

Ett N2 March 2014 Question Paper

Fishing vessels can be equipped with energy efficient refrigeration technology applying natural working fluids. Ammonia refrigeration systems have been the first choice, but CO₂ units have also become increasingly common in the maritime sector in the last few years. When retrofitting or implementing CO₂ refrigeration plants, less space on board is required and such units allow good service and maintenance. Nowadays, cruise ship owners prefer CO₂ units for the provision refrigeration plants. Ship owners, responsible for the health and safety of the crew and passengers, must carefully evaluate the usage of flammable low GWP working fluids, due to a high risk that toxic decomposition products are formed, even without the presence of an open flame. Suggestions for further work include a Nordic Technology Hub for global marine refrigeration R&D and development support for key components.

What if an algorithm could predict which manuscripts would become mega-bestsellers? *Girl on the Train*. *Fifty Shades*. *The Goldfinch*. Why do some books capture the whole world's attention? What secret DNA do they share? In *The Bestseller Code*, Archer and Jockers boldly claim that blockbuster hits are highly predictable, and they have created the algorithm to prove it. Using cutting-edge text mining

techniques, they have developed a model that analyses theme, plot, style and character to explain why some books resonate more than others with readers. Provocative, entertaining, and groundbreaking, *The Bestseller Code* explores the hidden patterns at work in the biggest hits and, more importantly, the real reasons we love to read.

E-Prime®, the software suite of Psychology Software Tools, is used worldwide for designing and running custom psychology experiments. Aimed at students and researchers alike, this timely volume provides a much needed, down-to-earth introduction into the wide range of experiments that can be set up using E-Prime®. Many tutorials are provided to introduce the beginner and reacquaint the experienced researcher with constructing experiments typical for the broad field of psychological and cognitive science. Apart from explaining the basic structure of E-Prime® and describing how it suits daily scientific practice, this book also gently introduces programming via E-Prime's own language: E-Basic. The authors guide the readers through the software step by step, from an elementary level to an advanced level, enabling them to benefit from the enormous possibilities E-Prime® provides for experimental design.

Developed from celebrated Harvard statistics lectures, *Introduction to Probability* provides essential language and tools for understanding

statistics, randomness, and uncertainty. The book explores a wide variety of applications and examples, ranging from coincidences and paradoxes to Google PageRank and Markov chain Monte Carlo (MCMC). Additional application areas explored include genetics, medicine, computer science, and information theory. The print book version includes a code that provides free access to an eBook version. The authors present the material in an accessible style and motivate concepts using real-world examples. Throughout, they use stories to uncover connections between the fundamental distributions in statistics and conditioning to reduce complicated problems to manageable pieces. The book includes many intuitive explanations, diagrams, and practice problems. Each chapter ends with a section showing how to perform relevant simulations and calculations in R, a free statistical software environment.

With a shift toward problem-based learning and critical thinking in many health science fields, professional pharmacy training faces a shift in focus as well. Although the Accreditation Council for Pharmacy Education (ACPE) has recently suggested guidelines for problem solving to be better integrated into pharmacy curriculum, pharmacy books currently available either address this material inadequately or lack it completely. *Theory and Practice of Contemporary Pharmaceutics* addresses this problem by challenging pharmacy students to think

critically in preparation for situations that arise in clinical practice. This book offers a wealth of up-to-date information, organized in a logical sequence, corresponding to the art and science required for formulators in industry and dispensing pharmacists in the community. It breaks down the subject to its simplest form and includes numerous examples, case studies, and problems. In addition to presenting basic scientific principles, each chapter includes a self-evaluation tutorial designed to help you evaluate your understanding of the subject matter, numerical problems that provide practice in finding mathematical solutions, and case studies that measure your overall grasp of the subject matter by challenging you to craft a plausible solution to a real-life scenario using the concepts presented in that chapter. Written by authors selected from academia, industry, and regulatory agencies, the book presents an objective and balanced view of pharmaceutical science and its application. The authors' insights are extremely helpful to pharmacy students as well as practicing pharmacists involved in the development and/or dispensation of existing and new generation biotechnology-based drug products. This simplified and user-friendly book will present pharmaceuticals in a way that it has never been presented before and will help prepare students and pharmacists for the competitive and challenging nature of the professional market.

This text is for a one semester graduate course in statistical theory and covers minimal and complete sufficient statistics, maximum likelihood estimators, method of moments, bias and mean square error, uniform minimum variance estimators and the Cramer-Rao lower bound, an introduction to large sample theory, likelihood ratio tests and uniformly most powerful tests and the Neyman Pearson Lemma. A major goal of this text is to make these topics much more accessible to students by using the theory of exponential families. Exponential families, indicator functions and the support of the distribution are used throughout the text to simplify the theory. More than 50 "brand name" distributions are used to illustrate the theory with many examples of exponential families, maximum likelihood estimators and uniformly minimum variance unbiased estimators. There are many homework problems with over 30 pages of solutions.

As network science and technology continues to gain popularity, it becomes imperative to develop procedures to examine emergent network domains, as well as classical networks, to help ensure their overall optimization. Advanced Methods for Complex Network Analysis features the latest research on the algorithms and analysis measures being employed in the field of network science. Highlighting the application of graph models, advanced computation, and analytical procedures, this publication is a

pivotal resource for students, faculty, industry practitioners, and business professionals interested in theoretical concepts and current developments in network domains.

Every anaesthetist reaches the end of their career with a collection of difficult airway experiences.

Managing airway challenges relies on a combination of good clinical practice, knowledge of relevant basic sciences and critical evaluation of every aspect of airway care. This new edition of Core Topics in Airway Management provides any trainee or consultant involved in airway techniques with practical, clinically relevant coverage of the core skills and knowledge required to manage airways in a wide variety of patients and clinical settings. All new procedures and equipment are reviewed, and detailed chapters advise on airway issues in a range of surgical procedures. This edition also contains a series of practical questions and answers, enabling the reader to evaluate their knowledge. Written by leading airway experts with decades of experience managing difficult airways, Core Topics in Airway Management, 2nd edition is an invaluable tool for anaesthetists, intensivists, and emergency physicians.

Develop your grade 7 students sentence editing, punctuation, grammar, vocabulary, word study, and reference skills using 180 focused 10- to 15-minute daily activities.

This clear and lively introduction to probability theory concentrates on the results that are the most useful for applications, including combinatorial probability and Markov chains. Concise and focused, it is designed for a one-semester introductory course in probability for students who have some familiarity with basic calculus. Reflecting the author's philosophy that the best way to learn probability is to see it in action, there are more than 350 problems and 200 examples. The examples contain all the old standards such as the birthday problem and Monty Hall, but also include a number of applications not found in other books, from areas as broad ranging as genetics, sports, finance, and inventory management. This introduction to Laplace transforms and Fourier series is aimed at second year students in applied mathematics. It is unusual in treating Laplace transforms at a relatively simple level with many examples. Mathematics students do not usually meet this material until later in their degree course but applied mathematicians and engineers need an early introduction. Suitable as a course text, it will also be of interest to physicists and engineers as supplementary material.

A multidisciplinary index covering the journal literature of the arts and humanities. It fully covers 1,144 of the world's leading arts and humanities journals, and it indexes individually selected, relevant items from over 6,800 major science and social science journals. The book deals with novel aspects and perspectives in metal oxide and hybrid material fabrication. The contributions are mainly focused on the search for a new

group of advanced materials with designed physicochemical properties, especially an expanded porous structure and defined surface activity. The proposed technological procedures result in an enhanced activity of the synthesized hybrid materials, which is of great importance when considering their potential fields of application. The use of such materials in different technological disciplines, including aspects associated with environmental protection, allows for the verification of the proposed synthesis method. Thus, it can be stated that those aspects are of interdisciplinary character and may be located at the interface of three scientific disciplines—chemistry, materials science, and engineering—as well as environmental protection. Furthermore, the presented scientific scope is in some way an answer to the continuous demand for such types of materials and opens new perspectives for their practical use

An updated and revised edition of the major reference work in forensic pathology, this will be an important purchase for all in the field. 'Forensic Pathology' offers a thorough, detailed guide to the performance and interpretation of post-mortem examinations conducted for the police and other legal authorities.

Head and Neck Surgery and Oncology, by Drs. Jatin P. Shah Snehal G. Patel, and Bhuvanesh Singh, offers you authoritative, multidisciplinary guidance on the latest diagnostic and multidisciplinary therapeutic approaches for head and neck cancer. With this medical reference book, you'll have all the help you need to offer your patients the best possible prognoses and to optimally

preserve and restore form and function. Overcome any challenge in head and neck surgery with comprehensive coverage of the scalp, skull base, paranasal sinuses, oral cavity, pharynx, larynx, cervical lymph nodes, thyroid, salivary glands, and soft tissue and bone tumors - from incidence, diagnosis, and work up through treatment planning, operative techniques, rehabilitation, and outcomes. Increase your understanding of head and neck oncology with this completely reorganized edition, presenting a uniform flow of topics, which includes the latest information on Diagnostic approaches, staging, algorithms for selection of therapy, and outcomes of treatment for head and neck tumors. Offer today's best treatment options with outcomes of therapy data from the NCDB, institutional data from MSKCC, and evidence-based information Diagnose patients using the latest advances in radiographic imaging, diagnostic pathology and molecular biology. Take fullest advantage of every multidisciplinary management approach available including radiation oncology, medical oncology (including targeted therapies), maxillofacial prosthodontics and dental oncology, surgical procedures for salvage of recurrences after chemoradiation therapy, and rehabilitation measures to improve functional outcomes (speech, swallowing, etc.). Understand the nuances of day-to-day practical care of patients with basic operating room techniques and technology, intraoperative decisions, and post operative care for patients undergoing head and neck surgery. Know what to look for and how to proceed with sequential operative photographs of each surgical procedure and full-color

artwork to demonstrate anatomical relationships. Particular emphasis is placed on surgical management of patients after chemo-radiotherapy, reflecting the changing paradigms in head and neck oncology and the special challenges that confront modern day head and neck surgeons. This comprehensive text will assist in improved survival and preserving and restoring form and function with the surgical treatment of tumors.

This book has been written specifically for candidates sitting the oral part of the FRCS (Tr & Orth) examination. It presents a selection of questions arising from common clinical scenarios along with detailed model answers.

The emphasis is on current concepts, evidence-based medicine and major exam topics. Edited by the team behind the successful Candidate's Guide to the FRCS (Tr & Orth) Examination, the book is structured according to the four major sections of the examination; adult elective orthopaedics, trauma, children's/hands and upper limb and applied basic science. An introductory section gives general exam guidance and end section covers common diagrams that you may be asked to draw out. Each chapter is written by a recent (successful) examination candidate and the style of each reflects the author's experience and their opinions on the best tactics for first-time success. If you are facing the FRCS (Tr & Orth) you need this book.

This book focuses on the causes of starvation in general and famines in particular. The traditional analysis of famines is shown to be fundamentally defective, and the author develops an alternative analysis.

This compendium of projects, writings and interviews focuses on how the field of drawing expands synchronously alongside technological and computational developments. This book critically reassess the act of drawing and where its future may lie. Bringing together practitioners from many creative fields, the book discusses how drawing is changing in relation to new technologies for the production and dissemination of ideas. Drawings seduce, and the drawings in this book are tantalising evidence of this. Yet the aim of the book is to illustrate how drawing works as an abundantly rich, diverse, inventive, critical and serious research domain. In this regard, it is a study of the point and promise of drawing; which both explores the microscopic detail of the craft and envisions the radical possibilities inherent in its expression. The academics, artists and architects whose work lies within conceive of drawing as a rigorous, liberating form of expression.

Ramp up the tension and keep your readers hooked! Inside you'll find everything you need to know to spice up your story, move your plot forward, and keep your readers turning pages. Expert thriller author and writing instructor James Scott Bell shows you how to craft scenes, create characters, and develop storylines that harness conflict and suspense to carry your story from the first word to the last. Learn from examples of successful novels

and movies as you transform your work from ho-hum to high-tension. • Pack the beginning, middle, and end of your book with the right amount of conflict. • Tap into the suspenseful power of each character's inner conflict. • Build conflict into your story's point of view. • Balance subplots, flashbacks, and backstory to keep your story moving forward. • Maximize the tension in your characters' dialogue. • Amp up the suspense when you revise. *Conflict & Suspense* offers proven techniques that help you craft fiction your readers won't be able to put down.

Covering the fundamentals of electrical technology and using these to introduce the application of electrical and electronic systems, this text had been updated to include recent developments in technology. It avoids unnecessary mathematics and features improved teaching aids, including: worked examples; updated and graded review questions; colour diagrams and chapter summaries. It is designed for use by students on NC, HNC and HND courses in electrical and electronic engineering.

Here in one easy-to-understand volume are the statistical procedures and techniques the agricultural researcher needs to know in order to design, implement, analyze, and interpret the results of most experiments with crops. Designed specifically for the non-statistician, this valuable guide focuses on the practical problems of the field researcher.

Throughout, it emphasizes the use of statistics as a

tool of research—one that will help pinpoint research problems and select remedial measures. Whenever possible, mathematical formulations and statistical jargon are avoided. Originally published by the International Rice Research Institute, this widely respected guide has been totally updated and much expanded in this Second Edition. It now features new chapters on the analysis of multi-observation data and experiments conducted over time and space. Also included is a chapter on experiments in farmers' fields, a subject of major concern in developing countries where agricultural research is commonly conducted outside experiment stations. *Statistical Procedures for Agricultural Research, Second Edition* will prove equally useful to students and professional researchers in all agricultural and biological disciplines. A wealth of examples of actual experiments help readers to choose the statistical method best suited for their needs, and enable even the most complicated procedures to be easily understood and directly applied. An International Rice Research Institute Book

The book covers the spread of conservation agriculture (CA) to regions including Brazil, Argentina, Canada, Australia, Europe and emerging CA destinations in Asia and Africa. Topics covered include the various components of CA, and how their individual and combined implementation influence productivity, soil health and environmental quality

under diverse edaphic and climatic conditions. The book will be useful to teachers, researchers, extensionists, farmers, and students interested in environmental quality.

Mathematics N1 Pearson South Africa
Engineering Science N4 Pearson South Africa
Introduction to Probability CRC Press

This book examines the interaction between art, design, technology and the social sciences. It features 56 papers that were presented at the International Symposium on Research of Arts, Design and Humanities, ISRADH 2014, held at Sutera Harbour Resort, Kota Kinabalu, Malaysia. Complete with helpful diagrams and tables, the papers cover such topics as artificial reef development, racial discourse in the social media, stoneware as a replacement material for modern ventilation walls, and factors contributing to internet abuse in the workplace. Overall, the coverage focuses on global design trends and demands with an emphasis on people, business and technology. Inside, readers will find information on art and science in industrial applications; art management and entrepreneurship; cognitive, psychological and behavioral science; design technology and sustainable development; humanities and social applications in quality of life; social implications of technology; and visual communication and technologies. Taking a multi-disciplinary approach,

the book features insightful discussions among academicians and industrial practitioners on the evolution of design that will appeal to researchers, designers and students.

Current and authoritative with many advanced concepts for petroleum geologists, geochemists, geophysicists, or engineers engaged in the search for or production of crude oil and natural gas, or interested in their habitats and the factors that control them, this book is an excellent reference. It is recommended without reservation. AAPG Bulletin.

We have read the stories of those who have "crossed" lines of race and class and culture. But few have written of crossing—completely and entirely—the gender line. Crossing is the story of Deirdre McCloskey (formerly Donald), once a golden boy of conservative economics and a child of 1950s and 1960s privilege, and her dramatic and poignant journey to becoming a woman. McCloskey's account of her painstaking efforts to learn to "be a woman" unearth fundamental questions about gender and identity, and hatreds and anxieties, revealing surprising answers.

This Book Covers A Wide Range Of Topics In Statistics With Conceptual Analysis, Mathematical Formulas And Adequate Details In Question-Answer Form. It Furnishes A Comprehensive Overview Of Statistics In A Lucid Manner. The Book Provides Ready-Made Material For All Inquisitive Minds To Help Them Prepare For Any Traditional Or Internal Grading System Examination, Competitions, Interviews, Viva-Voce And Applied Statistics Courses. One Will Not Have To Run From

Pillar To Post For Guidance In Statistics. The Answers Are Self-Explanatory. For Objective Type Questions, At Many Places, The Answers Are Given With Proper Hints. Fill-In-The-Blanks Given In Each Chapter Will Enable The Readers To Revise Their Knowledge In A Short Span Of Time. An Adequate Number Of Multiple-Choice Questions Inculcate A Deep Understanding Of The Concepts. The Book Also Provides A Good Number Of Numerical Problems, Each Of Which Requires Fresh Thinking For Its Solution. It Will Also Facilitate The Teachers To A Great Extent In Teaching A Large Number Of Courses, As One Will Get A Plethora Of Matter At One Place About Any Topic In A Systematic And Logical Manner. The Book Can Also Serve As An Exhaustive Text.

The distribution of elements in the cosmos is the result of many processes, and it provides a powerful tool to study the Big Bang, the density of baryonic matter, nucleosynthesis and the formation and evolution of stars and galaxies. Covering many exciting topics in astrophysics and cosmology, this textbook, by a pioneer of the field, provides a lucid and wide-ranging introduction to the interdisciplinary subject of galactic chemical evolution for advanced undergraduates and graduate students. It is also an authoritative overview for researchers and professional scientists. This new edition includes results from recent space missions and new material on abundances from stellar populations, nebular analysis, and meteoric isotopic anomalies, and abundance analysis of X-ray gas. Simple derivations for key results are provided, together with problems and

helpful solution hints, enabling the student to develop an understanding of results from numerical models and real observations.

What do medieval Icelanders mean when they say ¿troll¿? What did they see when they saw a troll? What did the troll signify to them? And why did they see them?The principal subject of this book is the Norse idea of the troll, which the author uses to engage with the larger topic of paranormal experiences in the medieval North. The texts under study are from 13th-, 14th-, and 15th-century Iceland. The focus of the book is on the ways in which paranormal experiences are related and defined in these texts and how those definitions have framed and continue to frame scholarly interpretations of the paranormal.The book is partitioned into numerous brief chapters, each with its own theme. In each case the author is not least concerned with how the paranormal functions within medieval society and in the minds of the individuals who encounter and experience it and go on to narrate these experiences through intermediaries. The author connects the paranormal encounter closely with fears and these fears are intertwined with various aspects of the human experience including gender, family ties, and death.The Troll Inside You hovers over the boundaries of scholarship and literature. Its aim is to prick and provoke but above all to challenge its audience to reconsider some of their preconceived ideas about the medieval past.

The number of electric vehicles (cars, buses, e-bikes, electric scooters and electric motorcycles) sold in the Nordic countries is currently increasing quickly. That

means that more electricity is used for driving, and also that more of some important metals are being used than earlier. This report regards the fate of the lithium-ion batteries used in vehicles in the Nordic countries.

Currently the “Battery Directive” (EC, 2006) which is a producer’s responsibility directive, is under revision and this study is a knowledge base intended for use by the Nordic Environmental Protection Agencies for their referral response in the revision process. This report focuses on the aspect of metal resources, but it does not elaborate on a broader range of environmental impacts, as these were outside the scope of this study.

Our ability to attribute mental states to others ("to mentalize") has been the subject of philosophical and psychological studies for a very long time, yet the role of language acquisition in the development of our mentalizing abilities has been largely understudied. This book addresses this gap in the philosophical literature. The book presents an account of how false belief reasoning is impacted by language acquisition, and it does so by placing it in the larger context of the issue, how language impacts cognition in general. The work provides the reader with detailed and critical literature reviews, and draws on them to argue that language acquisition helps false belief reasoning by boosting the ability to create schemata that facilitate processing of information in some social contexts. According to this framework, it is a combination of syntactic clues and cultural narratives that helps the child to solve the classic false belief task. The book provides a novel, original account of how language helps false belief reasoning,

while also giving the reader a broad, precise and well-documented picture of the debate around some of the most fundamental issues in social cognition.

One of the basic insights of the book is that there is a notion of non-relational linguistic representation which can fruitfully be employed in a systematic approach to literary fiction. This notion allows us to develop an improved understanding of the ontological nature of fictional entities. A related insight is that the customary distinction between extra-fictional and intra-fictional contexts has only a secondary theoretical importance. This distinction plays a central role in nearly all contemporary theories of literary fiction. There is a tendency among researchers to take it as obvious that the contrast between these two types of contexts is crucial for understanding the boundary that divides fiction from non-fiction. Seen from the perspective of non-relational representation, the key question is rather how representational networks come into being and how consumers of literary texts can, and do, engage with these networks. As a whole, the book provides, for the first time, a comprehensive artefactualist account of the nature of fictional entities.

Fossil fuels led the 21st century industrial revolution but caused some critical problems such as exhaustion of resources and global warming. Also, current power plants require too much high cost and long time for establishment and facilities to provide electricity. Thus, developing new power production systems with environmental friendliness and low-cost is critical global needs. There are some emerging energy harvesting

technologies such as thermoelectric, piezoelectric, and triboelectric nanogenerators, which have great advantages on eco-friendly low-cost materials, simple fabrication, and various operating sources. Since the introduction of various energy harvesting technologies, many novel designs and applications as power suppliers and physical sensors in the world have been demonstrated based on their unique advantages. In this Special Issue, we would like to address and share basic approaches, new designs, and industrial applications related to thermoelectric, piezoelectric, and triboelectric devices which are on-going in Korea. With this Special Issue, we aim to promote fundamental understanding and to find novel ways to achieve industrial product manufacturing for energy harvesters.

"5 solved Question papers and 5 self-assessments papers and 5 self-assessment papers with hints covering important concepts from an examination perspective. All typologies of questions specified by CISCE included for better examination success . On tips notes for quick revision . Answering tips for better understanding of the concepts. Mind maps to unlock the imagination and come up with new ideas. Examiner comments for clearer thinking."

This high-yield reference book focuses on the clinical, technical, and pathological aspects of endobronchial ultrasound-guided transbronchial needle aspiration (EBUS-TBNA). Its reviews cover all aspects of EBUS-TBNA, including the clinical perspective, technical aspects of the procedure, and cytomorphology of common and uncommon entities, as well as highlights

diagnostic challenges. Each chapter features a multitude of full-color high-resolution images and includes key references to the current literature in the field.

Additionally, reference tables and informative figures highlight the salient points. The book is unique in that it is written by experienced thoracic surgeons, pulmonary medicine physicians, and cytopathologists who use EBUS-TBNA in a large medical center. This publication is of interest to individuals learning and practicing cytopathology, in addition to clinicians practicing pulmonary/thoracic medicine or surgery. In short, it provides important pearls of wisdom to create a comprehensive reference for all physicians involved with EBUS-TBNA.

Applying the general deterministic approach of systems computational biology, the monograph considers questions related to the biomechanics of the human urinary bladder in conjunction with the peripheral and central nervous systems. The step-by-step development of mathematical models of separate structural elements and their assembly into a unique self-regulatory system offers, for the first time, a holistic overview and allows the investigation of the dynamics of the lower urinary tract system at its hierarchical levels. This book provides a coherent description and explanation for intertwined intracellular pathways in terms of spatiotemporal, whole body, tractable representations which are supported by numerous computational simulations. Key Features It reconstructs accurately the cytoarchitecture and morphofunctional relationships between the elements of the central nervous (brain) and genitourinary (urinary

bladder system). Offers for the first time a both quantitative and qualitative, assessment of the neurohormonal and mechanobiological processes involved in the process. Provides a comprehensive description for intertwined regulatory pathways in terms of spatiotemporal dynamic representations. Encourages the reader to develop and apply a unique holistic approach to solving complex biomedical problems in the area of growth and remodeling of the urinary bladder through application of modern methods of computational biology.

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