deshmukh
- Coal Mining Practice by Statham
- Principles and Practices of Modern Coal Mining by R. D. Singh