

GUJARAT TECHNOLOGICAL UNIVERSITY
Diploma in Mining Engineering
Semester: 4

Subject Name Mining Machinery -II

Sr. No.	Course content
1.	UNDERGROUND FACE MACHINARIES: 1.1 Board & Pillar coal cutting machines 1.2 Coal drills. 1.3 Long wall machines
2.	MECHANICAL LOADERS: 2.1 Rocker shovels 2.2 Gathering arm loader 2.3 Scraper 2.4 Load haul and dump machines 2.5 Construction and application of shuttle car.
3.	HOSTING MACHINARIES: 3.1 Constructional Details of head gear frame 3.2 Constructional features of winding drum, cage and skip, winder drives 3.3 Safety devices used in winding system 3.4 Single and multi rope friction winding-multilevel winding 3.5 Pit top and Pit bottom circuits
4.	WIRE ROPES: 4.1 Manufacturing Process of Wire Ropes 4.2 Types of wire ropes 4.3 Calculation based on wire ropes 4.4 Care and maintenance of wire ropes 4.5 Rope capping 4.6 Rope splicing

LABORATORY EXPERIENCES:

1. Study of constructional feature & working of Coal Cutting machines.
2. Study of Coal Drill Construction working & Maintenance.
3. Study of Constructional features of Shearer.
4. Study of constructional features of Road headers.
5. Study and Sketch of Winding Drum.
6. Study and Sketch of Winding Engine Brakes.
7. Study of Safety Hooks.
8. Study of different types of Pit Top & Bottom Circuits for Cage windings.
9. Study of different types of wire ropes used in mine
10. Study of Splicing of Haulage Ropes.

Reference Books:

Sr. No.	Name of Books	Author
1.	Elements of mining engg. D.J.Deshmukh	D.J.Deshmukh
2.	U.M.S.	