

2013 Dse Phy Paper

ICT Innovations 2013 Proceedings of the Scientific-Practical Conference "Research and Development - 2016" Crowdsourcing Geographic Knowledge Pharmaceuticals-II An Introduction to Statistical Concepts Physics of Semiconductor Devices Physics Exam-builder for HKDSE The Global Financial Crisis and the Indian Economy Advanced Concepts for Renewable Energy Supply of Data Centres African Capital Markets: Challenges and Opportunities Physics Exam-builder for HKDSE Intermetallics O-level Mathematics Challenging Drill Questions (Yellowreef) Language Across the Curriculum & CLIL in English as an Additional Language (EAL) Contexts Singapore Lower Secondary Science Challenging Drill Questions Book A (Concise) (Yellowreef) Qualitative Research & Evaluation Methods HKDSE 2014 Maths (Core) Past Paper Solution Three-dimensional Echocardiography O-level Additional Mathematics Challenging Drill Questions (Yellowreef) Elements of Descriptive Geometry Beautiful Seduction Endophytes of Forest Trees Climate Change and Island and Coastal Vulnerability Extracellular Matrix in Development and Disease Animal Brucellosis Inclusive Education in Italy O-level Physics Complete Yearly Solutions 2013 (Yellowreef) FEFLOW Finding Eden Rumen Microbiology: From Evolution to Revolution Unlearning the Colonial Cultures of Planning Introduction to Quantum Mechanics Evaluating "literacy for Development" Projects, Programs, and Campaigns Applied Physics, System Science and Computers III Physics Exam-

builder for HKDSEA-level Physics Challenging Drill Solutions (Yellowreef)Diagnostic Radiology PhysicsA-level Physics Challenging Drill Questions (Yellowreef)Carbon Nanotube and Graphene Device PhysicsUnderstanding Diabetes

ICT Innovations 2013

- completely covers all question-types since 2000
- exposes all-inclusive “trick” questions
- makes available full set of all possible step-by-step solution approaches
- provides examination reports revealing common mistakes & unusual wrong habits
- gives short side-reading notes
- teaches easy-to-implement check-back procedure
- advanced trade book
- complete edition eBook available

Proceedings of the Scientific-Practical Conference "Research and Development - 2016"

Crowdsourcing Geographic Knowledge

This comprehensive, flexible text is used in both one- and two-semester courses to review introductory through intermediate statistics. Instructors select the topics that are most appropriate for their course. Its conceptual approach helps students more easily understand the concepts and interpret SPSS and research results. Key concepts are simply stated and occasionally reintroduced and related to one another

for reinforcement. Numerous examples demonstrate their relevance. This edition features more explanation to increase understanding of the concepts. Only crucial equations are included. In addition to updating throughout, the new edition features: New co-author, Debbie L. Hahs-Vaughn, the 2007 recipient of the University of Central Florida's College of Education Excellence in Graduate Teaching Award. A new chapter on logistic regression models for today's more complex methodologies. More on computing confidence intervals and conducting power analyses using G*Power. Many more SPSS screenshots to assist with understanding how to navigate SPSS and annotated SPSS output to assist in the interpretation of results. Extended sections on how to write-up statistical results in APA format. New learning tools including chapter-opening vignettes, outlines, and a list of key concepts, many more examples, tables, and figures, boxes, and chapter summaries. More tables of assumptions and the effects of their violation including how to test them in SPSS. 33% new conceptual, computational, and all new interpretative problems. A website that features PowerPoint slides, answers to the even-numbered problems, and test items for instructors, and for students the chapter outlines, key concepts, and datasets that can be used in SPSS and other packages, and more. Each chapter begins with an outline, a list of key concepts, and a vignette related to those concepts. Realistic examples from education and the behavioral sciences illustrate those concepts. Each example examines the procedures and assumptions and provides instructions for how to run SPSS, including annotated output, and tips to develop

an APA style write-up. Useful tables of assumptions and the effects of their violation are included, along with how to test assumptions in SPSS. 'Stop and Think' boxes provide helpful tips for better understanding the concepts. Each chapter includes computational, conceptual, and interpretive problems. The data sets used in the examples and problems are provided on the web. Answers to the odd-numbered problems are given in the book. The first five chapters review descriptive statistics including ways of representing data graphically, statistical measures, the normal distribution, and probability and sampling. The remainder of the text covers inferential statistics involving means, proportions, variances, and correlations, basic and advanced analysis of variance and regression models. Topics not dealt with in other texts such as robust methods, multiple comparison and nonparametric procedures, and advanced ANOVA and multiple and logistic regression models are also reviewed. Intended for one- or two-semester courses in statistics taught in education and/or the behavioral sciences at the graduate and/or advanced undergraduate level, knowledge of statistics is not a prerequisite. A rudimentary knowledge of algebra is required.

Pharmaceutics-II

- updated with new questions from top schools & colleges from 2003 - 2013
- complete and true encyclopedia of all question-types
- exposes “surprise & trick” questions
- complete answer keys
- most efficient method of learning, hence saves time

arrange from easy-to-hard by topics and question-types to facilitate easy absorption • advanced trade book • complete and concise eBook editions available • also suitable for • Cambridge GCE OL • Cambridge IGCSE • Cambridge IOL • Books available for other subjects including Physics, Chemistry, Biology, Mathematics, Economics, English • Primary level, Secondary level, GCE O-level, GCE A-level, iGCSE, Cambridge A-level, Hong Kong DSE • visit www.yellowreef.com for sample chapters and more

An Introduction to Statistical Concepts

This book covers the elective module "Medical Physics" of the HKDSE (the Hong Kong Diploma of Secondary Education Examination) Physics Examination. It contains comprehensive notes of the relevant knowledge for the examination, so that it can be used as a coursebook as well. It contains a wealth of multiple choice questions and structured questions in examination format, with detailed solutions, to help students consolidate their concepts and master their skills.

Physics of Semiconductor Devices

This book provides an innovative and thought-provoking analysis of the policy of integrazione scolastica from an inclusive perspective. Drawing on historical and empirical research methods the book arises out of an ethnographic study, which investigates the extent to which the policy of integrazione scolastica can be considered an inclusive

policy. The author poses two fundamental questions: why are there episodes of micro-exclusion and discrimination against disabled pupils still taking place in regular schools after more than 30 years have passed since the enactment of such a progressive policy? Can the policy of integration lead to the development of inclusion in Italy? The research findings presented in the book indicate that exclusion and discrimination towards disabled pupils in education do not result from a lack of implementation of the policy at a school level, rather from the perpetuation of dominant discourses, which construct disability as an individual deficit. The book does not deny the progress made in the country following the application of this anti-discriminatory policy; rather it challenges the hegemonic abilist culture and the traditional perspectives of disability and schooling that undermine the development of inclusive education. After having investigated the theoretical premises of the policy of integration, the author argues that this progressive policy is still rooted in a special needs education paradigm and that what was once a liberating policy has been transformed into a hegemonic tool which still manages, controls and normalizes disability leaving school settings and teaching and learning routines unchanged. She finally argues for a human rights approach for the development of an inclusive school for the 21st century. The book is an essential reading for academics, policy makers, researchers and students involved in education as it links ideological pressures to practical analyses.

Physics Exam-builder for HKDSE

- new questions from top schools since 2003
- complete solutions
- topical order to facilitate drilling
- complete and true encyclopedia of question–types
- first to expose all-inclusive “trick” questions
- first to make available full set of step-by-step solution approaches (available separately)
- advanced trade book
- Complete edition eBook only

The Global Financial Crisis and the Indian Economy

This book is a printed edition of the Special Issue "Extracellular Matrix in Development and Disease" that was published in IJMS

Advanced Concepts for Renewable Energy Supply of Data Centres

This book will be of interest to a broad readership, regardless of whether they have a background in sociolinguistics, functional linguistics or genre theories. It presents an accessible “meta-language” (i.e. a language for talking about language) that is workable and usable for teachers and researchers from both language and content backgrounds, thus facilitating collaboration across content and language subject panels. Chapters 1 to 3 lay the theoretical foundation of this common meta-language by critically reviewing, systematically presenting and integrating key theoretical resources for teachers and researchers in this field. In turn, Chapters 4 to 7 focus

on issues in pedagogy and assessment, and on school-based approaches to LAC and CLIL, drawing on both research studies and the experiences of front-line teachers and school administrators. Chapter 8 provides a critical and reflexive angle on the field by asking difficult questions regarding how LAC and CLIL are often situated in contexts characterized by inequality of access to the linguistic and cultural capitals, where the local languages of the students are usually neglected or viewed unfavourably in relation to the L2 in mainstream society, and where teachers are usually positioned as recipients of knowledge rather than makers of knowledge. In closing, Chapter 9 reviews the state of the art in the field and proposes directions for future inquiry.

African Capital Markets: Challenges and Opportunities

HKDSE 2014 Maths - Core Past Paper Detail Solution (Paper 1 & 2)

Physics Exam-builder for HKDSE

What do you do when your dreams are right in front of you, but you can't reach them? Do you put everything else to the side and go for it? What if going for it, means losing everything you have now? Sean and Shireece Willis face this very question as they try to find their way through the maze of life's desires. Will the seduction of having all they ever wanted, be more than either of them can resist? When the final curtain closes, will the risk be worth the end result

Sea's only desire is to be a better husband and father than his father was. But, after years of trying and no baby, he focuses his attention on his career. Shireece is tired of being a Single Wife. Though she was raised to stand by her husband at all costs, she is determined to make something of her time, with or without Sean's approval. When Sean receives a promotion, it turns out to be more than even he could of anticipated. More money more problems or is it the time he is spending away from his wife with his new sultry personal assistant, that's the real problem? With Sean gone for weeks at a time, Shireece takes it as a sign and jumps in feet first to pursue the dreams she left behind, to be the wife she thought she needed to be. But, when her producer wakes up naked, with no memory of how he got there, and Shireece, is the first face he sees, have they crossed the line of no return? What will the couple everyone loves to hate, do when their secrets start to escape? Keep up with the rest of the Beautiful Mess Characters How is Tierra handling her new position as president of Baxwell Enterprises? Will Qu help his sister convince their parents to allow her to go to college so far from their watchful eye? What will Vito do when propositioned to help one friend deceive another? Find out in the 1st sequel in the Beautiful Mess Series

Intermetallics

Information communication technologies have become the necessity in everyday life enabling increased level of communication, processing and

information exchange to extent that one could not imagine only a decade ago. Innovations in these technologies open new fields in areas such as: language processing, biology, medicine, robotics, security, urban planning, networking, governance and many others. The applications of these innovations are used to define services that not only ease, but also increase the quality of life. Good education is essential for establishing solid basis of individual development and performance. ICT is integrated part of education at every level and type. Therefore, the special focus should be given to possible deployment of the novel technologies in order to achieve educational paradigms adapted to possible educational consumer specific and individual needs. This book offers a collection of papers presented at the Fifth International Conference on ICT Innovations held in September 2013, in Ohrid, Macedonia. The conference gathered academics, professionals and practitioners in developing solutions and systems in the industrial and business arena especially innovative commercial implementations, novel applications of technology, and experience in applying recent ICT research advances to practical solutions.

O-level Mathematics Challenging Drill Questions (Yellowreef)

This book offers an in-depth description of different groups of microbes (i.e. bacteria, protozoa, fungi and viruses) that exist in the rumen microbial community, and offers an overview of rumen microbiology, the

rumen microbial ecosystem of domesticated ruminants, and rumen microbial diversity. It provides the latest concepts on rumen microbiology for scholars, researchers and teachers of animal and veterinary sciences. With this goal in mind, throughout the text we focus on specific areas related to the biology and complex interactions of the microbes in rumen, integrating significant key issues in each respective area. We also discuss rumen manipulation with plant secondary metabolites, microbial feed additives, utilization of organic acids, selective inhibition of harmful rumen microbes, and 'omics' approaches to manipulating rumen microbial functions. A section on the exploration and exploitation of rumen microbes addresses topics including the current state of knowledge on rumen metagenomics, rumen: an underutilized niche for industrially important enzymes and ruminal fermentations to produce fuels. We next turn our attention to commercial applications of rumen microbial enzymes and to the molecular characterization of euryarcheal communities within an anaerobic digester. A section on intestinal disorders and rumen microbes covers acidosis in cattle, urea/ ammonia metabolism in the rumen and nitrate/ nitrite toxicity in ruminant diets. Last, the future prospects of rumen microbiology are examined, based on the latest developments in this area. In summary, the book offers a highly systematic collection of essential content on rumen microbiology.

Language Across the Curriculum & CLIL in English as an Additional Language

(EAL) Contexts

After tracing the causes of the global financial crisis, the book focuses on two fundamental systemic issues connected with its manifestation: financial-sector regulation and the problem of the dollar-centric international monetary system, both of which have been widely cited among the important factors leading to the 2008 financial crisis. The important analytical question of monetary policy transmission during the crisis is discussed in depth with the help of appropriate econometric models. The effectiveness of India's monetary policy during the crisis is examined by specifying an econometric model, and the impact of the crisis on the Indian stock market is modelled on the basis of risk-enhancing and risk-mitigating features. In closing, the impact of the crisis on real sectors of the Indian economy is analysed in detail.

Singapore Lower Secondary Science Challenging Drill Questions Book A (Concise) (Yellowreef)

Found in every plant species, the diversity of endophytic micro-organisms can be extremely high within different plant organs and tissue types. In trees, their ecological roles with respect to host tree can vary from latent pathogens or saprophytes to neutral commensalists and mutualists. Given their high diversity, and their bio-active nature, endophytes are currently being associated with a role in tree health against insect herbivores and fungal pathogens, as well as improving tree properties in

phytoremediation. Meanwhile there is increasing interest in the potential of some tree endophytes as new sources of drug compounds. The first book on tree endophytes in several years, and containing contributions from leading authors in the field, this book provides an important reference text for professional researchers and advanced students.

Qualitative Research & Evaluation Methods

This publication is aimed at students and teachers involved in programmes that train medical physicists for work in diagnostic radiology. It provides, in the form of a syllabus, a comprehensive overview of the basic medical physics knowledge required for the practice of modern diagnostic radiology. This makes it particularly useful for graduate students and residents in medical physics programmes. The material presented in the publication has been endorsed by the major international organisations and is the foundation for academic and clinical courses in both diagnostic radiology physics and in emerging areas such as imaging in radiotherapy.

HKDSE 2014 Maths (Core) Past Paper Solution

This timely publication updates and standardizes currently used diagnostic procedures for this widespread, economically costly livestock disease. It includes state-of-the-art technology, now in limited use, which will replace the conventional methodology

in the near future. The volume covers research done on improved diagnostic techniques, vaccines, taxonomy, epidemiology, pathology, and basic immunology. It is an important literature review for those more established in this field and serves as a guide to researchers or diagnosticians becoming involved with this disease.

Three-dimensional Echocardiography

A clear explanation of the cause, diagnosis, and treatment of diabetes Written for a broad range of readers, including students, researchers, policymakers, health care providers, and diabetes patients and caregivers, this book explains the underlying biochemistry and physiology of diabetes mellitus. Each chapter contains a glossary that defines key terms, a summary that highlights essential concepts discussed in each section of the chapter, as well as a set of simple problems to help readers gain a richer and deeper understanding of diabetes, from its history to treatment options.

Understanding Diabetes begins with an overview of the disease, its worldwide prevalence and cost, and its connection to the global obesity epidemic. The author then explores the history of diabetes, including the first documented description of the disease dating back to 3400 BCE in Ancient Egypt. The next chapter, A Glucose Metabolism Primer, sets forth the pathways for the metabolism of glucose. Next, the book covers: Regulation of glucose metabolism and glucose metabolism gone wrong Diabetes classification system Diagnosis, including current laboratory tests

Complications, such as retinopathy, neuropathy, and cardiovascular disease Hereditary transmission Prevention and treatment, including emerging research Although a cure has still not been found, this book demonstrates that researchers are continuing to make major breakthroughs on all fronts in the fight against diabetes, including a better understanding of its causes and an improved ability to diagnose and treat the disease.

O-level Additional Mathematics Challenging Drill Questions (Yellowreef)

Colonialization has never failed to provoke discussion and debate over its territorial, economic and political projects, and their ongoing consequences. This work argues that the state-based activity of planning was integral to these projects in conceptualizing, shaping and managing place in settler societies. Planning was used to appropriate and then produce territory for management by the state and in doing so, became central to the colonial invasion of settler states. Moreover, the book demonstrates how the colonial roots of planning endure in complex (post)colonial societies and how such roots, manifest in everyday planning practice, continue to shape land use contests between indigenous people and planning systems in contemporary (post)colonial states.

Elements of Descriptive Geometry

Beautiful Seduction

"Climate Change and Island and Coastal Vulnerability" is the outcome of a selection of peer reviewed edited papers presented at the International Workshop on Climate Change and Island Vulnerability (IWCCI) held at Kadmat Island, Lakshadweep, India in October 2010. Marine and coastal biodiversity, sea level rise vulnerability, fisheries, climate change impact on livelihood options, water and sanitation in island ecosystem and mitigation, adaptation and governance are the focal themes. The basic concept conveyed in the book is that biodiversity of islands is to be protected as a natural mechanism to mitigate climate change. Probability recurrence of mass coral bleaching and the management of coral reefs and their future protection are discussed in this book. Marine productivity and climate change for the last ten thousand years in the Arabian Sea have been examined with core records. Green technology is suggested as an important tool for mitigation and adaptation programmes in climate change. Measures taken to project biomass utilisation of islands as an energy source is delineated. Climate change may pose a potential threat on human health. Improved sanitation packages and models that are cost effective and environment-friendly for islands are uniquely presented in this book.

Endophytes of Forest Trees

Changes and additions to the new edition of this classic textbook include a new chapter on symmetries, new problems and examples, improved explanations, more numerical problems to be worked

on a computer, new applications to solid state physics, and consolidated treatment of time-dependent potentials.

Climate Change and Island and Coastal Vulnerability

This book presents a comprehensive treatment of the subject of evaluation as applied to literacy programs, covering evaluation theory, planning, and practice. Part I discusses questions of definition, context, objectives, and functions of evaluation and presents descriptions and analyses of evaluation paradigms and models. In Part II, the interrelated processes of evaluation planning and management are discussed, and evaluation planning and management approaches are explained and demonstrated. Parts III, IV, and V focus on the three components of the evaluation management approach discussed in Part II: management information systems (MIS), naturalistic evaluation (NE), and rationalistic evaluation (RE). Chapters in these parts cover: (1) theory, questions, and design of an MIS, NE, or RE; (2) writing a proposal for an MIS or for an evaluation study in the naturalistic or rationalistic mode; (3) tools and techniques of the three approaches; and (4) writing periodical and special reports. Part VI discusses the politics of evaluation, the need to establish evaluation standards for meta-evaluations, and the related question of evaluators' training. A glossary is appended. (YLB)

Extracellular Matrix in Development and

Disease

The first introductory textbook to explain the properties and performance of practical nanotube devices and related applications.

Animal Brucellosis

This book covers the elective module "Astronomy and Space Science" of the HKDSE (the Hong Kong Diploma of Secondary Education Examination) Physics Examination. It contains comprehensive notes of the relevant knowledge for the examination, so that it can be used as a coursebook as well. It contains a wealth of multiple choice questions and structured questions in examination format, with detailed solutions, to help students consolidate their concepts and master their skills. The book is written in accordance to the Fine-tuned HKDSE Syllabus, suitable for the 2016 HKDSE Physics Examination and onward.

Inclusive Education in Italy

Drawing on more than 40 years of experience conducting applied social science research and program evaluation, author Michael Quinn Patton has crafted the most comprehensive and systematic book on qualitative research and evaluation methods, inquiry frameworks, and analysis options available today. Now offering more balance between applied research and evaluation, this Fourth Edition of *Qualitative Research & Evaluation Methods* illuminates all aspects of qualitative inquiry through

new examples, stories, and cartoons; more than a hundred new summarizing and synthesizing exhibits; and a wide range of new highlight sections/sidebars that elaborate on important and emergent issues. For the first time, full case studies are included to illustrate extended research and evaluation examples. In addition, each chapter features an extended "rumination," written in a voice and style more emphatic and engaging than traditional textbook style, about a core issue of persistent debate and controversy.

O-level Physics Complete Yearly Solutions 2013 (Yellowreef)

Book 3 covers the topics of Wave Motion, which lays the foundation of physics and the concepts are also used in other sections of the syllabus. Moreover, this section carries a significant weight in the HKDSE examination. It takes time for students to grasp the concepts and master the necessary skills in solving problems. Some examination questions on this section cover integrated topics and require candidates' ability to comprehend an unfamiliar situation and to apply suitable knowledge in solving problems. In this book, although topics are grouped clearly in different chapters, some questions in a later chapter require application of knowledge learned in previous chapters. This will help candidates to consolidate their knowledge and to build up their confidence in tackling problems demanding higher order skills.

FEFLOW

I-Dispensing Pharmacy - II-Dispensed Medications - a-Monophasic Liquid Dosage Forms - b-Biphasic Liquid Dosage Forms - c- Semi-solid Dosage Forms - III - Sterile Dosage Forms

Finding Eden

By day, Mary Alayna Dalton is a successful Chicago professional. By night, she shares her home with six young men and performs with them in their band that plays at the local pub. The only thing missing in her life is a loving relationship with someone accepting of her whole life. When Clark Dulanty accidentally stumbles from her days into her nights and uncovers both sides of Mary Alayna Dalton, their encounters are turbulent and their ensuing romance revealing as Clark slowly discovers all her secrets, only to expose the ambiguities of his own life choices on his journey to Finding Eden.

Rumen Microbiology: From Evolution to Revolution

- almost 300 questions arranged topically for rapid drilling
- complete and true encyclopedia of question-types
- include latest “trick” questions
- answer keys provided
- complete step-by-step solutions sold separately
- complete and concise eBook editions available
- Books available for other subjects including Physics, Chemistry, Biology, Mathematics, Economics, English
- Primary level, Secondary level,

GCE O-level, GCE A-level, iGCSE, Cambridge A-level, Hong Kong DSE • visit www.yellowreef.com for sample chapters and more

Unlearning the Colonial Cultures of Planning

- new questions from top schools & colleges from 2003 - 2015
- complete and true encyclopedia of all question-types
- expose all “surprise & trick” questions
- complete answer keys
- most efficient method of learning, hence saves time
- arrange from easy-to-hard both by topics and question-types to facilitate easy absorption
- full set of step-by-step solution approaches (available separately)
- advanced trade book with teachers’ comments
- buy online at www.yellowreef.com to enjoy attractive discounts
- complete edition and concise edition eBooks available
- also suitable for • Cambridge IGCSE • Cambridge International GCE OL • Books available for other subjects including Physics, Chemistry, Biology, Mathematics, Economics, English
- Primary level, Secondary level, GCE O-level, GCE A-level, iGCSE, Cambridge A-level, Hong Kong DSE
- visit www.yellowreef.com for sample chapters and more

Introduction to Quantum Mechanics

- according to the latest syllabus
- first to collect complete Planning and Data Analysis question-types
- new questions from top schools & colleges since 2003 - 2013
- complete and true encyclopedia of all

question-types • exposes “surprise & trick” questions
• complete answer keys • most efficient method of learning, hence saves time • arrange from easy-to-hard both by topics and question-types to facilitate easy absorption • full set of step-by-step solution approaches (available separately) • advanced trade book with teachers’ comments • complete and concise eBook editions available • also suitable for • Cambridge GCE AL (H1/H2) • Cambridge International AL • Books available for other subjects including Physics, Chemistry, Biology, Mathematics, Economics, English • Primary level, Secondary level, GCE O-level, GCE A-level, iGCSE, Cambridge A-level, Hong Kong DSE • visit www.yellowreef.com for sample chapters and more

Evaluating "literacy for Development" Projects, Programs, and Campaigns

The purpose of this workshop is to spread the vast amount of information available on semiconductor physics to every possible field throughout the scientific community. As a result, the latest findings, research and discoveries can be quickly disseminated. This workshop provides all participating research groups with an excellent platform for interaction and collaboration with other members of their respective scientific community. This workshop’s technical sessions include various current and significant topics for applications and scientific developments, including • Optoelectronics • VLSI & ULSI Technology • Photovoltaics • MEMS & Sensors • Device Modeling and Simulation • High Frequency/

Power Devices • Nanotechnology and Emerging Areas
• Organic Electronics • Displays and Lighting Many eminent scientists from various national and international organizations are actively participating with their latest research works and also equally supporting this mega event by joining the various organizing committees.

Applied Physics, System Science and Computers III

Africa encompasses a wide range of market conditions, from rapidly emerging economies to countries with a long history with financial markets. Produced in partnership with the African Securities Exchanges Association, this collection of essays includes the perspectives of authors in local markets who provide their analysis of the history, current developments, and future outlook for South Africa, Nigeria, Mauritius, Ghana, Zimbabwe, Morocco, Egypt, Botswana, and East Africa. For prospective investors, the book provides valuable insights on how changing regulation, evolving financial technology, and expanding investor access are transforming local markets on the continent.

Physics Exam-builder for HKDSE

FEFLOW is an acronym of Finite Element subsurface FLOW simulation system and solves the governing flow, mass and heat transport equations in porous and fractured media by a multidimensional finite element method for complex geometric and

parametric situations including variable fluid density, variable saturation, free surface(s), multispecies reaction kinetics, non-isothermal flow and multidiffusive effects. FEFLOW comprises theoretical work, modeling experiences and simulation practice from a period of about 40 years. In this light, the main objective of the present book is to share this achieved level of modeling with all required details of the physical and numerical background with the reader. The book is intended to put advanced theoretical and numerical methods into the hands of modeling practitioners and scientists. It starts with a more general theory for all relevant flow and transport phenomena on the basis of the continuum approach, systematically develops the basic framework for important classes of problems (e.g., multiphase/multispecies non-isothermal flow and transport phenomena, discrete features, aquifer-averaged equations, geothermal processes), introduces finite-element techniques for solving the basic balance equations, in detail discusses advanced numerical algorithms for the resulting nonlinear and linear problems and completes with a number of benchmarks, applications and exercises to illustrate the different types of problems and ways to tackle them successfully (e.g., flow and seepage problems, unsaturated-saturated flow, advective-diffusion transport, saltwater intrusion, geothermal and thermohaline flow).

A-level Physics Challenging Drill Solutions (Yellowreef)

The rapid increase of cloud computing, high performance computing (HPC) and the vast growth in Internet and Social Media use have aroused the interest in energy consumption and the carbon footprint of Data Centres. Data Centres primarily contain electronic equipment used for data processing (servers), data storage (storage equipment), and communications (network equipment). Collectively, this equipment processes, stores, and transmits digital information and is known as information technology (IT) equipment. Advanced Concepts for Renewable Energy Supply of Data Centres introduces a number of technical solutions for the supply of power and cooling energy into Data Centres with enhanced utilisation of renewable energy sources in order to achieve low energy Data Centres. Because of the high energy density nature of these unique infrastructures, it is essential to implement energy efficiency measures and reduce consumption before introducing any renewable energy source. A holistic approach is used with the objective of integrating many technical solutions such as management of the IT (Information Technology) load, efficient electrical supply to the IT systems, Low-Ex air-conditioning systems, interaction with district heating and cooling networks, re-use of heat, free cooling (air, seawater, groundwater), optimal use of heat and cold storage, electrical storage and integration in smart grids. This book is therefore a catalogue of advanced technical concepts that could be integrated into Data Centres portfolio in order to increase the overall efficiency and the share of renewable energies in power and cooling supply. Based on dynamic energy models implemented in

TRNSYS some concepts are deeply evaluated through yearly simulations. The results of the simulation are illustrated with Sankey charts, where the energy flows per year within the subsystems of each concept for a selected scenario are shown, and graphs showing the results of parametric analysis. A set of environmental metrics (as the non-renewable primary energy) and financial metrics (CAPEX and OPEX) as well of energy efficiency metrics like the well-known PUE, are described and used to evaluate the different technical concepts.

Diagnostic Radiology Physics

This book is open access under a CC BY 4.0 license. It relates to the III Annual Conference hosted by The Ministry of Education and Science of the Russian Federation in December 2016. This event has summarized, analyzed and discussed the interim results, academic outputs and scientific achievements of the Russian Federal Targeted Programme “Research and Development in Priority Areas of Development of the Russian Scientific and Technological Complex for 2014–2020.” It contains 75 selected papers from 6 areas considered priority by the Federal Targeted Programme: computer science, ecology & environment sciences; energy and energy efficiency; lifesciences; nanoscience & nanotechnology and transport & communications. The chapters report the results of the 3-years research projects supported by the Programme and finalized in 2016.

A-level Physics Challenging Drill Questions (Yellowreef)

This book reports on advanced theories and methods in three related fields of research: applied physics, system science and computers. The first part covers applied physics topics, such as lasers and accelerators; fluid dynamics, optics and spectroscopy, among others. It also addresses astrophysics, security, and medical and biological physics. The second part focuses on advances in computers, such as those in the area of social networks, games, internet of things, deep learning models and more. The third part is especially related to systems science, covering swarm intelligence, smart cities, complexity and more. Advances in and application of computer communication, artificial intelligence, data analysis, simulation and modeling are also addressed. The book offers a collection of contributions presented at the 3rd International Conference on Applied Physics, System Science and Computers (APSAC), held in Dubrovnik, Croatia on September 26–28, 2018. Besides presenting new methods, it is also intended to promote collaborations between different communities working on related topics at the interface between physics, computer science and engineering.

Carbon Nanotube and Graphene Device Physics

The fascinating world of intermetallics is largely unexplored. There are many exciting physical

properties and important technological applications of intermetallics, from magnetism to superconductivity. The main focus of this book is on the statistics, topology and geometry of crystal structures and structure types of intermetallic phases. The underlying physics, in particular chemical bonding, is discussed whenever it helps understand the stability of structures and the origin of their physical properties. The authors' approach, based on the statistical analysis of more than twenty thousand intermetallic compounds in the data base Pearson's Crystal Data, uncovers important structural relationships and illustrates the relative simplicity of most of the general structural building principles. It also shows that a large variety of actual structures can be related to a rather small number of aristotypes. The text aims to be readable and beneficial in one way or another to everyone interested in intermetallic phases, from graduate students to experts in solid state chemistry and physics, and materials science. For that purpose it avoids the use of enigmatic abstract terminology for the classification of structures. Instead, it focuses on the statistical analysis of crystal structures and structure types in order to draw together a larger overview of intermetallics, and indicate the gaps in it - areas still to be explored, and potential sources of worthwhile research. The text should be read as a reference guide to the incredibly rich world of intermetallic phases.

Understanding Diabetes

The phenomenon of volunteered geographic information is part of a profound transformation in how geographic data, information, and knowledge are produced and circulated. By situating volunteered geographic information (VGI) in the context of big-data deluge and the data-intensive inquiry, the 20 chapters in this book explore both the theories and applications of crowdsourcing for geographic knowledge production with three sections focusing on 1). VGI, Public Participation, and Citizen Science; 2). Geographic Knowledge Production and Place Inference; and 3). Emerging Applications and New Challenges. This book argues that future progress in VGI research depends in large part on building strong linkages with diverse geographic scholarship. Contributors of this volume situate VGI research in geography's core concerns with space and place, and offer several ways of addressing persistent challenges of quality assurance in VGI. This book positions VGI as part of a shift toward hybrid epistemologies, and potentially a fourth paradigm of data-intensive inquiry across the sciences. It also considers the implications of VGI and the exaflood for further time-space compression and new forms, degrees of digital inequality, the renewed importance of geography, and the role of crowdsourcing for geographic knowledge production.

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