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FINANCIAL MANAGEMENT CASE: A PRACTICAL GUIDE Dr. Priyanka Bobade 2021-06-08 In this book, Author discuss the whole case of Financial Management for the Nagpur Improvement Trust. Also given the Analytical discussion in this e-book

Natural Pharmaceuticals and Green Microbial Technology Debarshi Kar Mahapatra 2021-02-22 This volume presents some of the latest research and applications in using natural substances and processes for pharmaceutical products. It presents an in-depth examination of the chemical and biological properties of selected natural products that are either currently used or have the potential for useful applications in the chemical and pharmaceutical industries. It covers emerging technologies and case studies and is a source of up-to-date information on the topical subject of natural products and microbial technology. It provides an applied overview of the field, from traditional medicinal targets to cutting-edge molecular techniques. Natural products have always been of key importance to drug discovery, but as modern techniques and technologies have allowed researchers to identify, isolate, extract, and synthesize their active compounds in new ways, they are once again coming to the forefront of drug discovery.

Medicinal Chemistry with Pharmaceutical Product Development Debarshi Kar Mahapatra 2019-02-04 This volume focuses on novel therapeutics and strategies for the development of pharmaceutical products, keeping the drug molecule as the central component. It discusses current theoretical and practical aspects of pharmaceuticals for the discovery and development of novel therapeutics for health problems. Explaining the necessary features essential for pharmacological activity, it takes an interdisciplinary approach by including a unique combination of pharmacy, chemistry, and medicine along with clinical aspects. It takes into consideration the therapeutic regulations of the USP along with all the latest therapeutic guidelines put forward by WHO, and the US Food and Drug Administration.

Mathematical Modeling and Simulation P.N. Belkhode 2021-08-16 This book explains the concept of man-machine systems by using the mining industry. The goal is to use a mathematical model based approach to improve the quality of human life of the workers and operators with the enhancement of productivity by controlling the process variables. The book will illustrate the formulation of mathematical modelling for manual operations. It will provide details in the investigation of many machine systems through the case study approach and provide data analysis using the concept of mathematical modelling and sensitivity. It presents how to solve a field problem through a field data-

based modelling concept and highlights the collection of anthropometry data and its behavior. The book will be useful for researchers, academic libraries, professionals, post graduate students of Industrial, Mechanical, and Manufacturing Engineering programs.

Assistive Technologies for Differently Abled Students Dhamdhere, Sangeeta 2022-04-22 In higher education systems, equal importance must be given to differently abled students. However, not all educational institutions have infrastructure and facilities to admit these students even though accessibility and support for these students is growing. There are many schemes, facilities, services, and financial assistance available to these students along with new assistive technologies that are making teaching and learning processes more effective. While using new technologies in education systems such as e-learning and blended learning, these students need special attention as well as some advanced training and additional features in the technology itself that better help them become familiar with it. Understanding the demands and requirements of differently abled students is the best way to provide them with quality education. *Assistive Technologies for Differently Abled Students* explores how to implement effective assistive technologies and other related services for providing differently abled students an education that is high quality and equal to their peers, enabling them to go on and excel in their field and obtain employment. Topics that are highlighted within this book include an overview for the different types of diverse assistive technologies for all types of students including students with visual impairments, learning disabilities, physical challenges, and more. This book is ideal for school administrators, researchers of higher educational institutes, non-governmental organizations, assistive technology experts, IT professionals, social workers, inservice and preservice teachers, teacher educators, practitioners, researchers, academicians, and students looking for information on the types of assistive technologies being employed in education for all types of differently abled students.

Applied Physics Semester-I (RTM) Nagpur University M N Avadhanulu, Dr. Shilpa A. Pande, Dr. Arti R. Golhar & Dr. Mohar Giriya "Applied Physics" is written exclusively for B. Tech. First semester students of various branches as per the revised syllabus of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur (RTMNU, Nagpur). It includes important topics such as Interference of Light, Diffraction, Compton Effect, de-Broglie's Hypothesis, Heisenberg Uncertainty Principle, Space and Cubic Lattice, Dispersion, Motion of Electron in Uniform Electric Field and Magnetic Field that help the student in learning the principles of Physics more

Photophysics and Nanophysics in Therapeutics Nilesh M. Mahajan 2022-05-13 *Photophysics and Nanophysics in Therapeutics* explores the latest advances and applications of phototherapy and nanotherapy, covering the application of light, radiation, and nanotechnology in therapeutics, along with the fundamental principles of physics in these areas. Consisting of two parts, the book first features a range of chapters covering phototherapeutics, from the fundamentals of photodynamic therapy (PDT) to applications such as cancer treatment and advances in radiotherapy, applied physics in cancer radiotherapy treatment, and the role of carbon ion beam therapy. Other sections cover nanotherapeutics, potential applications and challenges, and nanotherapy for drug delivery to the brain. Final chapters delve into nanotechnology in the diagnosis and treatment of cancers, the role of nanocarriers for HIV treatment, nanoparticles for rheumatoid arthritis treatment, peptide functionalized nanomaterials as microbial sensors, and theranostic nanoagents.

- Evaluates the latest developments in the fields of phototherapy and nanotherapy
- Investigates the fundamental physics behind these technologies
- Explores therapeutic applications across a range of diseases, such as skin disorders, cancer, and neurological conditions
- Includes case studies that illustrate research in practice

Considers challenges and future perspectives

Nanotechnological applications in virology Mahendra Rai 2022-07-08 Nanotechnological Applications in Virology explores the use of nanoparticles-based technologies to fight against viruses, also discussing the use of nanoparticles in the preparation of nano masks and as sanitizing agents. The role of nanotechnology against HIV, Hepatitis, Influenza, Herpes, Ebola and Zika using rapid detection and diagnostic techniques is included, as is a brief description of SARS, MERS, the novel Coronavirus, and recent advancements in its treatment process. Other sections cover the formulation of novel nano-vaccines for the treatment and control of viral infections like HIV, Hepatitis and COVID-19. Included toxicological studies of nanoparticles provide readers with a brief overview on global scenarios regarding viral infections. Nanotechnology is the present age technology, with wide usage in different areas of medical science, including drug delivery, gene therapy, antimicrobials, biosensors and bio-labelling. Nanoparticles play a competent role as an anti-infection agent and thus act as efficient antiviral agents. Mitochondria as a Key Intracellular Target of Thallium Toxicity presents a new hypothesis that explains the decrease in antioxidant defense in thallium poisoning. In addition, the book proposes a new model for studying the transport of inorganic cations across the inner mitochondrial membrane. Readers will learn about the toxicity of thallium and its compounds, the toxicology of thallium, the toxic thallium effects on cells, and the effects of thallium on mitochondria. This book+J136 lists the pathways and mechanisms of thallium transport into cells and mitochondria. This toxicity has been analyzed at both the cellular and subcellular levels. The increase in human contact with the toxic trace element thallium is associated with developments in industry, the release of this metal into the environment from various rocks, and the use of special isotope techniques for studying the vascular bed.

Novel Water Treatment and Separation Methods Bharat A. Bhanvase 2017-09-18 Due to increasing demand for potable and irrigation water, new scientific research is being conducted to deal with wastewater from a variety of sources. Novel Water Treatment and Separation Methods: Simulation of Chemical Processes presents a selection of research related to applications of chemical processes for wastewater treatment, separation techniques, and modeling and simulation of chemical processes. Among the many topics are: degradation of herbicide removal of anionic dye efficient sun-light driven photocatalysis removal of copper and iron using green activated carbon defluoridation of drinking water removal of calcium and magnesium from wastewater using ion exchange resins degradation of vegetable oil refinery wastewater novel separation techniques, including microwave-assisted extraction and more The volume presents selected examples in wastewater treatment, highlighting some recent examples of processes such as photocatalytic degradation, emulsion liquid membrane, novel photocatalyst for degradation of various pollutants, and adsorption of heavy metals. The book goes on to explore some novel separation techniques, such as microwave-assisted extraction, anhydrous ethanol through molecular sieve dehydration, batch extraction from leaves of *Syzygium cumini* (known as jambul, jambolan, jamblang or jamun), and reactive extraction. These novel separation techniques have proved be advantageous over conventional methods. The volume also looks at modeling and simulation of chemical processes, including chapters on flow characteristics of novel solid-liquid multistage circulating fluidized bed, mathematical modeling and simulation of gasketed plate heat exchangers, optimization of the adsorption capacity of prepared activated carbon, and modeling of ethanol/water separation by pervaporation, along with topics on simulation using CHEMCAD software. The diverse chapters share and encourage new ideas, methods, and applications in ongoing advances in this growing area of chemical engineering and technology. It will be a valuable resource for researchers and faculty and industrialists as well as for students.

Direct Nose-to-Brain Drug Delivery Chandrakantsing Pardeshi 2021-06-16 Direct Nose-to-Brain Drug Delivery provides the reader with precise knowledge about the strategies and approaches for enhanced

nose-to-brain drug delivery. It highlights the development of novel nanocarrier-based drug delivery systems for targeted drug delivery to the brain microenvironments with a focus on the technological advances in the development of the novel drug delivery devices for intranasal administration, including special emphasis on brain targeting through nose. This book explores the various quantification parameters to assess the brain targeting efficiency following intranasal administration and includes an overview on the toxicity aspects of the various materials used to develop the direct nose-to-brain drug delivery vehicles and of the regulatory aspects including patents and current clinical status of the potential neurotherapeutics for the effective management of neuro-ailments. Technological advances in new drug delivery systems with diverse applications in pharmaceutical, biomedical, biomaterials, and biotechnological fields are also explained. This book is a crucial source that will assist the veteran scientists, industrial technologists, and clinical research professionals to develop new drug delivery systems and novel drug administration devices for the treatment of neuro-ailments. Explains the targeting approaches for enhanced brain targeting following intranasal drug administration Explores the various nanocarriers developed to date for neurotherapeutic delivery via nose-to-brain Discusses pharmaceutical and biomedical applications after nose-to-brain delivery of therapeutic pharmaceuticals and biologicals

Handbook of Nanomaterials for Wastewater Treatment Bharat A. Bhanvase 2021-05-05 Handbook of Nanomaterials for Wastewater Treatment: Fundamentals and Scale up Issues provides coverage of the nanomaterials used for wastewater treatment, covering photocatalytic nanocomposite materials, nanomaterials used as adsorbents, water remediation processes, and their current status and challenges. The book explores the major applications of nanomaterials for effective catalysis and adsorption, also providing in-depth information on the properties and application of new advanced nanomaterials for wastewater treatment processes. This is an important reference source for researchers who need to solve basic and advanced problems relating to the use of nanomaterials for the development of wastewater treatment processes and technologies. As nanotechnology has the potential to substantially improve current water and wastewater treatment processes, the synthesis methods and physiochemical properties of nanomaterials and noble metal nanoparticles make their performance and mechanisms efficient for the treatment of various pollutants. Explains the properties of the most commonly used nanomaterials used for wastewater treatment Describes the major nanoscale synthesis and processing techniques for wastewater treatment Assesses the major challenges for using nanomaterials on a mass scale for wastewater treatment

Nanofluids and Their Engineering Applications K.R.V. Subramanian 2019-06-18 Nanofluids are solid-liquid composite material consisting of solid nanoparticles suspended in liquid with enhanced thermal properties. This book introduces basic fluid mechanics, conduction and convection in fluids, along with nanomaterials for nanofluids, property characterization, and outline applications of nanofluids in solar technology, machining and other special applications. Recent experiments on nanofluids have indicated significant increase in thermal conductivity compared with liquids without nanoparticles or larger particles, strong temperature dependence of thermal conductivity, and significant increase in critical heat flux in boiling heat transfer, all of which are covered in the book. Key Features Exclusive title focusing on niche engineering applications of nanofluids Contains high technical content especially in the areas of magnetic nanofluids and dilute oxide based nanofluids Feature examples from research applications such as solar technology and heat pipes Addresses heat transfer and thermodynamic features such as efficiency and work with mathematical rigor Focused in content with precise technical definitions and treatment

Library and Information Science Trends and Research Amanda Spink 2012-01-16 This book draws out

and examines the trends in education and research in the field of library and information science (LIS) in the vast Asia-Oceania region. Information is an important part of the human condition and critical to the development of the Asia-Oceania region. The book is timely, therefore, as the region continues to grow and develop.

Electrospun Nanofibers Ashok Vaseashta 2022-07-14 This book presents the development of electrospun materials, fundamental principles of electrospinning process, controlling parameters, electrospinning strategies, and electrospun nanofibrous structures with specific properties for applications in tissue engineering and regenerative medicine, textile, water treatment, sensor, and energy fields. This book can broadly be divided into three parts: the first comprises basic principles of electrospinning process, general requirements of electrospun materials and advancement in electrospinning technology, the second part describes the applications of electrospun materials in different fields and future prospects, while the third part describes applications that can be used in advanced manufacturing based on conjoining electrospinning and 3D printing. Electrospinning is the most successful process for producing functional nanofibers and nanofibrous membranes with superior chemical and physical properties. The unique properties of electrospun materials including high surface to volume ratio, flexibility, high mechanical strength, high porosity, and adjustable nanofiber and pore size distribution make them potential candidates in a wide range of applications in biomedical and engineering areas. Electrospinning is becoming more efficient and more specialized in order to produce particular fiber types with tunable diameter and morphology, tunable characteristics, having specific patterns and 3D structures. With a strong focus on fundamental materials science and engineering, this book provides systematic and comprehensive coverage of the recent developments and novel perspectives of electrospun materials. This comprehensive book includes chapters that discuss the latest and emerging applications of nanofiber technology in various fields, specifically in areas such as wearable textile, biomedical applications, energy generation and storage, water treatment and environmental remediation, and sensors such as biomarkers in healthcare and biomedical engineering. Despite all these advancements, there are still challenges to be addressed and overcome for nanofiber technology to move towards maturation.

Handbook of Nanomaterials for Industrial Applications Chaudhery Mustansar Hussain 2018-07-19 Handbook of Nanomaterials for Industrial Applications explores the use of novel nanomaterials in the industrial arena. The book covers nanomaterials and the techniques that can play vital roles in many industrial procedures, such as increasing sensitivity, magnifying precision and improving production limits. In addition, the book stresses that these approaches tend to provide green, sustainable solutions for industrial developments. Finally, the legal, economical and toxicity aspects of nanomaterials are covered in detail, making this is a comprehensive, important resource for anyone wanting to learn more about how nanomaterials are changing the way we create products in modern industry. Demonstrates how cutting-edge developments in nanomaterials translate into real-world innovations in a range of industry sectors Explores how using nanomaterials can help engineers to create innovative consumer products Discusses the legal, economical and toxicity issues arising from the industrial applications of nanomaterials

Nanomedicine and Tissue Engineering Nandakumar Kalarikkal 2016-03-30 This book focuses on the recent advances in nanomedicine and tissue engineering. It outlines the basic tools and novel approaches that are becoming available in nanomedicine and tissue engineering and considers the full range of nanomedical applications which employ molecular nanotechnology inside the human body, from the perspective of a future practitioner in an era of widely available nanomedicine. Topics include: Health benefits of phytochemicals and application of superparamagnetic nanoparticles for hyperthermia

Silver nanoparticles in nanomedicine Optical diagnostic of molecules and cells using nanotechnology Nanoparticulate drug delivery system for antiviral drugs Liposomal drug delivery systems, nanoemulsifying drug delivery system (SNEDS) Functionalization of tissue engineering scaffolds Induction of angiogenesis in scaffolds Many other recent achievements Written by some of the most innovative minds in medicine and tissue engineering, this book considers the full range of nanomedical applications which employ molecular nanotechnology inside the human body and will help professionals understand cutting-edge and futuristic areas of nanomedicine and tissue engineering research. Readers will find insightful discussions on nanostructured intelligent materials and devices that are considered technically feasible and that have a high potential to produce advances in medicine in the near future.

Studies in Natural Products Chemistry 2016-06-20 Studies in Natural Products Chemistry, Volume 48, provides the latest on the use of natural products from the plant and animal kingdom and the ways in which they can offer a huge diversity of chemical structures, which are the result of biosynthetic processes that have been modulated over the millennia through genetic effects. With the rapid developments in spectroscopic techniques and accompanying advances in high-throughput screening techniques, it has become possible to isolate and then rapidly determine the structures and biological activity of natural products, thus opening up exciting opportunities in the field of new drug development. The series covers all aspects of the science, along with the synthesis, testing, and recording of the medicinal properties of natural products. With articles written by leading authorities in their respective fields of research, the book presents current frontiers and future guidelines for research based on important discoveries made in the field of bioactive natural products. It is a valuable resource for all those working in natural product and medicinal chemistry. Provides the latest on the use of natural products from the plant and animal kingdom and the ways in which they can offer a huge diversity of chemical structures Focuses on the chemistry of bioactive natural products and their exciting new applications in the pharmaceutical industry Presents current frontiers and future guidelines for research based on important discoveries made in the field of bioactive natural products Contains contributions by leading authorities in the field

Engineering Mechanics 2015

Novel Applications in Polymers and Waste Management Badal Jageshwar Prasad Dewangan 2018-01-19 This book focuses on exciting new research in polymer science. The first section of the book deals with new advancements in polymer technology, which includes polymers that are responsible for progress in the field of energy, electronics, and medical sciences. It focuses on the most promising polymer nanocomposites and nanomaterials. Composites are becoming more important because they can help to improve quality of life. The second section of the book highlights this aspect of macromolecules, while the third section emphasizes biopolymers, their development, and applications.

Biochemistry, Biophysics, and Molecular Chemistry Francisco Torrens 2020-04-13 Biochemistry, Biophysics, and Molecular Chemistry: Applied Research and Interactions provides the background needed in biophysics and molecular chemistry and offers a great deal of advanced biophysical knowledge. It emphasizes the growing interrelatedness of molecular chemistry and biochemistry, and acquaints one with experimental methods of both disciplines. This book addresses some of the enormous advances in biochemistry, particularly in the areas of structural biology and bioinformatics, by providing a solid biochemical foundation that is rooted in chemistry. Topics include scientific integrity and ethics in the field; clinical translational research in cancer, diabetes, and cardiovascular disease; emerging drugs to treat neurodegenerative diseases; swine, avian, and human flu; the use of big data in artificial knowledge in the field; bioinformatic insights on molecular chemistry; and much

more.

Natural Products Pharmacology and Phytochemicals for Health Care Debarshi Kar Mahapatra 2021-02-22 Medicinal chemistry and pharmacology are closely associated fields, and the use of natural products for their medicinal properties is ever-growing. The study of drugs from natural products and their effects on the living body are explored in this volume. The book looks into the research, discovery, and characterization of chemicals that exhibit biological effects. Providing an informative compilation of research, valuable case studies, and reviews of existing literature in the area, the book focuses on the ethnobotanical uses of natural products and phytochemicals for health care, including applications for diabetes, ulcers, wound healing, chronic alcoholism, hemorrhoidal treatment, cancer mitigation, pain management, immunotherapy, and more.

Natural Products Chemistry Tatiana G. Volova 2020-11-16 Natural Products Chemistry: Biomedical and Pharmaceutical Phytochemistry focuses on the development of biochemical, biomedical and their applications. It highlights the importance of accomplishing an integration of engineering with biology and medicine to understand and manage the scientific, industrial, and clinical aspects. It also explains both the basic science and the applications of biotechnology-derived pharmaceuticals, with special emphasis on their clinical use. The biological background provided enables readers to comprehend the major problems in biochemical engineering and formulate effective solutions. This title also expands upon current concepts with the latest research and applications, providing both the breadth and depth researchers need. The book also introduces the topic of natural products chemistry with an overview of key concepts. This book is aimed at professionals from industry, academicians engaged in chemical science or natural product chemistry research, and graduate-level students.

Nutraceutical Delivery Systems Pankaj V. Dangre 2022-08-18 This book highlights recent innovative work in nutraceutical delivery systems, focusing on strategies and approaches for delivering maximum health benefits from foods. It presents recent research-oriented work from diverse global perspectives on isolation techniques for nutraceutical components, phytosomes, liposomes, solid dispersions, micelles, self-emulsifying drug delivery systems, microemulsions, solid lipid nanoparticles, polyelectrolyte complexes, oral delivery, polymeric nanoparticles, and more. The book begins with an overview of recent facts and diverse perspectives on the use of nutraceuticals in medicine and proceeds to discuss recent techniques in isolation of nutraceuticals from plants and in solubility enhancement. It looks at innovations and advances in nanoparticles-based nutraceutical delivery, such as in solid lipid nanoparticles (SLNs), fabrication methods of therapeutic nanoparticles, and polymeric nanoparticles-based nutraceutical delivery system. It also discusses vesicular delivery systems and biphasic systems for nutraceutical applications. The book also looks at the challenges in oral delivery and the latest taste-masking techniques.

Micro- and Nanoengineered Gum-Based Biomaterials for Drug Delivery and Biomedical Applications Sougata Jana 2022-02-01 Micro- and Nanoengineered Gum-Based Biomaterials for Drug Delivery and Biomedical Applications focuses on micro- and nanotechnology in gums and biopolymers as drug and biomolecule carriers and their applications in biomedicine. Currently, natural gums and polymers are widely utilized as biocarrier systems, to deliver drugs and biomolecules to the target site, for prolonged release and the desired therapeutic effect. Natural gums and polymers are important because they are easily available from natural sources and are characteristically biodegradable, biocompatible, and nontoxic. Natural gums and polymers are also chemically modified with other polymers, in the presence of cross-linking agents, to develop scaffolds, matrices, composites, and interpenetrating polymer networks using micro- and nanotechnology. The book also discusses biological applications, such as

gene delivery, cancer therapy, tissue engineering, bioimaging, and theranostics. This book is an important reference source for biomaterials scientists, biomedical engineers, and pharmaceutical scientists, who are looking to increase their understanding of how micro- and nanoengineered biomaterials are being used to create more efficient gum-based drug delivery systems. Explains how micro- and nanoengineering is being used to make a variety of gum types more effective as nanocarriers. Explores the major biomedical applications of various gum classes. Assesses the major challenges of using micro- and nanotechnologies in gum-based biomedical systems.

Seven Social Sins J.S. Rajput 2012-11-10 This book has been prepared with great expectations. The relevance of dynamism in Gandhian thought, percept and vision could guide the concerned citizens and policy makers in the search for solutions. Each of the seven sins identified gets organically linked to the remaining six. Hopefully, it would provide sparks for further study and analysis of how the ideology of progress that India deserves could evolve, taking the best from outside but retaining the flavour of the indigenous thought and wisdom. Indian democracy, with all its lacunae and inadequacies, has certainly made aware a large chunk of its citizens of their responsibilities and duties. The young are now alert to their own role that the country expects them to perform. The idealism of the youth, strengthened with inputs from Gandhian thought and approach, could be sustained on a strong base of value development strategies. An emerging knowledge society must derive strength from its existing cognitive capital and its analysis and contemporary relevance could always bring in substantial additions and advancements. Those, to whom this volume could reach, may be better prepared to contribute effectively to the cause of the nation building.

Mathematics - I Semester-I (RTM) Nagpur University H K Dass, Rajnish Verma, Dr. Rama Verma, Dr. Vinod J. Dagwal, Dr. Sajid Anwar & Dr. Damodhar F. Shastrakar "Mathematics - I" is as per the latest prescribed Syllabus RTMNU Nagpur with a major focus on Differential and Multivariable Calculus, Matrices, First Order and Higher Order Ordinary Differential Equations. The text is lucid and brimming with examples for further ease of students. The practice quotient is high as well so that the reader further understands the topics which have been deftly explained.

DISCOURSE ON HIGHER EDUCATION RESEARCH & TEACHING LEARNING Dr. Madhukar Nikam And Dr. Aarti Pawar ABOUT THE BOOK This effort made for the academic cause to have some solid resource in the form of book material for those who are seeking guidance and help in the area of higher education, research, teaching- learning and professional social work education. There are four chapters namely -Current scenario in higher education; Status of research; English for teaching and learning; Professional social work education. And different twenty eight sub-chapters have been given for the depth knowledge of the reader through this book. In this edition, we maintain the features that are most important to readers as well as adding new perspectives that keep the text current. It is hoped that the book titled, "DISCOURSE ON HIGHER EDUCATION RESEARCH & TEACHING LEARNING" based on theoretical knowledge would make modest contribution to bring quality study material for not only the students but academicians, researchers and practitioner also get benefited from this book.

NAC 2019 Ri-Ichi Murakami 2020-01-07 This book presents selected articles from the 2nd International Conference on Nanomaterials and Advanced Composites, which brings together leading researchers and professionals from academia and industry to present their findings and provides a platform for the exchange of ideas and future collaboration. The book covers eight topics, including nanomaterials, polymer materials, mechanical materials, materials chemistry, materials physics, ceramics, recycling materials and green composites.

Mathematics - II Semester-II (RTM) Nagpur University H K Dass, Rajnish Verma, Dr. Rama Verma, Dr. Vinod J. Dagwal, Dr. Sajid Anwar & Dr. Damodhar F. Shastrakar "Mathematics - II" is as per the latest prescribed Syllabus RTMNU Nagpur with a major focus on Integral, Multivariable and Vector Calculus, Statistics and Finite Differences. The text is lucid and brimming with examples for further ease of students. The practice quotient is high as well so that the reader further understands the topics which have been deftly explained.

Energy and Environment Semester-I (RTM) Nagpur University Dr. Archana R. Chaudhari & Dr. Aditi S. Pandey "Energy and Environment" is written exclusively for B. Tech. First semester students of various branches as per the revised syllabus of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur (RTMNU, Nagpur). It includes important topics such as Solid Fuels, Dulong's and Goutal's formula for calculation of theoretical calorific value of solid fuel, Knocking, Photolysis of water, Liquid and Nuclear Fuels, Industrial Pollution, Cement and Petroleum Industry and Conducting and Biodegradable Polymers.

Magnetic Oxides and Composites II Rajshree B. Jotania 2020-10-15 Magnetic oxides have highly interesting applications in the fields of permanent magnets, microwave devices, magnetic refrigeration, sensors, catalysis, and the health sector. This book focuses on the synthesis, characterization, and applications of various perovskites, garnets, manganites, carbon-based metal oxide nanocomposites, nanoferrites, and graphene-metal oxide nanocomposites. Keywords: Magnetic Oxides, Permanent Magnets, Microwave Devices, Magnetic Refrigeration, Sensors, Catalysis, Perovskites, Nanoferrites, Manganites, Rare Earth Iron Garnet, Graphene-Metal Oxide Nanocomposites, Carbon Nanomaterials, Mesoporous Materials, Nanocatalysts, Multifunctional Ferrites, Magnetocaloric Effect, Biosynthesis, Photo Catalysis, Antibacterial Activity, High Density Recording Media.

Neurodegenerative Diseases: Multifactorial Degenerative Processes, Biomarkers and Therapeutic Approaches (First Edition) Tabish Qidwai 2022-08-10 This reference is the definitive guide to common neurodegenerative diseases that affect humans. The book covers mechanisms of some of the most well-known neurodegenerative diseases, their biomarkers, neuropharmacology, and emerging treatment strategies. The book introduces the subject of neurodegeneration by outlining the biochemistry, pathophysiology and multifactorial neurological mechanisms (the role of genetics, environmental factors and mitochondrial damage, for example). Next, it explains some of the most studied diseases, namely, Parkinson's Disease, Alzheimer's Disease, Huntington's Disease, and Multiple Sclerosis. Subsequent chapters delve into current knowledge about diagnostic and immunological biomarkers, followed by a summary of novel therapeutic strategies. Special attention has been given to the role of medicinal plants in attempting to treat neurodegenerative diseases, as well as the public health burden posed by these conditions. Key Features - give readers an overview of multifactorial disease mechanisms in neurodegeneration - covers some major neurodegenerative diseases in detail - covers diagnostic and immunological biomarkers - explores current therapeutic strategies and drug targets in common neurodegenerative diseases - offers a simple presentation with references for advanced readers The book is a suitable reference for all readers, including students, research scholars, and physicians who are interested in the mechanisms and treatment of neurodegenerative diseases.

Cloud Computing Technologies for Smart Agriculture and Healthcare Urmila Shrawankar 2021-12-29 The Cloud is an advanced and fast-growing technology in the current era. The computing paradigm has changed drastically. It provided a new insight into the computing world with new characteristics including on-demand, virtualization, scalability and many more. Utility computing, virtualization and service-oriented architecture (SoA) are the key characteristics of Cloud computing. The Cloud provides

distinct IT services over the web on a pay-as-you-go and on-demand basis. Cloud Computing Technologies for Smart Agriculture and Healthcare covers Cloud management and its framework. It also focuses how the Cloud computing framework can be integrated with applications based on agriculture and healthcare. Features: Contains a systematic overview of the state-of-the-art, basic theories, challenges, implementation, and case studies on Cloud technology Discusses of recent research results and future advancement in virtualization technology Focuses on core theories, architectures, and technologies necessary to develop and understand the computing models and its applications Includes a wide range of examples that uses Cloud technology for increasing farm profitability and sustainable production Presents the farming industry with Cloud technology that allows it to aggregate, analyze, and share data across farms and the world Includes Cloud-based electronic health records with privacy and security features Offers suitable IT solutions to the global issues in the domain of agriculture and health care for society This reference book is aimed at undergraduate and post-graduate programs. It will also help research scholars in their research work. This book also benefits like scientists, business innovators, entrepreneurs, professionals, and practitioners.

Nanomaterials for Green Energy Bharat A Bhanvase 2018-04-18 Nanomaterials for Green Energy focuses on the synthesis, characterization and application of novel nanomaterials in the fields of green science and technology. This book contains fundamental information about the properties of novel nanomaterials and their application in green energy. In particular, synthesis and characterization of novel nanomaterials, their application in solar and fuel cells and batteries, and nanomaterials for a low-toxicity environment are discussed. It will provide an important reference resource for researchers in materials science and renewable energy who wish to learn more about how nanomaterials are used to create cheaper, more efficient green energy products. Provides fundamental information about the properties and application of new low-cost nanomaterials for green energy Shows how novel nanomaterials are used to create more efficient solar cells Offers solutions to common problems related to the use of materials in the development of energy- related technologies

Applied Pharmaceutical Science and Microbiology Debarshi Kar Mahapatra 2020-12-17 This volume on applied pharmaceutical science and microbiology looks at the latest research on the applications of natural products for drug uses. It focuses on understanding how to apply the principles of novel green chemistry methods in the vital area of pharmaceuticals and covers the important aspects of green microbial technology in the pharmaceutical industry. Chapters include studies on the applications of natural products used in folk and regional medicines, such as for digestive problems, dermatological infections, respiratory diseases, vessel diseases, diarrhea and dysentery, ringworms, boils, fevers (antipyretic), skin and blood diseases, mouth sores, channel discharges, and even cancer. The volume also looks at medical benefit of microbial fermentation for the conservation of nutrients.

Applied Chemistry: Semester-II (RTM) Nagpur University Dr. Archana R. Chaudhari & Dr. Aditi S. Pandey "Applied Chemistry" is written exclusively for B. Tech. Second semester students of various branches as per the revised syllabus of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur (RTMNU, Nagpur). It includes important topics such as Periodic Properties and Atomic, Molecular Structure, Thermodynamics and Corrosion, Applications of Spectroscopic Techniques, Basic Green Chemistry and Water Technology that help the student in learning the principles of Chemistry more effectively.

Nanotechnology for Energy and Environmental Engineering Lalita Ledwani 2020-03-12 This book examines the potential applications of nanoscience and nanotechnology to promote eco-friendly processes and techniques for energy and environment sustainability. Covering various aspects of both

the synthesis and applications of nanoparticles and nanofluids for energy and environmental engineering, its goal is to promote eco-friendly processes and techniques. Accordingly, the book elaborates on the development of reliable, economical, eco-friendly processes through advanced nanoscience and technological research and innovations. Gathering contributions by researchers actively engaged in various domains of nanoscience and technology, it addresses topics such as nanoparticle synthesis (both top-down and bottom-up approaches); applications of nanomaterials, nanosensors and plasma discharge in pollution control; environmental monitoring; agriculture; energy recovery; production enhancement; energy conservation and storage; surface modification of materials for energy storage; fuel cells; pollution mitigation; and CO₂ capture and sequestration. Given its scope, the book will be of interest to academics and researchers whose work involves nanotechnology or nanomaterials, especially as applied to energy and/or environmental sustainability engineering. Graduate students in the same areas will also find it a valuable resource.

Materials for Potential EMI Shielding Applications Joseph Kuruvilla 2019-11-01 Materials for Potential EMI Shielding Applications: Processing, Properties and Current Trends extensively and comprehensively reviews materials for EMI shielding applications, ranging from the principles to possible applications and various types of shielding materials. The book provides a thorough introduction to electromagnetic interference, its effect on both the environment and other electronic items, various materials that are used for electromagnetic interference shielding applications, and its properties. It explains the mechanism behind EMI shielding, the methods by which EMI SE of a given material is estimated, and the different fabrication methods currently employed for fabricating EMI shielding materials. Final sections focus on the theoretical background of EMI shielding and shielding mechanisms. This theoretical background is extended to the physics of EMI shielding, wherein the physics behind mechanism of shielding is explained. Focuses on the different types of available EMI shielding, their applications, processing, characterization, and the mechanism behind their shielding Discusses how to incorporate EMI shielding with low cost, low density and high strength Provides an understanding and clarifies both elementary and practical problems relating to EMI shielding materials

Winged Thoughts In-House 2009-01-01 Winged Thoughts is An Anthology for Degree Classes. Prescribed by Rashtrasant Tukadoji Maharaj Nagpur University for B.A. Part II Course in English.

Quantitative Techniques in Business, Management and Finance Umeshkumar Dubey 2016-11-25 This book is especially relevant to undergraduates, postgraduates and researchers studying quantitative techniques as part of business, management and finance. It is an interdisciplinary book that covers all major topics involved at the interface between business and management on the one hand and mathematics and statistics on the other. Managers and others in industry and commerce who wish to obtain a working knowledge of quantitative techniques will also find this book useful.