

**NPTEL : Fundamentals of Environmental Pollution and Control (Mining Engineering)**

**Co-ordinators : Prof. J. Bhattacharyya**

- Lecture 1 - State of the Environment
- Lecture 2 - Environmental Movement
- Lecture 3 - Definitions of Environmental Terms
- Lecture 4 - Water Pollutants
- Lecture 5 - Water Pollutants (Continued...)
- Lecture 6 - Water Pollution Modelling-Surface Water
- Lecture 7 - Water Pollution Modelling-Surface Water(Continued...)
- Lecture 8 - BOD Modelling - Part 1
- Lecture 9 - BOD Modelling - Part 2
- Lecture 10 - Oxygen Demanding Waste in Streams - Part 1
- Lecture 11 - Oxygen Demanding Waste in Streams - Part 2
- Lecture 12 - Ground Water and its Contamination
- Lecture 13 - Ground Water and its Contamination (Continued...)
- Lecture 14 - Ground Water and its Contamination (Continued...)
- Lecture 15 - Waste Water Treatment
- Lecture 16 - Wastewater Treatment (Continued...)
- Lecture 17 - Wastewater Treatment (Continued...)
- Lecture 18 - Chemical Treatment
- Lecture 19 - Wetland Treatment and Bio-Technology Applications
- Lecture 20 - Introduction to Soil
- Lecture 21 - Parameters to Soil for Vegetative Growth
- Lecture 22 - Parameters to Soil for Vegetative Growth (Continued...)
- Lecture 23 - Soil Acidity
- Lecture 24 - Soil Erosion
- Lecture 25 - Mechanical Soil Erosion Control
- Lecture 26 - Soil Erosion Prediction
- Lecture 27 - Universal Soil Loss Equation
- Lecture 28 - Air Pollutants
- Lecture 29 - Health Effects of Air Pollutants - Part 1
- Lecture 30 - Health Effects of Air Pollutants - Part 2
- Lecture 31 - Air Pollutants and Meteorology - Part 1

[Lecture 32 - Air Pollutants and Meteorology - Part 2](#)

[Lecture 33 - The Point-Source Gaussian Plume Model](#)

[Lecture 34 - Ground Level Concentration](#)

[Lecture 35 - Emission Control](#)

[Lecture 36 - EIA, EMP & EA](#)

**NPTEL : NOC:Drilling and Blasting Technology (Mining Engineering)**

**Co-ordinators : Prof. Kaushik Dey**

Lecture 1 - Introduction to Drilling Technology

Lecture 2 - Introduction to Blasting Technology

Lecture 3 - Rock Formation

Lecture 4 - Rock Formation (Continued...)

Lecture 5 - Rock Formation (Continued...)

Lecture 6 - Rock Properties and Testing - 1

Lecture 7 - Rock Properties and Testing - 2

Lecture 8 - Drilling Mechanism

Lecture 9 - Drillability of Rock

Lecture 10 - Drilling Machines - 1

Lecture 11 - Drilling Machines - 2

Lecture 12 - Drilling Pattern - 1

Lecture 13 - Drilling Pattern - 2

Lecture 14 - Special Drilling Methods - I

Lecture 15 - Special Drilling Methods - II

Lecture 16 - Explosives - 1

Lecture 17 - Explosives - 2

Lecture 18 - Explosives accessories - 1

Lecture 19 - Explosives accessories - 2

Lecture 20 - Explosives accessories - 3

Lecture 21 - Explosives properties - 1

Lecture 22 - Explosives properties - 2

Lecture 23 - Explosives properties - 3

Lecture 24 - Basics of blasting - 1

Lecture 25 - Basics of blasting - 2

Lecture 26 - Explosive storage and transportation - 1

Lecture 27 - Explosive storage and transportation - 2

Lecture 28 - Surface blasting - 1

Lecture 29 - Surface blasting - 2

Lecture 30 - Surface blast design

Lecture 31 - Underground blast design - 1

Lecture 32 - Underground blast design - 2

Lecture 33 - Blasting results - 1

Lecture 34 - Blasting results - 2

Lecture 35 - Blasting results - 3

Lecture 36 - Blasting results - 4

Lecture 37 - Problems - 1

Lecture 38 - Problems - 2

Lecture 39 - Problems - 3

Lecture 40 - Problems - 4

Lecture 1 - Introduction to Network Analysis

Lecture 2 - Introduction to network and some terminology

Lecture 3 - Construction of network

Lecture 4 - Introduction to activity on node diagram and comparison with arrow diagram

Lecture 5 - Rules of dummy job, redundancy and cycles

Lecture 6 - Critical path and its calculation

Lecture 7 - Algorithm for critical path early start and early finish times

Lecture 8 - Late start and late finish times algorithm

Lecture 9 - Understanding the slack

Lecture 10 - Examples of slacks and calculation of AON network

Lecture 11 - Project due dates and earliest completion time examples

Lecture 12 - CPM model and cost modelling

Lecture 13 - Lowest cost schedule and optimum schedule

Lecture 14 - Crashing and stretching of jobs

Lecture 15 - Crashing and stretching of jobs (Continued...)

Lecture 16 - Introduction to PERT

Lecture 17 - Expected length of critical path calculation with examples

Lecture 18 - Probability of completion of a project

Lecture 19 - Event oriented project management

Lecture 20 - Algorithm and computer program