## NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

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NPTEL Video Course - Chemical Engineering - NOC: Atomic and Molecular Absorption Spectrometry for Pollution Mo
Subject Co-ordinator - Dr. J.R. Mudakavi
Co-ordinating Institute - IISc - Bangalore
Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable
Lecture 1 - Course Introduction
Lecture 2 - Atomic structure
Lecture 3 - Interaction of EM radiation with matter
Lecture 4 - Atomic and molecular orbitals
Lecture 5 - Interaction of EM radiation with matter - I
Lecture 6 - Interaction of EM radiation with matter - II
Lecture 7 - Interaction of interaction of EM radiation with matter - III
Lecture 8 - Emission and absorption spectra
Lecture 9 - MO theory
Lecture 10 - Structure  property relationship of organic compounds
Lecture 11 - Woodword Fieser rules, structure  property relationship
Lecture 12 - Beer-Lamberts law
Lecture 13 - Deviations from Beer-Lamberts law, relative concentration error, instrumentation - I
Lecture 14 - UV-Visible spectrophotometry, instrumentation - II
Lecture 15 - UV-Visible spectrophotometry, instrumentation - III
Lecture 16 - UV-Visible spectrophotometry, instrumentation - IV
Lecture 17 - Quantitative analysis  I
Lecture 18 - Quantitative analysis  II
Lecture 19 - Quantitative analysis  III
Lecture 20 - Quantitative analysis  IV
Lecture 21 - Fluorescence spectrophotometry  I
Lecture 22 - Fluorescence spectrophotometry - II
Lecture 23 - Fluorescence spectrophotometry - III
Lecture 24 - Instrumentation
Lecture 25 - Chemical analysis, applications
Lecture 26 - Chemiluminiscence, principles
Lecture 27 - Status of spectrophotometry vis a vis environment
Lecture 28 - Separations methods
Lecture 29 - Method development
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Lecture 30 - Boron, chloride
Lecture 31 - Fluoride
Lecture 32 - Phenols
Lecture 33 - Arsenic, Free chlorine
Lecture 34 - Magnesium
Lecture 35 - Nonionic surfactants, iron, phosphate
Lecture 36 - Nitrite , manganese
Lecture 37 - Cadmium, copper, lead
Lecture 38 - Total hardness, zinc
Lecture 39 - Nitrate, chromium
Lecture 40 - Determination of aluminum, cyanide, sulphate
Lecture 41 - Sulphate, ammonia, Conclusions
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