

**PMN7D012      Advanced Underground Coal Mining 4-0-0**

**(HONOR SUBJECT)**

**Module - I:**

Mining of thick seams: Concept of a thick seam; Problems of mining thick seams; Past experience of working thick seams by Bord & Pillar method in multi-sections; Longwall based multi-slice methods:-Inclined slicing, horizontal slicing and cross-slicing in ascending and descending sequence; Under winning methods:-sub-level caving, integral caving, blasting gallery method, descending shield method

**Module - II:**

Hydraulic Mining of Coal:Conditions suitable for hydraulic Mining of Coal, Hydraulic Mining Operation, Hydraulic breaking of coal, hydraulic transport and hydro hoisting; Layout of workings for hydraulic mining of moderately thick seams

**Module - III:**

Mining of thin seams: Problems in Mining thin seams; Equipment and methods for thin seam extraction.Highwall Mining: Introduction, Applicability and Method

**Module - IV:**

Underground Coal Gasification: Conditions suitable for Underground Coal Gasification; Basic principle and technology of underground coal gasification, Advantage and disadvantage of UCG: Scope of application of UCG in Indian conditions