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

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NPTEL Video Course - Chemistry and Biochemistry - NOC: Organic Chemistry in Biology and Drug Development
Subject Co-ordinator - Prof. A. Basak
Co-ordinating Institute - IIT - Kharagpur
Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable
Lecture 1 - A brief introduction to Molecules of Life
Lecture 2 - Biological Macromolecules and Small molecules
Lecture 3 - Amino Acids
Lecture 4 - Amino acids
Lecture 5 - Method of determination of Amino acid sequence
Lecture 6 - Selective peptide bond cleavage
Lecture 7 - Peptide synthesis
Lecture 8 - Peptide synthesis (Continued...) Protection, coupling and deprotection method
Lecture 9 - Recent development of coupling agents; Merrifieldâ s method of solid phase peptide synthesis
Lecture 10 - Hierarchial structure of proteins
Lecture 11 - Ramachandran plot and protein purification techniques
Lecture 12 - Protein purification techniques (Continued...)
Lecture 13 - Introduction to Enzymes and its kinetics
Lecture 14 - Enzyme catalysed reactions and introduction to catalytic activity of proteases
Lecture 15 - Enzyme Kinetics (Continued...)
Lecture 16 - Concept of Enzyme Inhibition
Lecture 17 - Concept of Enzyme Inhibition (Continued...)
Lecture 18 - Problems on Enzyme Kinetics and Enzyme Inhibition
Lecture 19 - Synthetic Biology
Lecture 20 - Synthetic Biology (Continued...)
Lecture 21 - Synthetic Biology (Continued...)
Lecture 22 - Nucleic Acid
Lecture 23 - Nucleic Acid (Continued...)
Lecture 24 - DNA sequencing method
Lecture 25 - DNA sequencing method (Continued...)
Lecture 26 - DNA sequencing method (Continued...)
Lecture 27 - Synthesis of oligonucleotide
Lecture 28 - Central dogma
Lecture 29 - Central dogma
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Lecture 30 - Central dogma
Lecture 31 - Central dogma
Lecture 32 - Central dogma
Lecture 33 - Molecular Biology
Lecture 34 - Molecular Biology (Continued...)
Lecture 35 - Chemistry of cofactors/coenzymes
Lecture 36 - Chemistry of cofactors/coenzymes (Continued...)
Lecture 37 - Chemistry of cofactors/coenzymes (Continued...)
Lecture 38 - Chemistry of cofactors/coenzymes (Continued...)
Lecture 39 - Chemistry of cofactors/coenzymes (Continued...)
Lecture 40 - Chemistry of cofactors/coenzymes (Continued...)
Lecture 41 - Introduction to Drug Discovery Process
Lecture 42 - Fundamental Principles of Drug Development Process
Lecture 43 - Combinatorial chemistry
Lecture 44 - Neurotransmitters
Lecture 45 - Catechol amine based and GABA neurotransmitters
Lecture 46 - Hypertension
Lecture 47 - Inhibitor design of angiotensin converting enzyme
Lecture 48 - Antimicrobial drugs
Lecture 49 - Chemistry of penicillins
Lecture 50 - Resistance to beta-lactam antibiotics
Lecture 51 - Mechanistic studies of beta-lactamase
Lecture 52 - Non beta-lactam antibiotics
Lecture 53 - Mechanistic enzymology of Isopenicillin N synthase
Lecture 54 - Polyketide Biosynthesis
Lecture 55 - Biosynthesis of macrolide polyketides and introduction to virus
Lecture 56 - Anti-viral drugs
Lecture 57 - Cancer and Chemotherapy
Lecture 58 - Anti-cancer drugs (Continued...)
Lecture 59 - Aromatase inhibition and Anti-ulcer drugs
Lecture 60 - Cholesterol lowering agents
Lecture 61 - Cholesterol Biosynthesis
Lecture 62 - Pharmakinetics and pharmadynamics
Lecture 63 - OSAR principles
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