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Engineering Chemistry By Jain And Jain 15th Edition Free

Life is impossible without chemistry. Engineering chemistry has a special role to play in the curriculum of under graduate students of all branches of Engineering. The present book entitled “ENGINEERING CHEMISTRY LABORATORY MANUAL” is very useful to Engineering students of various Institutions. The practical book providing simple and easy approach on the subject

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relevant examples throughout demonstrates the importance of green chemistry in many industry sectors. Intended primarily for use by students and lecturers, this book will also appeal to industrial chemists, engineers, managers or anyone wishing to know more about green chemistry.

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Objective Pre Engineering
Chemistry
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Chemistry(Chemistry of
Engineering Materials)(A
Modern Approach)**

*This book is written
strictly for the first and
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students of engineering
chemistry according to the
revised syllabus. It aims*

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to provide a thorough understanding of the chemical concepts, theories and principles in Engineering Chemistry in a clear and concise manner, so that the average students are able to grasp the intricacies of the subject. Explaining general concepts of atomic structure and chemical bond, the book covers all advanced topics such as acid-base theory, concentration of solutions, electrochemistry, corrosion, metallurgy, hydrocarbons, sources of

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water and its treatment, lubricants and adhesives, fuel, polymer and environmental chemistry. Each theoretical concept is well supported by illustrative examples. Besides, the book provides a large number of solved problems to reinforce the theoretical understanding of concepts. Each chapter contains glossary terms and provides short questions and long questions for practice. Previous year question papers and model questions with answers are appended at the end of the book to

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examinations.*

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those working in
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laboratories of drug,
pesticide and other
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*About the Book: This book
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is designed as a self-
contained, comprehensive
classroom text for the
second semester B.E.*

*Classes of Visveswaraiiah
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as per the Revised new Syllabus. The topics included are Differential Calculus, Integral Calculus and Vector Integration, Differential Equations and Laplace Transforms. The book is written in a simple way and is accompanied with explanatory figures. All this make the students enjoy the subject while they learn. Inclusion of selected exercises and problems make the book educational in nature. It shou.

*Multi-Objective
Optimization in Chemical*

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Engineering

A Textbook of Engineering

Physics

Developments and

Applications

Engineering Chemistry for

Degree Students

Journal of Industrial and

Engineering Chemistry

Advances in Chemical Engineering

This handbook covers the broad scope of nanomedicine. Starting with the basics, the subject is developed to potential clinical applications, many of which are still at an experimental stage. The book features extensive coverage of nanodiagnosics and nanopharmaceuticals, which are two important components of

nanomedicine. Written by a physician-scientist author who blends his clinical experience and scientific expertise in new technologies, this book provides a definitive account of nanomedicine. It offers more up-to-date and comprehensive coverage of nanomedicine than any other comparable work.

In this edition some practical have been revised and expanded considerably. To meet the specific demands of a segment of readers, a number of new experiments are incorporated in various sections. A new practical on Bomb calorimeter has been added.

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Renewable and Recyclable

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Materials

Engineering Mathematics - II

A Manual of Practical Engineering

Chemistry[For First Year

B.E./B.Tech/B.Arch. Students of

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Chemistry of Engineering Materials

ENVIRONMENTAL CHEMISTRY:

WATER AND SOIL POLLUTION

Water And Its Industrial

Applications | Fuels And

Combustion | Lubricants |

Cement And Refractories |

Polymers | Instrumental

Techniques In Chemical

Analysis | Water Analysis

Techniques | Question Bank

Advances in Chemical

Engineering, Volume 19

reflects the major impact of

chemical engineering on

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medical practice, with chapters covering polymer systems for controlled release, receptor binding and signaling, and transport phenomena in tumors. Other key topics include oil refining, pollution prevention in engineering design, and atmospheric dynamics.

We are pleased to place in the hands of teachers and students, our book entitled A Manual of Practical Engineering Chemistry for Engineering Students. Though one may come across with several books of practical chemistry but, the present book specifically caters to the requirments of the

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students of U.P.Unified
syllabus of firstand second
semester of all Engineering
Colleges.

An Introductory Text
Engineering Chemistry
Practical Book

The Handbook of Nanomedicine
Aerated Foods

ENGINEERING CHEMISTRY WITH
LABORATORY EXPERIMENTS

*Any good text book, particularly
that in the fast changing fields
such as engineering &
technology, is not only expected
to cater to the current
curricular requirments of
various institutions but also
should provied a glimpse
towards the latest*

developments in the concerned subject and the relevant disciplines. It should guide the periodic review and updating of the curriculum.

*Some chapters in the book deal with the basic principles of chemistry while others are focused on its applied aspects, providing the correct interphase between the principles of chemistry and engineering. KEY FEATURES **

*Chapters cover both basic principles of chemistry as also its applied aspects. * Written in easy self-explanatory language and in depth at the same time. * Review questions provided at*

*the end of each chapter. * A separate section 'Laboratory Manual' in Engineering Chemistry comprising 12 experiments is appended at the end of the book.*

Engineering Chemistry is an interdisciplinary subject offered to undergraduate Engineering students. This book introduces the fundamental concepts in a simple and concise manner and highlights the role of chemistry in the field of engineering. It includes a large number of end-of-chapter exercises that test the student's understanding besides being useful from the examination point of view.

*Conceptual Chemistry Volume I
For Class XI*

Advances in Chemical

Engineering

For Class 11

Fundamentals of Chemical

Engineering Thermodynamics,

SI Edition

Principles, Formation and

Stability

A brand new book, FUNDAMENTALS OF CHEMICAL ENGINEERING THERMODYNAMICS makes the abstract subject of chemical engineering thermodynamics more accessible to undergraduate students. The subject is presented through a problem-solving inductive (from specific to general) learning approach, written in a conversational

and approachable manner. Suitable for either a one-semester course or two-semester sequence in the subject, this book covers thermodynamics in a complete and mathematically rigorous manner, with an emphasis on solving practical engineering problems. The approach taken stresses problem-solving, and draws from best practice engineering teaching strategies.

FUNDAMENTALS OF CHEMICAL ENGINEERING THERMODYNAMICS uses examples to frame the importance of the material. Each topic begins with a motivational example that is investigated in context to that topic. This framing of the material is helpful to all readers, particularly to global learners who require big picture insights, and hands-on learners who struggle with

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abstractions. Each worked example is fully annotated with sketches and comments on the thought process behind the solved problems.

Common errors are presented and explained. Extensive margin notes add to the book accessibility as well as presenting opportunities for investigation. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Engineering Chemistry aims to provide clear and sufficient understanding of chemistry for students of engineering. Some chapters in the book deal with the basic principles of chemistry while others are focused on its applied aspects, providing a balance between the principles of chemistry and

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engineering. Chapters cover both basic principles of chemistry and its applied aspects. Written in easy self-explanatory language, coverage is nonetheless in depth. Clear diagrams and solved numerical problems included wherever required. Review questions provided at the end of each chapter.

Conceptual Chemistry Volume I For Class XI

Green Chemistry

Advanced Engineering Mathematics, 22e

Issues in Chemical Engineering and other Chemistry Specialties: 2011 Edition

Applied Chemistry

ENGINEERING CHEMISTRY

This book on Engineering Chemistry has been entirely rewritten in order

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to make it up-to-date and modern, both in approach and content. All diagrams have been redrawn or replaced by new ones. To meet the requirements of the latest syllabi of the various universities of India, topics like transition metals, coordination compounds, crystal field theory, gaseous and liquid states, adsorption, flame photometry, fullerenes, composites, mechanism of some typical reactions, oils and fats, soaps and detergents, have been included or expanded upon. A large number of solved numerical examples drawn from various university examinations have been given at the end of theoretical part of each

chapter. Questions have been drawn from latest examinations of various universities.

Issues in Chemical Engineering and other Chemistry Specialties: 2011 Edition is a ScholarlyEditions™ eBook that delivers timely, authoritative, and comprehensive information about Chemical Engineering and other Chemistry Specialties. The editors have built Issues in Chemical Engineering and other Chemistry Specialties: 2011 Edition on the vast information databases of ScholarlyNews.™ You can expect the information about Chemical Engineering and other Chemistry Specialties in this eBook to be deeper than what you can

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access anywhere else, as well as consistently reliable, authoritative, informed, and relevant. The content of Issues in Chemical Engineering and other Chemistry Specialties: 2011 Edition has been produced by the world's leading scientists, engineers, analysts, research institutions, and companies. All of the content is from peer-reviewed sources, and all of it is written, assembled, and edited by the editors at ScholarlyEditions™ and available exclusively from us. You now have a source you can cite with authority, confidence, and credibility. More information is available at <http://www.ScholarlyEditions.com/>. This book is primarily intended for

the first year B.Tech students of all branches for their course on engineering chemistry. The main objective of this book is to provide a broad understanding of the chemical concepts, theories and principles of Engineering Chemistry in a clear and concise manner, so that even an average student can grasp the intricacies of the subject. It includes the general concepts of structure and bonding, phase rule, solid state, reaction kinetics and catalysis, electrochemistry, chemical thermodynamics and free energy. Besides, the book introduces topics of applied chemistry like water technology, polymer chemistry and nanotechnology. Each theoretical

concept is well supported by illustrative examples. The book also provides a large number of solved problems and illustrations to reinforce the theoretical understanding of concepts. **KEY FEATURES** (i) Each chapter of the book provides a clear and easy understanding of the definitions, theories and principles. (ii) A large number of well-labelled diagrams help to understand the concepts easily and clearly. (iii) Chapter-wise glossary and important mathematical relations are given for quick revision. (iv) Provides multiple choice questions with answers, short questions and long questions for practice.a

Engineering Chemistry (Ptu)

Physical-Chemical Properties and
Functional Aspects

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

Engineering Chemistry Laboratory
Manual

Analytical Chemistry

INTRODUCTION

Environmental science is the systematic study of the interaction of two worlds. The word 'Environment' is derived from an old French word 'environ' meaning 'encircle'. The environment consists of four segments: atmosphere, hydrosphere, lithosphere and biosphere. Among all of

substances, water is a marvelous substance on earth. Water is one of the abundantly available substances in nature. Water is essential for all kinds of life and is the medium in which all living processes occur. Water is renewable source, but renewable takes time. The hydrological cycle constantly purifies and redistributes fresh water on landmasses, providing endless renewable resource. At present, there are many environmental issues, which have grown in size and complexity day by day, threatening the survival of mankind and all living organisms on earth. Unfortunately, with progress

in science and technology, man has been dumping waste material into atmosphere and causing pollution.

Environmental pollution can be divided among the categories of water, air and soil pollution. Emission of pollutants in air, water and soil has caused considerable damage to our environment. Water pollution disturbs the normal uses of water for irrigation, agriculture, industries, public water supply and aquatic life. Most of the human activities produce liquid effluents, which are the prime cause of water pollution. Rapid increase in population, intensive agriculture, growing

industrialization and urbanization has resulted in progressive deterioration in the quality of water in our natural reservoirs. Most of the water related diseases are some way or other concerned with the polluted water supply. Water borne infections diseases like cholera, dysentery, typhoid, jaundice and worm infection are still the major public health problems in developing countries. Another substance, which plays a very important role, is soil as it produces food for human beings and animals. Soil is a complex of physical and biological systems, which give support to the plants and supplies water

and essential nutrients to them. It is the main reservoir of the minerals essential for normal growth of the plants. The soil consists of four major components, i.e. mineral matter, organic matter, soil air and soil water. All these components cannot be separated with much satisfaction because they are present very intimately mixed with each other. With careful husbandry, soil can be replenished and renewed indefinitely. Hazardous chemicals heavily pollute soil day by day. Disposal of industrial waste is the major problem responsible for soil pollution. These waste products are also tipped on

soil, enhancing the extent of soil pollution. As a result, hazardous chemicals can enter into human food chain from the soil or water, disturb the biochemical process and finally lead to serious effects on living organisms. Large-scale soil and water pollution is one of the primary factors behind the high prevalence of soil and water borne diseases. Soil degradation can reduce the quality of our food, whereas deforestation can reduce the availability plants to make current medicines and medicines for the future. Heavy metal pollution has also a serious impact. Metal pollution can affect all environments but its effects

most long lasting in soil. Drinking is one of the major routes of intake of heavy metals by the human body. Soil contamination should be a primary concern in India, because the country relies heavily on agriculture. Toxic metal is the one, which is neither essential nor beneficial but exhibits a positive catastrophic effect on normal metabolic function even when present in small amounts and may, at times, be responsible for permanent disorders or malfunctioning of organ system leading finally to death. This BOOK consists of five chapters. CHAPTER 1: INTRODUCTION This chapter is divided into two parts: 1A:

WATER This part contains Introduction of Water, Properties of Water, Major Water Compartments, Types & Forms of Water, Water and its Significance, Potability of Water, Water Consumption Pattern & Demand, Water Resources, Water Quality for Irrigation and Ground Water Quality Status in Rajasthan.

1B: SOIL & VEGETATION This part contains Introduction of Soil, What is Soil?, Composition of Soil, Process of Soil Formation, Soil Profile, Soil Texture, Types of Soil, Soil pH, Life on Soil, Macro and Micro Plant Nutrients, Functions of Various Nutrients and Agricultural Status w.r.t. Soil. **CHAPTER 2:**

WATER & SOIL POLLUTION

This chapter is divided into two parts: 2A: WATER POLLUTION (i) This part contains Environmental Pollution, Water Pollution, Causes of Water Pollution, Sources of Water Pollution, Types of Water Pollution, Classification of Pollutants, Types of Pollutants, Characteristics of Fresh Water, Chemical Characteristics of Water, Characteristics of Industrial Wastes, Control of Water Pollution, Diseases Caused by Water Pollution, Various Effluents and Their Effects on Aquatic Organisms, Fluoridation and Defluoridation of Water,

Water Management, Water Pollution in India and Water Pollution in Rajasthan. (ii) 2B:

SOIL POLLUTION This part contains Soil Pollution, Sources of Soil Pollution, Diseases Caused by Soil Pollution, Control of Soil Pollution, Heavy Metal Toxicology, Sources of Heavy Metals and Environment Friendly Technologies.

CHAPTER 3: METHODS & METHODOLOGY

METHODOLOGY FOR WATER

Wastewater samples were collected from eleven different sites from the 'AMANISHAH NALA' and groundwater (Hand pump) samples were taken from nine different vicinal locations of

various industrial sites. Samples were collected in good quality screw-capped polyethylene bottles of one litre capacity, labeled properly and analyzed in laboratory for their all physico-chemical parameters. Monitoring was done during the three seasons (pre-monsoon, during monsoon and post-monsoon) throughout the two-years from different industrial areas and adjacent places of Jaipur city (June, 2002 to May, 2004). Various physical parameters like pH, EC, DO and TDS, which are important to evaluate the suitability of wastewater for irrigation, were determined on the site with the help of digital

portable water analyzer kit (CENTURY-CK-710). For rest of the analysis, water samples were preserved and brought to the laboratory. The chemical analysis carried out for BOD by incubation method, COD by KMnO_4 method, Calcium (Ca^{2+}), Magnesium (Mg^{2+}), Chloride (Cl^-), Sulphate (SO_4^{2-}), Carbonate (CO_3^{2-}) and Bicarbonate (HCO_3^-) by volumetric titration methods; while Fluoride (F^-) by spectrophotometric (AIMIL-C160-80314) & ion selective electrode method and Nitrate (NO_3^-) by spectrophotometric (ELICO-CL-54D) method; Sodium (Na^+), Potassium (K^+) by flamephotometry

(ELICO-CL-220) and heavy metals by AAS. In order to estimate the quality of the groundwater for drinking purposes, an indexing system, Water Quality Index (WQI), based on Adak and Purohit(20), was determined. Evaluation of the quality of wastewater on the basis of percent sodium (%Na) is excellent, was determined. Quantitatively, United States Salinity Laboratory (USSL) proposed, for the first time, a better index called 'Sodium Absorption Ratio (SAR)', was determined. Sodium hazard of irrigation water can be well understood by knowing SAR. There is a significant correlation between SAR

values of irrigation water and the extent to which sodium is absorbed by the soil.

METHODOLOGY FOR SOIL

Soil samples were collected from thirteen different vicinal locations of various industrial sites where industrial wastewater use for irrigation. Samples were collected in good quality polyethylene bags, labeled properly and analyzed in laboratory for their all parameters.

Monitoring was done during the four intervals throughout the year from different vicinal locations of various industrial sites of Jaipur city where industrial wastewater use for irrigation (April, 2004 to March, 2005). Soil samples

may be analyzed for the following parameters like: pH, EC, Organic Carbon, Nitrogen, Phosphorous, Potassium, Fe, Zn, Cu, Mn, etc. CHAPTER 4: RESULTS AND DISCUSSION

This chapter is divided into three parts: 4A: WATER FOR DOMESTIC PURPOSES In these sites, positive correlation between surface and ground water was recognized. The groundwater near solid waste and liquid waste disposal sites was polluted, whereas the groundwater away from disposal sites was not much affected. The values obtained were compared with standards of ISI, ICMR and WHO. From the observations, it may

inferred that the concentration of pH, EC, Ca²⁺, Na⁺, K⁺, Mg²⁺, SO₄²⁻, CO₃²⁻, HCO₃²⁻, Cl⁻, DO and BOD are within permissible limits of ISI, ICMR & WHO but NO₃⁻, TDS, TH, COD and WQI values show the poor water quality in most of the studied groundwater samples taken from vicinal locations of various industrial sites. Concentrations of all heavy metals like Cr, Cu, Cd, Mn, Ni, Pb, Fe, As & Zn are within permissible limits. Higher concentrations of Zn in very few samples have been observed. WQI values of these samples were ranging from 35.08 to 268.78 which means that only 37.5% sample's

water were fit for human consumption directly, but 62.5% water of all sources can be used for domestic consumption after appropriate treatment whereas remaining 37.5% water of samples were of very poor quality and was not recommended for domestic purposes. So it may be accomplished with the help of WQI that the water of the various samples were unfit for drinking purpose without further treatment (mainly disinfections). It may be concluded that the general characteristics of groundwater samples from the study area classify the water under moderate

category and are tolerable for household and commercial purposes However, high WQI and COD values suggest purification may be necessary for domestic consumption.

4B: WATER FOR IRRIGATION PURPOSES The suitability of groundwater and wastewater for irrigation depends upon its mineral constituents. The salts present in the water, besides affecting the growth of the plants directly also affect the soil structure, permeability and aeration, which indirectly affect the plant growth. Jaipur is undergoing rapid urbanization and industrialization. Wastewater generated from various

industries discharged into 'AMANISHAH NALA' where this water is used for irrigation purpose. The values obtained were compared with standards of ISI, ICMR and WHO. The concentrations of pH, Na⁺, K⁺, Ca²⁺, Mg²⁺, SO₄²⁻, CO₃²⁻, HCO₃⁻, TH, Cl⁻, NO₃⁻, Oil & Grease, DO and F⁻ are within permissible limits in both groundwater and wastewater but definite contaminations with special reference to EC, TDS, BOD and COD in wastewater have been observed, calls for at least primary treatment of wastewater before being used for irrigation. High EC and TDS values reflect greater salinity of water and it cannot

be suitable for irrigation under ordinary conditions. There was also a significant correlation between SAR values of irrigation water and the extent to which sodium is absorbed by the soil. No excellent conclusion can be drawn to observed values but general conclusion can be drawn as: The general characteristics of groundwater and industrial wastewater samples from the study area classify the water under moderate category and are good for household, irrigation and commercial purposes and results of suitability evaluation indicate that there is no major pollution hazard in

wastewater of AMANISHAH NALA. However, high BOD and COD values suggest purification may be necessary for sensitive crops and human consumption. 4C: SOIL FOR AGRICULTURAL PURPOSES

In all studied locations, soil is moderate for all kinds of crops except sensitive ones. Adjacent locations of all industrial areas under study have concentrations of pH, EC, organic carbon, Fe, Cu and Mn are within permissible limits and show good soil quality in most of the studied soil samples taken from vicinal locations of various industrial sites. There is lack of concentrations of Zn is all soil samples and is need to

give zinc sulphate fertilizer to compensate this but definite concentrations of P and K in soil samples have been observed at critical limit. Some samples also have higher pH i.e. alkaline in nature and they need to give gypsum for reducing alkalinity from soil samples.

CHAPTER 5: WASTEWATER TREATMENT AND

SUGGESTIONS The ultimate disposal of wastewater can only be onto the land or into the water. But whenever the watercourses are used for the ultimate disposal, the wastewater is given a treatment to prevent any injury to the aquatic life in the receiving water. Normally,

the treatment consists of the removal of suspended and dissolved solids through different units in the treatment plants. The treatment of industrial wastewater may be accomplished in part or as a whole either by the biological processes, as done in the sanitary sewage, or by processes very special for the industrial wastewater only. Depending upon the constituents present in it, the treatment may consist of any one or more treatment (chemical or biological or both) processes. The chemical treatment should be provided only when it becomes unavoidable. The selection of

the particular treatment process depends on the effluent requirements and the characteristics of the waste. Today it is not enough to emphasize the protection of the environment. The fundamental purpose of water treatment is to remove impurities that may be offensive or injurious to health and well being of the individual and community. Disinfectant should kill the pathogens quickly at room temperature. It should be inexpensive, and non-toxic, to humans and should provide protection against only contamination in water during conveyance or storage. The Govt. should immediately

make laws banning industrial pollution. Failure to do so will lead to substantial penalties and fine. The water treatment plants should be installed in rural areas. The rural inhabitants should try to avoid the use of pesticides in their fields. All small scale and big industries must have anti-pollution unit. Create the awareness about the effects of high concentration of nitrate, fluoride, solids and hardness among villagers. Through strict implementation of the Government's Water Treatment Programme, water can be rendered safe for drinking. Chapter 1, 2, 3 & 5 precisely details under various heads and chapter 4 details

under water for domestic & irrigation purposes and soil for agricultural purposes, results, discussion, tables and graphs of each parameters results, evaluations, assessments and comparison followed by a comprehensive list of relevant references after everything else of the BOOK.

This new resource focuses on many recent advances in recycling and reuse of materials, outlining basic tools and novel approaches. It covers such important issues as e-waste recycling, bio-mass recycling, vermitechnology, recovery of metals, polymer recycling, environmental remediation, waste

management, recycling of nanostructured materials, and more. Also included is coverage of new research in the use of laser spectroscopy, pyrolysis, and recycled biomaterials for biomedical applications.

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Chemistry

**ENGINEERING CHEMISTRY
FOR DIPLOMA**

Basic of Engineering

Chemistry (For RGPV, Bhopal)

**A Textbook for Engineers and
Technologists**

Engineering Chemistry

Written in lucid language, the book offers a detailed treatment of fundamental concepts of

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chemistry and its engineering applications.

The book has been designed according to the new AICTE syllabus and will cater to the needs of engineering students across all branches. The book provides the basis which is necessary for dealing with different types of physicochemical phenomena. Great care has been taken to explain the physical meaning of mathematical formulae, when and where they are required, followed by lucid development and discussion of experimental behaviour of systems. Every chapter has a set of solved problems and exercises. The idea is to instil sound understanding of the fundamental principles and

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applications of the subject. The author is known for explaining the concepts of Engineering Chemistry with full clarity, leaving no ambiguity in the minds of the readers. Although this book is primarily intended for BTech/BE students, it will also cater to the requirements of those pursuing BSc and MSc, including those of other disciplines like materials science and environmental science.

For reasons both financial and environmental, there is a perpetual need to optimize the design and operating conditions of industrial process systems in order to improve their performance, energy efficiency, profitability, safety and reliability. However, with most chemical

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engineering application problems having many variables with complex inter-relationships, meeting these optimization objectives can be challenging. This is where Multi-Objective Optimization (MOO) is useful to find the optimal trade-offs among two or more conflicting objectives. This book provides an overview of the recent developments and applications of MOO for modeling, design and operation of chemical, petrochemical, pharmaceutical, energy and related processes. It then covers important theoretical and computational developments as well as specific applications such as metabolic reaction networks, chromatographic systems, CO₂ emissions targeting

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for petroleum refining units, ecodesign of chemical processes, ethanol purification and cumene process design. Multi-Objective Optimization in Chemical Engineering: Developments and Applications is an invaluable resource for researchers and graduate students in chemical engineering as well as industrial practitioners and engineers involved in process design, modeling and optimization. Chemistry-I (As per AICTE)

"Advanced Engineering Mathematics" is written for the students of all engineering disciplines. Topics such as Partial Differentiation, Differential Equations, Complex Numbers, Statistics,

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Probability, Fuzzy Sets and Linear Programming which are an important part of all major universities have been well-explained. Filled with examples and in-text exercises, the book successfully helps the student to practice and retain the understanding of otherwise difficult concepts.

Explore the roles aeration can play in the production, stability, and consumer experience of foods Aeration is an increasingly prevalent part of food manufacturing, bringing a light texture, enhanced appearance, and richer flavors to a wide range of products. Essential

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to the creation of everything from ice cream and popcorn to cheese and beer, the incorporation of fine air bubbles into the foods we consume can also boost satiety and thus reduce calorific intake. Aerated Foods examines this process in detail, offering a complete overview of all aspects of aeration. With sections that address the effects of aeration upon product structure and stability, this informative book explains how food formulation influences the shelf life, texture, and overall experience of different foods. Chapters also outline the various

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methods by which aeration can be achieved, breaking down the science and technology involved in the incorporation of air Details the mechanisms and overall results of aeration as a method of food processing Covers innovative and experimental aeration techniques Looks at the role of aeration in baking Aerated Foods provides food scientists, researchers, and product developers with an invaluable guide to this multifaceted and fast-growing method of food production.

A Txtbook of Engineering Physics is written with two distinct objectives:to

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provided a single source of information for engineering undergraduates of different specializations and provided them a solid base in physics. Successive editions of the book incorporated topic as required by students pursuing their studies in various universities. In this new edition the contents are fine-tuned, modernized and updated at various stages.