

GUJARAT TECHNOLOGICAL UNIVERSITY

B. E. SEMESTER: V MINING ENGINEERING

Subject Name: **Underground Coal Mining**

Subject Code: **152205**

Teaching Scheme				Evaluation Scheme		
Theory	Tutorial	Practical	Total	University Exam (Theory) (E)	Mid Sem Exam (Theory) (M)	Practical (I)
3	0	0	3	70	30	50

Sr. No.	Content
1.	Stratified deposits, their origin and distribution, Characteristics of roofs, Floors and associated rocks.
2.	Factors Influencing Choice of Methods : Classification of mining, Systems their relative and application, Layout and development of mines, Mechanized development layout, Type of machinery, personnel, cycle of operation.
3.	Details of Board and Pillar method size of pillars and headings, Panel system application, Size of panels, Barrier and preparatory stoppings, Working of panels, Pillar extraction and safety, Room and Pillar, Method of working.
4.	Longwall system of workings, Advancing and retreating methods, Development and maintenance of longwall faces, Mechanization, Layout of workings for the required outputs, length and direction of faces, Size of gates and their maintenance, Organization on a longwall face.
5.	Stowing: Principle, Method of stowing hand packing (Packwalls) Mechanical, Pneumatic and hydraulic stowing their merits, demerits and applicability, Collection and preparation of materials, Transport, handling and storage of material on surface and underground face arrangements.

Reference Books:

1. Elements of Mining Tech (Vol-I), D. J. Deshmukh.
2. Advance coal Mining Tech, Samir kumar Das.
3. Advance coal Mining, B. Singh.
4. U M S