O P Aggarwal Organic Chemistry Free Book

This updated version of this text contains all the reactions, mechanisms, and structures of organic compounds that are key to understanding life processes.

The first edition of this book achieved considerable success due to its ease of use and practical approach, and to the clear writing style of the authors. The preparation of organic compounds is still central to many disciplines, from the most applied to the highly academic and, more tan ever is not limited to chemists. With an emphasis on the most up-to-date techniques commonly used in organic syntheses, this book draws on the extensive experience of the authors and their association with some of the world's mleading laboratories of synthetic organic chemistry. In this new edition, all the figures have been re-drawn to bring them up to the highest possible standard, and the text has been revised to bring it up to date. Written primarily for postgraduate, advanced undergraduate and industrial organic chemists, particularly those involved in pharmaceutical, agrochemical and other areas of fine chemical research, the book is also a source of reference for biochemists, biologists, genetic engineers, material scientists and polymer researchers.

Fuels and Petroleum Processing

Challenger Chemistry for JEE Main & Advanced with Past 5 Years Solved Papers Ebook (12th Edition)

Part A: Structure and Mechanisms

Mathematical Techniques

Natural Products

The two-part, fifth edition of Advanced Organic Chemistry has been substantially revised and reorganized for greater clarity. The material has been updated to reflect advances in the field since the previous edition, especially in computational chemistry. Part A covers fundamental structural topics and basic mechanistic types. It can stand-alone; together, with Part B: Reaction and Synthesis, the two volumes provide a comprehensive foundation for the study in organic chemistry. Companion websites provide digital models for study of structure, reaction and selectivity for students and exercise solutions for instructors.

The Classic Texts Series is the only of its kind selection of classic pieces of work that started off as bestseller and continues to be the bestseller even today. These classic texts have been designed so as to work as elementary textbooks which play a crucial role in building the concepts from scratch as in-depth knowledge of concepts is necessary for students preparing for various entrance exams.The present book on Higher Algebrapresents all the elements of Higher Algebra in a single book meant to work as textbook for the students beginning their preparation of the varied aspects covered under Higher Algebra. The present book has been divided into 35 chapters namely Ratio, Proportion, Variation, Arithmetical Progression, Geometrical Progression, Harmonical Progression Theorems Connected with The Progression, Scales of Notation, Surds & Imaginary Quantities, The Theory of Quadratic Equations, Miscellaneous Equations, Permutations & Combinations, Mathematical Induction, Binomial Theorem Positive Integral Index, Binomial Theorem, Any Index, Multinational Theorem, Logarithms, Exponential & Logarithmic Series, Interest & Annuities, Inequalities, Limiting Values & Vanishing Fractions, Convergency&Divergency of Series, Undetermined Coefficients, Partial Fractions, Recurring Series, Continued Fractions, Recurring Series, Continued Fractions, Indeterminate Equations of the First Degree, Recurring Continued Fractions, Indeterminate Equations of the Second Degree, Summation of Series, Theory of Numbers, The General Theory of Continued Fractions, Probability, Determinants, Miscellaneous Theorems & Examples and Theory of Equations, each subdivided into number of topics. The first few chapters in the book have been devoted to a fuller discussion of Ratio, Proportions, Variation and the Progressions. Both the theoretical text as well as examples have been treated minutely which will help in better understanding of the concepts covered in the book. Theoretical explanation of the concepts in points has been provided at the beginning of each chapter. At the end of each chapter, unsolved practice exercises have been provided to help aspirants revise the concepts discussed in the chapter. At the end of chapterwise study, miscellaneous examples have also been given along with answers and solutions to the unsolved examples covered in each chapter. All the relevant theorems covered under the syllabi of Higher Algebra have also been covered in the detail in this book.As the book covers the whole syllabi of Higher Algebra in detail along with ample number of solved examples, it for sure will help the students perfect the varied concepts covered under the Higher Algebra section.

Organic Chemistry

Sainik School Entrance Test

Mathematics

Mathematics for M.B.A

A MASTERPIECE BY Dr. O. P. AGARWAL. The book is written with the objective that, Rather than memorising mechanisms, the student should be able to work-through the mechanisms based on previous knowledge. The revised edition has been enriched with a lot of new questions on the new pattern of IIT-JEE. Some of the salient features of the revised edition are - More focus on questions based on reaction mechanisms, organic conversions, identification of organic compounds & typical problems involving application of two or more concepts; The book aims at 100% Concept Clarity for the students.The theory is followed by inchapter Exercises (Test Your Understanding), Illustrative Examples and 3 levels of Exercises. The first exercise is an Objective one with single choice correct MCQs. The second exercise covers questions on the NEW PATTERN of IIT-JEE - MCQs (more than 1 correct), Passages, Multiple Matching and Assertion-Reason Type questions. The final exercise covers quality subjective questions. The book also features a SPECIAL SECTION on revising and strengthening the concepts through passage based questions. The book provides solutions to most of the questions.

Rev. ed. of: Organic chemistry / Jonathan Clayden ... [et al.].

New Pattern Organic Chemistry For Iit-Jee

Reactions and Reagents

Thermal & Radio Active

42 Years (1978-2019) JEE Advanced (IIT-JEE) + 18 yrs JEE Main (2002-2019) Topic-wise Solved Paper Chemistry 15th Edition

Text Book of Biochemistry

Introduction to microbiology; Characteristics of bacteria; Microorganisms other than bacteria; Control of microorganisms; Microorganisms and disease; Applied microbiology.

• The book "42 Years IIT-JEE Advanced + 18 yrs JEE Main Topic-wise Solved Paper CHEMISTRY" is the first integrated book, which contains topic-wise collection of past JEE Advanced (including 1978-2012 IIT-JEE & 2013-19 JEE Advanced) questions from 1978 to 2019 and past JEE Main (including 2002-2012 AIEEE & 2013-19 JEE Main) questions from 2002 to 2019. • The book provides 2 Sets of JEE Main 2019 (1 of each of the 2 Phases) & Paper 1 & 2 of JEE ADvanced 2019. • The book is divided into 23 chapters. The flow of chapters has been aligned as per the NCERT books. • Each chapter divides the questions into 9 categories (as per the NEW IIT pattern) - Fill in the Blanks, True/False, MCQ 1 correct, MCQ more than 1 correct, Passage Based, Assertion-Reason, Multiple Matching, Integer Answer and Subjective Questions. • All the Screening and Mains papers of IIT-JEE have been incorporated in the book. • Detailed solution of each and every question has been provided for 100% conceptual clarity of the student. Well elaborated detailed solutions with user friendly language provided at the end of each chapter. • Solutions have been given with enough diagrams, proper reasoning to bring conceptual clarity. • The students are advised to attempt questions of a topic immediately after they complete a topic in their class/school/home. The book contains around 3380+ MILESTONE PROBLEMS IN Mathematics.

Advanced Practical Organic Chemistry, Second Edition

Chemistry Class 12 CBSE Board 13 Years Skill-wise & Chapter-wise Solved Papers (2008 - 20) 8th Edition

Alcohols,Phenols & Ethers for JEE Main & JEE Advanced (Study Package for Chemistry)

Synthetic Organic Chemistry: (For Honours & Post-Graduate Students of Various Universities)

Engineering Mathematics: Vol II; B.Sc. (Engg.), B.E., B.Tech., and other equivalent professional exams of all Engg. Colleges and Indian Universities

A Clear And Reliable Guide To Students Of Practical Organic Chemistry At The Undergraduate And Postgraduate Levels. This Edition S Special Emphasis Is On Semi Micro Methods And Modern Techniques And Reactions.

An advanced-level textbook of organic chemistry for the graduate (B.Sc) and postgraduate (M.Sc) students of Indian and foreign universities. This book is a part of the four-volume series, entitled "A Textbook of Organic Chemistry – Volume I, II, III, IV". CONTENTS: CHAPTER 1. Nature of Bonding in Organic molecules: Delocalized Chemical Bonding; Conjugation; Cross Conjugation; Resonance; Hyperconjugation; Tautomerism; Aromaticity in Benzenoid and Nonbenzenoid Compounds; Alternant and Non-Alternant Hydrocarbons; Huckel's Rule: Energy Level of p-Molecular Orbitals; Annulenes; Antiaromaticity; Homo-Aromaticity; PMO Approach; Bonds Weaker than Covalent; Addition Compounds: Crown Ether Complexes and Cryptands, Inclusion Compounds, Cyclodextrins; Catenanes and Rotaxanes CHAPTER 2. Stereochemistry: Chirality; Elements of symmetry; Molecules with more than one chiral centre: diastereomerism; Determination of relative and absolute configuration (octant rule excluded) with special reference to lactic acid, alanine & mandelic acid; Methods of resolution; Optical purity; Prochirality; Enantiotopic and diastereotopic atoms, groups and faces; Asymmetric synthesis: cram's rule and its modifications, prelog's rule; Conformational analysis of cycloalkanes (upto six membered rings); Decalins; Conformations of sugars; Optical activity in absence of chiral carbon (biphenyls, allenes and spiranes); Chirality due to helical shape; Geometrical isomerism in alkenes and oximes; Methods of determining the configuration CHAPTER 3. Reaction Mechanism: Structure and Reactivity: Types of mechanisms; Types of reactions; Thermodynamic and kinetic requirements; Kinetic and thermodynamic control; Hammond's postulate; Curtin-Hammett principle; Potential energy diagrams: Transition states and intermediates; Methods of determining mechanisms; Isotope effects; Hard and soft acids and bases; Generation, structure, stability and reactivity of carbocations, carbanions, free radicals, carbenes and nitrenes; Effect of structure on reactivity; The Hammett equation and linear free energy relationship; Substituent and reaction constants; Taft equation CHAPTER 4. Carbohydrates: Types of naturally occurring sugars; Deoxy sugars; Amino sugars; Branch chain sugars; General methods of determination of structure and ring size of sugars with particular reference to maltose, lactose, sucrose, starch and cellulose. CHAPTER 5. Natural and Synthetic Dyes: Various classes of synthetic dyes including heterocyclic dyes; Interaction between dyes and fibers; Structure elucidation of indigo and Alizarin CHAPTER 6. Aliphatic Nucleophilic Substtitution: The SN2, SN1, mixed SN1 and SN2, SNi , SN1', SN2', SNi' and SET mechanisms; The neighbouring group mechanisms; neighbouring group participation by p and s bonds; anchimeric assistance; Classical and nonclassical carbocations; Phenonium ions; Common carbocation rearrangements; Applications of NMR spectroscopy in the detection of carbocations; Reactivity- effects of substrate structure, attacking nucleophile, leaving group and reaction medium; Ambident nucleophiles and regioselectivity; Phase transfer catalysis. CHAPTER 7. Aliphatic Electrophilic Substitution: Bimolecular mechanisms – SE2 and SEi; The SE1 mechanism; Electrophilic substitution accompained by double bond shifts; Effect of substrates, leaving group and the solvent polarity on the reactivity CHAPTER 8. Aromatic Electrophilic Substitution: The arenium ion: mechanism, orientation and reactivity, energy profile diagrams; The ortho/para ratio, ipso attack, orientation in other ring systems; Quantitative treatment of reactivity in substrates and electrophiles; Diazonium coupling; Vilsmeir reaction; Gattermann-Koch reaction CHAPTER 9. Aromatic Nucleophilic Substitution: The ArSN1, ArSN2, Benzyne and SRN1 mechanisms; Reactivity – effect of substrate structure, leaving group and attacking nucleophile; The von Richter, Sommelet-Hauser, and Smiles rearrangements CHAPTER 10. Elimination Reactions: The E2, E1 and E1cB mechanisms; Orientation of the double bond; Reactivity –effects of substrate structures, attacking base, the leaving group and the medium; Mechanism and orientation in pyrolytic elimination CHAPTER 11. Addition to Carbon-Carbon Multiple Bonds: Mechanistic and stereochemical aspects of addition reactions involving electrophiles, nucleophiles and free radicals; Regio–and chemoselectivity: orientation and reactivity; Addition to cyclopropane ring; Hydrogenation of double and triple bonds; Hydrogenation of aromatic rings; Hydroboration; Michael reaction; Sharpless asymmetric epoxidation. CHAPTER 12. Addition to Carbon-Hetero Multiple Bonds: Mechanism of metal hydride reduction of saturated and unsaturated carbonyl compounds, acids, esters and nitriles; Addition of Grignard reagents, organozinc and organolithium; Reagents to carbonyl and unsaturated carbonyl compounds; Wittig reaction; Mechanism of condensation reactions involving enolates – Aldol, Knoevenagel, Claisen, Mannich, Benzoin, Perkin and Stobbe reactions; Hydrolysis of esters and amides; Ammonolysis of esters.

HIGHER ALGEBRA

Carbonyl Compounds for JEE Main & JEE Advanced (Study Package for Chemistry)

Microbiology

Reactions, Mechanisms, and Structure

Disha Organic Chemistry

Reactions and Regents in Organic ChemistrySynthetic Organic Chemistry: (For Honours & Post-Graduate Students of Various Universities)Krishna Prakashan MediaGeneral Organic Chemistry for JEE Main & JEE AdvancedNatural ProductsKrishna Prakashan MediaNew Pattern Organic Chemistry For Iit-Jee

Advanced Practical Organic Chemistry

Reactions and Regents in Organic Chemistry

Practical Organic Chemistry

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Set Theory and Related Topics