

## 5<sup>th</sup> Semester

### Under Ground Coal Mining

#### **Module-I:**

**(8 Hours)**

Selection of mining methods, classification of method of coal mining. Pillar Mining Method: Panel system of working, incubation, period, Relation between depth of deposit & size of pillar, percentage of extraction, Man- power calculation, Productivity calculation, Application

#### **Module-II:**

**(10 Hours)**

Development & extraction by B&P Method of mining, Depillaring

#### **Module-III:**

**(10 Hours)**

Long wall Mining Method: Classification, Application on Development and extraction, face mechanization, Power support.

#### **Module- IV:**

**(10 Hours)**

Horizon Mining, Contiguous Mining. Application & Layout

#### **Module-V:**

**(8 Hours)**

Mining equipment and production machine used below ground. Stowing and Filling Methods, gathering and transportation arrangements, stowing plants and layout. Provision of CMR 1957.

#### **Books:**

- [1] Principles and Practices of Modern Coal Mining, R. D. Singh, New Age International, New Delhi, 1997
- [2] Underground Winning of Coal, T. N. Singh, Oxford & IBH, New Delhi, 1992
- [3] Modern Coal Mining Technology, S. K. Das, Lovely Prakashan, Dhanbad, 1992
- [4] Elements of Mining Technology, Volume-2, D. J. Deshmukh, Denett & Company, 2016
- [5] Coal Mining Practice, I. C. F. Statham, Caxton Eastern Agencies, Calcutta, Reprint, 1964