Environmental Science Engineering By Benny Joseph

This book is intended to meet the syllabus requirement of the Environmental Science and Engineering paper that is offered to undergraduate students of all branches of engineering, in all colleges affiliated to the Anna University.
Fundamentals of Environmental and Toxicological Chemistry: Sustainable Science, Fourth Edition covers university-level environmental chemistry, with toxicological chemistry integrated throughout the book. This new edition of a bestseller provides an updated text with an increased emphasis on sustainability and green chemistry. It is organized based on the five spheres of Earth's environment: (1) the hydrosphere (water), (2) the atmosphere (air), (3) the geosphere (solid Earth), (4) the biosphere (life), and (5) the anthrosphere (the part of the environment made and used by humans). The first chapter defines environmental chemistry and each of the five environmental spheres. The second chapter presents the basics of toxicological chemistry and its relationship to environmental chemistry. Subsequent chapters are grouped by sphere, beginning with the hydrosphere and its environmental chemistry, water pollution, sustainability, and water as nature's most renewable resource. Chapters then describe the atmosphere, its structure and importance for protecting life on Earth, air pollutants, and the sustainability of atmospheric quality. The author explains the nature of the geosphere and discusses soil for growing food as well as geosphere sustainability. He also describes the biosphere and its sustainability. The final sphere described is the anthrosphere. The text explains human influence on the environment, including climate, pollution in and by the anthrosphere, and means of sustaining this sphere. It also discusses renewable, nonpolluting energy and introduces workplace monitoring. For readers needing additional basic chemistry background, the book includes two chapters on general chemistry and organic chemistry. This updated edition includes three new chapters, new examples and figures, and many new homework problems.
This book has been designed in such a way that it will develop interest among students and will sensitize them about environment, natural resources and conservation of nature. This book is as per UGC guideline with inputs from various government and non-government environmental institutes.
This book presents endeavors to join synergies in order to create added value for society, using the latest scientific knowledge to boost technology transfer from academia to industry. It potentiates the foundations for the creation of knowledge- and entrepreneurial cooperation networks involving engineering, innovation, and entrepreneurship stakeholders. The Regional HELIX 2018 conference was organized at the University of Minho's School of Engineering by the MEtRICs and Algoritmi Research Centers, and took place in Guimarães, Portugal, from June 27th to 29th, 2018. After a rigorous peer-review process, 160 were accepted for publication, covering a wide range of topics, including Control, Automation and Robotics; Mechatronics Design, Medical Devices and Wellbeing;

Cyber-Physical Systems, IoT and Industry 4.0; Innovations in Industrial Context and Advanced Manufacturing; New Trends in Mechanical Systems Development; Advanced Materials and Innovative Applications; Waste to Energy and Sustainable Environment; Operational Research and Industrial Mathematics; Innovation and Collaborative Arrangements; Entrepreneurship and Internationalization; and Oriented Education for Innovation, Engineering and/or Entrepreneurship.

The book provides insight into the working of clays and clay minerals in speeding up a variety of organic reactions. Clay minerals are known to have a large propensity for taking up organic molecules and can catalyse numerous organic reactions due to fine particle size, extensive surface area, layer structure, and peculiar charge characteristics. They can be used as heterogeneous catalysts and catalyst carriers of organic reactions because they are non-corrosive, easy to separate from the reaction mixture, and reusable. Clays and clay minerals have an advantage over other solid acids as they are abundant, inexpensive, and non-polluting.

Red Snapper Lutjanus campechanus, is an important commercial and recreational fish species and there has been much interest in maintaining its status among a variety of scientific, social and economic levels. Stocks are influenced by varying environmental conditions, changing fishing effort and efficiency, anthropogenic effects, inter- and intraspecific interactions, bycatch from other fisheries, and habitat alterations. Red Snapper Biology in a Changing World explores these changing factors and their potential effects on Red Snapper in the Eastern Atlantic region including the Gulf of Mexico and Southeastern U.S. The book will provide a better understanding of Red Snapper population fluctuations that will subsequently allow for better management decisions and more informed user groups in their efforts to maintain a sustainable fishery. It explores the responses Red Snapper have made, and are making, relative to their life history attributes such as early life history and adult ecology, especially attributes associated with population distribution and abundance, movement patterns, fish health issues and management success. A compendium of many papers presented at the 147th annual meeting of the American Fisheries Society in Tampa, Florida, this volume also includes additional research completed as a result of the symposium. It will be essential reading for fisheries scientists and managers, ichthyologists, resource and environmental managers, and policymakers who are involved with coastal fisheries.

The Importance Of Environmental Studies Cannot Be Disputed Since The Need For Sustainable Development Is A Key To The Future Of Mankind. Recognising This, The Honourable Supreme Court Of India Directed The Ugc To Introduce A Basic Course On Environmental Education For Undergraduate Courses In All Disciplines, To Be Implemented By Every University In The Country. Accordingly, The Ugc Constituted An Expert Committee To Formulate A Six-Month Core Module Syllabus For Environmental Studies. This Textbook Is The Outcome Of

The Ugc S Efforts And Has Been Prepared As Per The Syllabus. It Is Designed To Bring About An Awareness On A Variety Of Environmental Concerns. It Attempts To Create A Pro-Environmental Attitude And A Behavioural Pattern In Society That Is Based On Creating Sustainable Lifestyles And A New Ethic Towards Conservation. This Textbook Stresses On A Balanced View Of Issues That Affect Our Daily Lives. These Issues Are Related To The Conflict Between Existing `Development Strategies And The Need For `Conservation . It Not Only Makes The Student Better Informed On These Concerns, But Is Expected To Lead The Student Towards Positive Action To Improve The Environment. Based On A Multidisciplinary Approach That Brings About An Appreciation Of The Natural World And Human Impact On Its Integrity, This Textbook Seeks Practical Answers To Make Human Civilization Sustainable On The Earth S Finite Resources. Attractively Priced At Rupees One Hundred And Fifteen Only, This Textbook Covers The Syllabus As Structured By The Ugc, Divided Into 8 Units And 50 Lectures. The First 7 Units, Which Cover 45 Lectures Are Classroom Teaching-Based, And Enhance Knowledge Skills And Attitude To Environment. Unit 8 Is Based On Field Activities To Be Covered In 5 Lecture Hours And Would Provide Students With First Hand Knowledge On Various Local Environmental Issues.

Locally computable (NC0) functions are "simple" functions for which every bit of the output can be computed by reading a small number of bits of their input. The study of locally computable cryptography attempts to construct cryptographic functions that achieve this strong notion of simplicity and simultaneously provide a high level of security. Such constructions are highly parallelizable and they can be realized by Boolean circuits of constant depth. This book establishes, for the first time, the possibility of local implementations for many basic cryptographic primitives such as one-way functions, pseudorandom generators, encryption schemes and digital signatures. It also extends these results to other stronger notions of locality, and addresses a wide variety of fundamental questions about local cryptography. The author's related thesis was honorably mentioned (runner-up) for the ACM Dissertation Award in 2007, and this book includes some expanded sections and proofs, and notes on recent developments. The book assumes only a minimal background in computational complexity and cryptography and is therefore suitable for graduate students or researchers in related areas who are interested in parallel cryptography. It also introduces general techniques and tools which are likely to interest experts in the area.

Adopting a lucid approach, the book aims to develop an appreciation of the seriousness of the environmental crisis at the local and global levels. The text discusses the major environmental problems we face today: global warming, overexploitation of natural resources, degraded land, disappearing forests, endangered species, rising pollution, growing population, and dangerous toxins, among others. The book illustrates various problems, solutions, successes, and failures with numerous Indian and global examples. Written in a student-friendly manner, the text is enriched with a number of photographs and illustrations.

The New Imperatives of Educational Change is a clarion call to move beyond the standardized

testing and marketplace competition that have become pervasive in school systems to focus instead on creating the conditions that will encourage all students to become critical and independent thinkers. Dennis Shirley presents five new imperatives to guide educators and policymakers towards a re-thinking of what it means to teach effectively and to learn in depth. The evidentiary imperative requires educators to attain a better grasp of what data actually reveal about international trends in student learning. The interpretive imperative encourages mindful deliberation before acting on evidence in order to promote the integrity of a school community. The professional imperative describes new international research findings on promising pedagogies and curricula that propel learning in new directions. The global imperative argues that we all must look beyond our national boundaries to improve the flourishing of all young people, wherever they may be found. Finally, the existential imperative reminds us that students look to their teachers as role models who can dignify learning with meaning and embellish life with joy. Visionary in its scope and practical in its details, The New Imperatives of Educational Change is an indispensable road map for all teachers, principals, and system leaders.

Separation science plays a critical role in maintaining our standard of living and quality of life. Many industrial processes and general necessities such as chemicals, medicines, clean water, safe food, and energy sources rely on chemical separations. However, the process of chemical separations is often overlooked during product development and this has led to inefficiency, unnecessary waste, and lack of consensus among chemists and engineers. A reevaluation of system design, establishment of standards, and an increased focus on the advancement of separation science are imperative in supporting increased efficiency, continued U.S. manufacturing competitiveness, and public welfare. A Research Agenda for Transforming Separation Science explores developments in the industry since the 1987 National Academies report, Separation and Purification: Critical Needs and Opportunities. Many needs stated in the original report remain today, in addition to a variety of new challenges due to improved detection limits, advances in medicine, and a recent emphasis on sustainability and environmental stewardship. This report examines emerging chemical separation technologies, relevant developments in intersecting disciplines, and gaps in existing research, and provides recommendations for the application of improved separation science technologies and processes. This research serves as a foundation for transforming separation science, which could reduce global energy use, improve human and environmental health, and advance more efficient practices in various industries.

Computers are ubiquitous throughout all life-cycle stages ofengineering, from conceptual design to manufacturing maintenance,repair and replacement. It is essential for all engineers tobe aware of the knowledge behind computer-based tools andtechniques they are likely to encounter. The computationaltechnology, which allows engineers to carry out design, modelling,visualisation, manufacturing, construction and management ofproducts and infrastructure is known as Computer-Aided Engineering(CAE). Engineering Informatics: Fundamentals of Computer-AidedEngineering, 2nd Edition provides the foundation knowledge ofcomputing that is essential for all engineers. This knowledge isindependent of hardware and software characteristics and thus, itis expected to remain valid throughout an engineering career. ThisSecond Edition is enhanced with treatment of new areas such asnetwork science and the computational complexity of distributedsystems. Key features: Provides extensive coverage of almost all aspects ofComputer-Aided Engineering, outlining general concepts such asfundamental logic, definition of engineering tasks andcomputational complexity Every chapter revised and expanded following more than tenyears of experience teaching courses on the basis of the firstedition Covers numerous representation frameworks and reasoningstrategies Considers the benefits of increased computational power,parallel computing and cloud computing Offers many practical engineering examples and exercises,

withlecture notes available for many of the topics/chapters from theASCE Technical Council on Computing and Information Technology,Global Centre of Excellence in Computing(www.asceglobalcenter.org), providing a valuable resource forlecturers. Accompanied by a website hosting updates and solutions Engineering Informatics: Fundamentals of Computer-AidedEngineering, 2nd Edition provides essential knowledge oncomputing theory in engineering contexts for students, researchersand practising engineers.
The rapid development of video technology in the last decade has changed the ways in which people communicate, how they learn, and how research is done. Video technology offers rich potential in capturing complex social interactions over a prolonged period of time and in supporting teacher professional learning and development. This book explores the ontological, epistemological, methodological, and ethical challenges associated with the different uses of video in research, ranging from video as a tool for investigating social interactions and for stimulating participants' reflection, to the use of video for engaging varied communities and social groups in the process of teaching, learning and research. Each chapter presents the authors' critical reflection on the ways in which video was employed, the research decisions made, the methodological challenges faced, and the consequences for how educational practices were understood. As such, it illustrates a wide range of philosophical and theoretical standpoints with respect to video-based research approaches. This book will stimulate broad and rich discussion among education researchers who are interested in video research and contributes to: advancing knowledge of the field; developing approaches to dealing with emergent ethical, theoretical, and methodological issues; and generating new protocols and guidelines for conducting video-based research across a variety of disciplinary areas in education.
Knowledge of the basic interactions that take place between geological materials and different substances is the first step in understanding the effects of adsorption and other interfacial processes on the quality of rocks and soils, and on driving these processes towards a beneficial or neutral result. Interfacial Chemistry of Rocks and Soils examines the different processes at solid and liquid interfaces of soil and rock, presenting a complete analysis that emphasizes the importance of chemical species on these interactions. Summarizing the results and knowledge of the authors' research in this field over several decades, this volume: Explores the individual components of the studied systems: the solid, the solution, and the interface Discusses the characteristics and thermodynamics of the interface Illustrates the kinetic aspects of interfacial reactions Examines interfacial processes in a montmorillonite model system Demonstrates transformations initiated by interfacial processes Studies interfacial processes of real rock and soil solution systems Outlines avenues of treatment that may solve geological, soil science, and environmental problems Profiles the most important analytical methods in the study of interfacial processes Previous books in this area typically focus on selected aspects of the subject, such as the properties of the solid phase, or the interactions of selected substances with soil/rock. This book comprehensively treats the soil-liquid-interface system. Drawn chiefly from the authors' years of research at the Isotope Laboratory in the Department of Colloid and Environmental Chemistry at the University of Debrecen in Hungary, this book discusses chemical reactions on the surfaces/interfaces of soils and rocks; examines the role of these processes in environmental, colloid and geochemistry; and explores the effects on agricultural, environmental and industrial applications.
This book comprises the proceedings of the International Conference on Green Buildings and Sustainable Engineering (GBSE 2019), which focused on the theme "Ecotechnological and Digital Solutions for Smart Cities". The papers included address all aspects of green buildings and sustainability practices in civil engineering, and focus on ways and means of reducing pollution and degradation of the environment through efficient usage of energy and water. The

book will prove a valuable reference resource for researchers, practitioners, and policy makers. The Most Authentic Source Of Information On Higher Education In India The Handbook Of Universities, Deemed Universities, Colleges, Private Universities And Prominent Educational & Research Institutions Provides Much Needed Information On Degree And Diploma Awarding Universities And Institutions Of National Importance That Impart General, Technical And Professional Education In India. Although Another Directory Of Similar Nature Is Available In The Market, The Distinct Feature Of The Present Handbook, That Makes It One Of Its Kind, Is That It Also Includes Entries And Details Of The Private Universities Functioning Across The Country.In This Handbook, The Universities Have Been Listed In An Alphabetical Order. This Facilitates Easy Location Of Their Names. In Addition To The Brief History Of These Universities, The Present Handbook Provides The Names Of Their Vice-Chancellor, Professors And Readers As Well As Their Faculties And Departments. It Also Acquaints The Readers With The Various Courses Of Studies Offered By Each University.It Is Hoped That The Handbook In Its Present Form, Will Prove Immensely Helpful To The Aspiring Students In Choosing The Best Educational Institution For Their Career Enhancement. In Addition, It Will Also Prove Very Useful For The Publishers In Mailing Their Publicity Materials. Even The Suppliers Of Equipment And Services Required By These Educational Institutions Will Find It Highly Valuable.

The dramatic real life stories of four young people caught up in the mass exodus of Shanghai in the wake of China's 1949 Communist revolution--a heartrending precursor to the struggles faced by emigrants today. "A true page-turner . . . [Helen] Zia has proven once again that history is something that happens to real people."--New York Times bestselling author Lisa See NAMED ONE OF THE BEST BOOKS OF THE YEAR BY NPR AND THE CHRISTIAN SCIENCE MONITOR - LONGLISTED FOR THE PEN/JACQUELINE BOGRAD WELD AWARD FOR BIOGRAPHY Shanghai has historically been China's jewel, its richest, most modern and westernized city. The bustling metropolis was home to sophisticated intellectuals, entrepreneurs, and a thriving middle class when Mao's proletarian revolution emerged victorious from the long civil war. Terrified of the horrors the Communists would wreak upon their lives, citizens of Shanghai who could afford to fled in every direction. Seventy years later, members of the last generation to fully recall this massive exodus have revealed their stories to Chinese American journalist Helen Zia, who interviewed hundreds of exiles about their journey through one of the most tumultuous events of the twentieth century. From these moving accounts, Zia weaves together the stories of four young Shanghai residents who wrestled with the decision to abandon everything for an uncertain life as refugees in Hong Kong, Taiwan, and the United States. Benny, who as a teenager became the unwilling heir to his father's dark wartime legacy, must decide either to escape to Hong Kong or navigate the intricacies of a newly Communist China. The resolute Annuo, forced to flee her home with her father, a defeated Nationalist official, becomes an unwelcome exile in Taiwan. The financially strapped Ho fights deportation from the U.S. in order to continue his studies while his family struggles at home. And Bing, given away by her poor parents, faces the prospect of a new life among strangers in America. The lives of these men and women are marvelously portrayed, revealing the dignity and triumph of personal survival. Herself the daughter of immigrants from China, Zia is uniquely equipped to explain how crises like the Shanghai transition affect children and their families, students and their futures, and, ultimately, the way we see ourselves and those around us. Last Boat Out of Shanghai brings a poignant personal

angle to the experiences of refugees then and, by extension, today. "Zia's portraits are compassionate and heartbreaking, and they are, ultimately, the universal story of many families who leave their homeland as refugees and find less-than-welcoming circumstances on the other side."--Amy Tan, author of The Joy Luck Club

This book is the essential guide to the pedagogical and industry-inspired considerations that must shape how BIM is taught and learned. It will help academics and professional educators to develop programmes that meet the competences required by professional bodies and prepare both graduates and existing practitioners to advance the industry towards higher efficiency and quality. To date, systematic efforts to integrate pedagogical considerations into the way BIM is learned and taught remain non-existent. This book lays the foundation for forming a benchmark around which such an effort is made. It offers principles, best practices, and expected outcomes necessary to BIM curriculum and teaching development for construction-related programs across universities and professional training programmes. The aim of the book is to: Highlight BIM skill requirements, threshold concepts, and dimensions for practice; Showcase and introduce tried-and-tested practices and lessons learned in developing BIM-related curricula from leading educators; Recognise and introduce the baseline requirements for BIM education from a pedagogical perspective; Explore the challenges, as well as remedial solutions, pertaining to BIM education at tertiary education; Form a comprehensive point of reference, covering the essential concepts of BIM, for students; Promote and integrate pedagogical consideration into BIM education. This book is essential reading for anyone involved in BIM education, digital construction, architecture, and engineering, and for professionals looking for guidance on what the industry expects when it comes to BIM competency.

Accounting irregularities are at the heart of those kinds of frauds that hit financial statements and include misstatement, misclassification as well as misrepresentation. In essence, they involve manipulation of accounting data, description or disclosure in order to distort the true financial picture of the organization in question. This book provides an in-depth practical reference, designed for litigators, investigators, auditors, accountants and other professionals who need to understand and combat accounting irregularities and to uphold the integrity of financial statements. Regulators will find this book an essential source of ideas and references when considering reforms. Educators and students will see this book as an alternative, inspiring way of understanding accounting and how to stay alert for accounting irregularities. The first two chapters introduce the basics of accounting irregularities in the context of the financial reporting environments, and generally accepted accounting principles in the UK and Hong Kong. Perpetrators often seek ways to creating financial illusions in four common directions - selling more, costing less, owning more and owing less as discussed in Chapters 3 to 6. The seventh chapter considers various ways that perpetrators manipulate the classification and disclosure of financial statements. Chapter 8 explores three scenarios of accounting irregularities - tax evasion, theft and commercial dispute. The concluding chapter sets out the deterrents to accounting irregularities in two dimensions. At the micro-level, deterrents are implemented within the authority of the organization in question, whilst the macro-level deterrents refer to the external environment beyond the controls of any individual organization.

Oceanography and Marine Biology: An Annual Review remains one of the most cited

sources in marine science and oceanography. The ever-increasing interest in work in oceanography and marine biology and its relevance to global environmental issues, especially global climate change and its impacts, creates a demand for authoritative refereed reviews summarizing and synthesizing the results of recent research. For more than 50 years, OMBAR has been an essential reference for research workers and students in all fields of marine science. This volume considers such diverse topics as optimal design for ecosystem-level ocean observatories, the oceanography and ecology of Ningaloo, human pressures and the emergence of novel marine ecosystems and priority species to support the functional integrity of coral reefs. Six of the nine peer-reviewed contributions in Volume 58 are available to read Open Access via the links on the Routledge.com webpage. An international Editorial Board ensures global relevance and expert peer review, with editors from Australia, Canada, Hong Kong, Ireland, Singapore, South Africa and the United Kingdom. The series volumes find a place in the libraries of not only marine laboratories and oceanographic institutes, but also universities worldwide.

This book covers the fundamentals of environmental engineering and applications in water quality, air quality, and hazardous waste management. It begins by describing the fundamental principles that serve as the foundation of the entire field of environmental engineering. Readers are then systematically reintroduced to these fundamentals in a manner that is tailored to the needs of environmental engineers, and that is not too closely tied to any specific application.

Evolutionary Psychology and Digital Games: Digital Hunter-Gatherers is the first edited volume that systematically applies evolutionary psychology to the study of the use and effects of digital games. The book is divided into four parts: Theories and Methods Emotion and Morality Social Interaction Learning and Motivation These topics reflect the main areas of digital games research as well as some of the basic categories of psychological research. The book is meant as a resource for researchers and graduate students in psychology, anthropology, media studies and communication as well as video game designers who are interested in learning more about the evolutionary roots of player behaviors and experiences.

This book provides state of the art description of various approaches, techniques and some basic fundamentals of bioremediation to manage a variety of organic and inorganic wastes and pollutants present in our environment. A comprehensive overview of recent advances and new development in the field of bioremediation research are provided within relevant theoretical framework to improve our understanding for the cleaning up of polluted water and contaminated land. The book is easy to read and language can be readily comprehended by aspiring newcomer, students, researchers and anyone else interested in this field. Renowned scientists around the world working on the above topics have contributed chapters. In this edited book, we have addressed the scope of the inexpensive and energy neutral bioremediation technologies. The scope of the book extends to environmental/agricultural scientists, students, consultants, site owners, industrial stakeholders, regulators and policy makers.

In a time when threats against the maritime community have never been greater, Maritime Security: Protection of Marinas, Ports, Small Watercraft, Yachts, and Ships provides a single, comprehensive source of necessary information for understanding and preventing or reducing threats to the maritime community. The book defines what

comprises the maritime community, including marinas, ports, small watercraft, yachts, and ships. It focuses on the protection of these rather than the protection of cargo in the maritime supply chain, since with the protection of the infrastructural elements it follows that the cargo is secured. In identifying and discussing threats to security, the book includes natural threats such as storms as well as traditional criminal threats and piracy, with especially detailed examinations of terrorism and cybersecurity. It also introduces the US Coast Guard America's Waterway Watch program, describing the components of the program, its implementation throughout the maritime community, and its successes. By dealing with the security of all areas within the maritime community, Maritime Security is highly valuable to all members of the community, from the local boater to professionals charged with the protection of major ports and seagoing vessels. It gives you the skills to understand, identify, analyze, and address natural and man-made threats to localized or broad sections in the maritime community.

Environmental Studies3/eMcGraw-Hill Education

This volume comprises select peer reviewed papers presented at the international conference - Advanced Research and Innovations in Civil Engineering (ARICE 2019). It brings together a wide variety of innovative topics and current developments in various branches of civil engineering. Some of the major topics covered include structural engineering, water resources engineering, transportation engineering, geotechnical engineering, environmental engineering, and remote sensing. The book also looks at emerging topics such as green building technologies, zero-energy buildings, smart materials, and intelligent transportation systems. Given its contents, the book will prove useful to students, researchers, and professionals working in the field of civil engineering.

Designed as a text for all undergraduate students of engineering for their core course in Environmental Science and Engineering and for elective courses in environmental health engineering and pollution and control engineering for students of civil engineering, this comprehensive text, now in its Second Edition provides an in-depth analysis of the fundamental concepts. It also introduces the reader to different niche areas of environmental science and engineering. The book covers a wide array of topics, such as natural resources, disaster management, biodiversity, and various forms of pollution, viz. water pollution, air pollution, soil pollution, noise pollution, thermal pollution, and marine pollution, as well as environmental impact assessment and environmental protection. This edition introduces a new chapter on Environment and Human Health. KEY FEATURES : Gives in-depth yet lucid analysis of topics, making the book user-friendly. Covers important topics, which are adequately supported by illustrative diagrams. Provides case studies to explore real-life problems. Supplies review questions at the end of each chapter to drill the students in self-study.

This book is meant for undergraduate engineering students of Indian Universities undertaking the course on Environmental Studies. Maintaining a holistic approach throughout, the book offers easy and logical comprehension. Concepts are explained through a plethora of illustrations which will enable students to grasp the subject easily irrespective of their background at school level. Salient Features: - Pictorial representation of topics for easy retention and understanding - Comprises important environmental case studies - Inclusion of learning outcomes for focused reading - Excellent Pedagogy - Descriptive questions: 175 - Objective-type questions: 133 - Short answer questions: 115 - Glossary of technical terms frequently used in Environmental Science: 208

Realizing that water, energy and food are the three pillars to sustain the growth of human population in the future, this book deals with all the above aspects with particular emphasis on

water and energy. In particular, the book addresses applications of membrane science and technology for water and wastewater treatment, energy and environment. Th

The protection and security of cultural properties is of primary concern to the thousands of federal, state, county, city, and private institutions entrusted with housing and displaying our national heritage and history of our society. Cultural property security is of global importance as well, with tens of thousands of institutions internationally tasked with protecting and maintaining relics and artifacts of social, cultural, and historical significance. Cultural Property Security offers powerful protection guidelines to security departments tasked with safeguarding popular historical sites, museums, and libraries and the historical artifacts they house. Presenting practical, ready-to-implement solutions in a clear writing style, the book: Provides a working definition of cultural properties Identifies the threats against cultural properties from crime and terrorism, particularly in regions with political or civil unrest Offers guidance in threat assessment Identifies the physical security measures and technology that can be used to protect such institutions Presents guidelines for establishing a protective service department for cultural properties Describes proper arrest and post-arrest protocols Includes a list of online resources for further information related to the protection of cultural properties Complete with dozens of photos, the book establishes leading industry best practices to identify the various threats to cultural properties and protect them. Dr. Daniel J. Benny has more than 35 years of security management experience and has served as a Director of Protective Services for the state of Pennsylvania's Historic and Museum Commission. His insight is invaluable to those responsible for securing these institutions from internal and external threats.

Gas separation membranes offer a number of benefits over other separation technologies, and they play an increasingly important role in reducing the environmental impacts and costs of many industrial processes. This book describes recent and emerging results in membrane gas separation, including highlights of nanoscience and technology, novel polymeric and inorganic membrane materials, new membrane approaches to solve environmental problems e.g. greenhouse gases, aspects of membrane engineering, and recent achievements in industrial gas separation. It includes: Hyperbranched polyimides, amorphous glassy polymers and perfluorinated copolymers Nanocomposite (mixed matrix) membranes Polymeric magnetic membranes Sequestration of CO2 to reduce global warming Industrial applications of gas separation Developed from sessions of the most recent International Congress on Membranes and Membrane Processes, Membrane Gas Separation gives a snapshot of the current situation, and presents both fundamental results and applied achievements.

After 9/11, the initial focus from the U.S. government, media, and the public was on security at commercial airports and aboard commercial airlines. Soon, investigation revealed the hijackers had trained at flight schools operating out of general aviation airports, leading to a huge outcry by the media and within the government to mandate security regulations for this flight sector. General Aviation Security: Aircraft, Hangars, Fixed-Base Operations, Flight Schools, and Airports examines the threats against general aviation (GA) and presents resources for security professionals and GA airport owners and operators to develop an impenetrable airport and aircraft security plan. Following an overview of general aviation and its inherent security threats, the book explores: Physical security for the aviation environment, including intrusion detection systems, cameras, locks, lighting, and window security The security force, including recruitment and training Security of general aviation aircraft and airports, including runway security and fuel storage Airport safety regulations such as the Workers Protection Act and the Bloodborne Pathogens Act Emergency response to a range of scenarios, including medical emergencies, fires, gas leaks, and bomb threats The security of hangars, fixed-base operations, and flight schools Corporate aviation security departments The book concludes with a study involving the Aircraft Owners and Pilots Association (AOPA) Airport Watch Program and the Transportation Security Administration (TSA) security requirements and

recommendations for general aviation. General aviation supports public safety, business, agriculture, commercial airports, aeronautical education, and many aspects of the aviation industry. The book is the first to explore the unique security concerns relevant to general aviation operations. Dr. Daniel J. Benny was interviewed on video by General Aviation Security Magazine about his article concerning the effects of the Airport Watch Program.

Water and Wastewater Conveyance: Pumping, Hydraulics, Piping, and Valves provides fundamental, basic information on the conveyance of water and wastewater. Written in straight-forward and easy-to-understand language for professionals and non-professionals alike, it provides the techniques to assist water and wastewater operators to better understand basic pump operations and applications, maintenance regimens, and troubleshooting procedures. Addressing a multitude of water quality issues, it provides an introduction to water hydraulics, piping systems, tubes, hoses, and ancillaries as well as valves, and the maintenance requirements of each. It also discusses common operational problems and their appropriate corrective actions. Definitions of key terms and self-examination questions are provided at the end of each chapter.

This book is designed for students of GTU studying the course on Environmental Science. Maintaining a holistic approach throughout, the book offers easy and logical comprehension for understanding. Concepts are explained through a variety of illustrations which will enable the students to grasp the subject easily. Highlights: 1. Complete coverage of the new GTU syllabus 2. Pictorial representation of topics for easy retention and understanding 3. Variety of chapter-end questions for students to ace their examinations 4. Additional Solved Gujarat Technical University Examination Questions from previous year

Gender Futurity, Intersectional Autoethnography showcases a collection of narrative and autoethnographic research that unpacks the complexity of gender at its intersections, i.e. by ability, race, sexuality, religion, beauty, geography, spatiality, community, performance, politics, socio-economic status, education, and many other markers of difference. The book focuses on gender as it is lived, chaperoned, and chaperones other social identity categories. It tells stories that reveal problematic gender binaries, promising gender futures, and everything in between—they ask us to rethink what we assume to be true, real, and normal about gender identity and expression. Each essay, written by both gender variant and cisgender scholars, explores cultural phenomena that create space for us to re-imagine, re-think, and create new ways of being. This book will be useful for undergraduate, postgraduate, and professional degree students, particularly in the fields of gender studies, qualitative methods, and communication theory.

This is the time when legacy, pathogenic, and emerging contaminants must be talked about, understood, and dealt with together. While the geogenic contamination of the groundwater is a well-established phenomenon that is considered as legacy contaminants that risk people’s health globally, both pathogenic and emerging contaminants like various water-borne pathogens and pharmaceutical personal care products (PPCPs) are becoming imperative for their acute and chronic toxic effects. While contaminated groundwater consumption leads to skin pigmentation, hyperkeratosis, kidney damage, cardiovascular disease, and children’s overall development, poor sanitation-related pathogenic microorganisms cause a significant number of child and prenatal deaths. Simultaneously, antibiotic microbial resistance (AMR) is expected to kill 100 million people by 2050. However, there are rare texts that combine aspects of all these three under a single book cover. This book gives an understanding of the occurrence, fate, and transport of geogenic, microbial, and anthropogenic contaminants in the groundwater. It covers not only the scientific and technical aspects but also environmental, legal, and policy aspects for contaminant management in the environment under the paradigm shift of COVID-19. This book is intended to bring the focus on the natural contaminants—biotic or abiotic—in the post-COVID Anthropocene, which is illustrating a significant alteration of

systems and the subsequent downstream impacts owing to globalization. This book has compiled global work on emergence, mass flow, partitioning, and activation of geogenic, emerging, and pathogenic contaminants in various spheres of environment with special emphasis on soil, sediment, and aquatic systems for enhancing the understanding on their migration and evolution for the welfare of mankind.