

Question Bank Nptel

This book starts with an introduction to robots and robotics. Forward and inverse kinematics problems of serial manipulators have been dealt in details. After discussing trajectory planning schemes, inverse dynamics problem of serial manipulator has been solved. A separate chapter has been devoted to the analysis of wheeled robot. It then concentrates on analysis of two-legged robot. The working principles of different types of sensors used in robots have been explained in one chapter. Various steps involved in robot vision have then been discussed in detail. The last chapter deals with different motion planning schemes of robots. It has been written to fulfill the requirements of a large number of readers belonging to various disciplines of engineering. It will be very much helpful to the students, scientists and practicing engineers.

The COVID-19 pandemic created a ripple effect that impacted education worldwide, felt from Pre-K through higher education. In response to the pandemic, teachers, parents, and students shifted to teaching and learning online to adjust to the affordances found in digital spaces. However, challenges quickly arose, and it was found that research was sorely needed on adapting learning to these digital spaces, including addressing issues with equitable access to technological tools, meeting the social emotional needs of all learners, and developing appropriate teaching strategies for young children in online spaces. Situating our understanding of emerging research in this area of remote teaching and learning in Pre-K through higher education is critical as we look to build upon evidence-based practices to better support 21st-century educators and learners. Cases on Practical Applications for Remote, Hybrid, and Hyflex Teaching presents emerging case studies on the impacts of the COVID-19 pandemic and reports and responds to early evidence of these impacts and the predicted future impacts for students, families, teachers, policymakers, and higher education. Building on knowledge of how teaching and learning in digital spaces work, the literature presented in this book captures preliminary findings and emerging research examining how educators leverage teaching and learning across platforms and modalities and shares stories on how educators, families, and communities responded to the challenges of teaching and learning online to ensure all students were engaged and fully supported while learning remotely and as they transitioned back to the classroom. Covering topics such as pedagogies, remote teaching, and parental responses, it is ideal for teachers, academicians, preservice teachers, professors, researchers, community education providers, and students.

This book presents the current advances and emerging trends in digital technologies for learning and education through a number of invited chapters on key research areas. It addresses information and communications technology (ICT) in a global context, reporting on emerging trends and issues in four areas – basic education, technical and vocational education, distance and continuing education and higher education –, as these four areas represent the primary contexts in which ICT is used to support learning and instruction. This book provides a brief overview of the potential benefits of ICT used in education and some of the best approaches in which different ICTs have been used in education thus far in a global context. It also presents the expertise and the most current research and practices of recognized international educators and researchers in the field of ICT in education. Third, this volume is both informative and transformative in its coverage of the conceptual and practical impact of technology on current educational practices, making it a valuable resource for policymakers, educators and educational researchers around the globe.

Presents algorithmic techniques for solving problems in bioinformatics, including applications that shed new light on molecular biology This book introduces algorithmic techniques in bioinformatics, emphasizing their application to solving novel problems in post-genomic molecular biology. Beginning with a thought-provoking discussion on the role of algorithms in twenty-first-century bioinformatics education, Bioinformatics Algorithms covers: General algorithmic techniques, including dynamic programming, graph-theoretical methods, hidden Markov models, the fast Fourier transform, seeding, and approximation algorithms Algorithms and tools for genome and sequence analysis, including formal and approximate models for gene clusters, advanced algorithms for non-overlapping local alignments and genome tilings, multiplex PCR primer set selection, and sequence/network motif finding Microarray design and analysis, including algorithms for microarray physical design, missing value imputation, and meta-analysis of gene expression data Algorithmic issues arising in the analysis of genetic variation across human population, including computational inference of haplotypes from genotype data and disease association search in case/control epidemiologic studies Algorithmic approaches in structural and systems biology, including topological and structural classification in biochemistry, and prediction of protein-protein and domain-domain interactions Each chapter begins with a self-contained introduction to a computational problem; continues with a brief review of the existing literature on the subject and an in-depth description of recent algorithmic and methodological developments; and concludes with a brief experimental study and a discussion of open research challenges. This clear and approachable presentation makes the book appropriate for researchers, practitioners, and graduate students alike.

Introduction to IoT

Techniques and Applications

Health and Environmental Impacts

National conference on Applied Science and Humanities

The Future of Knowledge Management

Mastering Blockchain

This textbook focuses on the members of the digital value chain of eBusiness and eCommerce and dedicates a separate chapter to each member part: eProducts & eServices, eProcurement, eMarketing, eContracting, eDistribution, ePayment, as well as eCustomer Relationship Management.

In addition to business models and business webs, digital procurement and marketing processes are likewise addressed such as electronic negotiation processes, security questions with digital signatures, as well as electronic supplier relationship management and customer relationship management. The topics are described based on explicit procedures and descriptive examples of application. The gradual set-up of an electronic Webshop for DVD's serves as a continuous case study. The book is directed towards students of economics at universities and technical colleges; it is also suitable for executives, project leaders, and company experts who deal with the digital value chain.

Exploring theories and applications developed during the last 30 years, Digital Geometry in Image Processing presents a mathematical treatment of the properties of digital metric spaces and their relevance in analyzing shapes in two and three dimensions. Unlike similar books, this one connects the two areas of image processing and digital geometry,

The COVID-19 pandemic has impacted all aspects of human existence—including the education sector. The pandemic has triggered a paradigm shift in the future of education, and thus, the current practices must transition to the “new normal.” For better or for worse, the practices and technologies used within learning environments must drastically change in the aftermath of the COVID-19 pandemic. Policies and Procedures for

the Implementation of Safe and Healthy Educational Environments: Post-COVID-19 Perspectives discusses the policies and procedures used in the implementation of safe and healthy educational environments both during and after the COVID-19 pandemic. It shares the best practices and presents the opportunity to learn from educator experiences in the time of crisis. Covering topics such as digital accessibility, healthy educational environments, and social-emotional development, this book is essential for educators in both K-12 and higher education settings, researchers, education administrators, policymakers, pre-service teachers, and academicians.

Presents information how to spot and sidestep roadblocks on the entrepreneurial journey and sets readers on a path to startup success.

Introduction to Educational Technology

English Language for Competitive Exams (SSC/MBA/Banking/Defence/Airforce/Railways/Insurance)

Policies and Procedures for the Implementation of Safe and Healthy Educational Environments: Post-COVID-19 Perspectives

Post-COVID-19 Perspectives

Integrated River Basin Development

History, Themes, and Challenges

International experts discuss how to restore degraded ecosystems and bring water resources to a level at which they can be sustained naturally. Examines the relationships between the various water-related activities of man and formulates acceptable tactics for the integrated development of river basins.

The construction of buildings and structures relies on having a thorough understanding of building materials. Without this knowledge it would not be possible to build safe, efficient and long-lasting buildings, structures and dwellings. Building materials in civil engineering provides an overview of the complete range of building materials available to civil engineers and all those involved in the building and construction industries. The book begins with an introductory chapter describing the basic properties of building materials. Further chapters cover the basic properties of building materials, air hardening cement materials, cement, concrete, building mortar, wall and roof materials, construction steel, wood, waterproof materials, building plastics, heat-insulating materials and sound-absorbing materials and finishing materials. Each chapter includes a series of questions, allowing readers to test the knowledge they have gained. A detailed appendix gives information on the testing of building materials. With its distinguished editor and eminent editorial committee, Building materials in civil engineering is a standard introductory reference book on the complete range of building materials. It is aimed at students of civil engineering, construction engineering and allied courses including water supply and drainage engineering. It also serves as a source of essential background information for engineers and professionals in the civil engineering and construction sector. Provides an overview of the complete range of building materials available to civil engineers and all those involved in the building and construction industries Explores the basic properties of building materials featuring air hardening cement materials, wall and roof materials and sound-absorbing materials Each chapter includes a series of questions, allowing readers to test the knowledge they have gained

Introduction to IoT Cambridge University Press

Mastering Blockchain, Third Edition is the blockchain bible to equip you with extensive knowledge of distributed ledgers, cryptocurrencies, smart contracts, consensus algorithms, cryptography and blockchain platforms such as Ethereum, Bitcoin, and many more.

Reinforced Concrete Bridges

Managing the Digital Value Chain

Handbook on Battery Energy Storage System

OBJECT-ORIENTED PROGRAMMING WITH C++ AND JAVA

Data Structures and Algorithms Using Python

Teaching Aptitude and Attitude Test Book

Air pollution is recognized as one of the leading contributors to the global environmental burden of disease, even in countries with relatively low concentrations of air pollution. Air Pollution: Health and Environmental Impacts examines the effect of this complex problem on human health and the environment in different settings around the world. |

The broad, yet in-depth coverage of C programming language, within the context of today's C programming style, makes this book as useful for practicing professionals as it is for beginning programmers. This study guide solves many sample problems using other programming languages so readers can compare several popular languages. It also includes clear explanations of most of the features in the current ANSI standard. The emphasis throughout is on designing clear, legible, modular and efficient programs.

Introduction to E-commerce discusses the foundations and key aspects of E-commerce while focusing on the latest developments in the E-commerce industry.

Practical case studies offer a useful reference for dealing with various issues in E-commerce such as latest applications, management techniques, or

psychological methods. Dr. Zheng Qin is currently Director of the E-Commerce Institute of Xi'an Jiaotong University.

English is globally recognized language for cross-border business communication. As a dominant business language, fluency and expertise in the language can help you build great opportunities of professional growth. The paper of English language usually contains Questions relating to Grammatical Concepts, Word Power and Compositional English in almost all competitive examinations like Bank PO, Bank Clerical, CDS, NDA, Railways, etc. The book of General English includes over 600 Practice Exercises and 10,000 Words & Sentences Structures for all Competitive exams divided in 32 chapters. Each chapter comprehensively contains short synopsis, detailed description of important rules and enough practice exercises. Almost all types of objective questions and previous years' questions that appear in Competitive examinations have been compiled together to help the candidates in understanding the rationale behind the answers. Table of Content Spotting the Errors, Phrase Substitution and Sentence Improvement, Ordering of Sentences, Ordering of Words/Rearranging the Sentence, Cloze Test/Passages, Choosing Appropriate Words, Double Blanks in a Sentence, Related Pair of Words, Synonyms/Antonyms, Idioms and Phrases, Homonyms, Phrasal Verbs, Comprehension, Tense, Forms of Verbs, Modals, Subject-Verb Agreement, Non-Finites, Noun, Pronoun, Articles, Preposition, Conjunction, Adjectives and Determiners, Adverbs, Question Tags, Conditionals, Un-English and Superfluous Expressions Reported Speech (Direct- Indirect Narrations), Active-Passive...

An Evaluation of its Implementation in OECD Countries

Schaum's Outline of Theory and Problems of Programming with C

Software Testing

Introduction to Computer Networks and Cybersecurity

A Craftsman's Approach, Fourth Edition

ICT in Education in Global Context

If a network is not secure, how valuable is it? Introduction to Computer Networks and Cybersecurity takes an integrated approach to networking and cybersecurity, highlighting the interconnections so that you quickly understand the complex design issues in modern networks. This full-color book uses a wealth of examples and illustrations to effectively

This book is designed to introduce object-oriented programming (OOP) in C++ and Java, and is divided into four areas of coverage:

Preliminaries: Explains the basic features of C, C++, and Java such as data types, operators, control structures, storage classes, and array structures. Part I : Covers classes, objects, data abstraction, function overloading, information hiding, memory management, inheritance, binding, polymorphism, class template using working illustrations based on simple concepts. Part II : Discusses all the paradigms of Java programming with ready-to-use programs. Part III : Contains eight Java packages with their full structures. The book offers straightforward explanations of the concepts of OOP and discusses the use of C++ and Java in OOP through small but effective illustrations. It is ideally suited for undergraduate/postgraduate courses in computer science. The IT professionals should also find the book useful.

This handbook serves as a guide to deploying battery energy storage technologies, specifically for distributed energy resources and flexibility resources. Battery energy storage technology is the most promising, rapidly developed technology as it provides higher efficiency and ease of control. With energy transition through decarbonization and decentralization, energy storage plays a significant role to enhance grid efficiency by alleviating volatility from demand and supply. Energy storage also contributes to the grid integration of renewable energy and promotion of microgrid.

Engineering Fluid Mechanics guides students from theory to application, emphasizing critical thinking, problem solving, estimation, and other vital engineering skills. Clear, accessible writing puts the focus on essential concepts, while abundant illustrations, charts, diagrams, and examples illustrate complex topics and highlight the physical reality of fluid dynamics applications. Over 1,000 chapter problems provide the "deliberate practice"—with feedback—that leads to material mastery, and discussion of real-world applications provides a frame of reference that enhances student comprehension. The study of fluid mechanics pulls from chemistry, physics, statics, and calculus to describe the behavior of liquid matter; as a strong foundation in these concepts is essential across a variety of engineering fields, this text likewise pulls from civil engineering, mechanical engineering, chemical engineering, and more to provide a broadly relevant, immediately practicable knowledge base. Written by a team of educators who are also practicing engineers, this book merges effective pedagogy with professional perspective to help today's students become tomorrow's skillful engineers.

Mathematics for Machine Learning

General English for All Competitive Examinations

Design: Creation of Artifacts in Society

Indian Poetry in English

Why Startups Fail

Communication Systems

The fundamental mathematical tools needed to understand machine learning include linear algebra, analytic geometry, matrix decompositions, vector calculus, optimization, probability and statistics. These topics are traditionally taught in disparate courses, making it hard for data science or computer science students, or professionals, to efficiently learn the mathematics. This self-contained textbook bridges the gap between mathematical and machine learning texts, introducing the mathematical concepts with a minimum of prerequisites. It uses these concepts to derive four central machine learning methods: linear regression, principal component analysis, Gaussian mixture models and support vector machines. For students and others with a mathematical background, these derivations provide a starting point to machine learning texts. For those learning the mathematics for the first time, the methods help build intuition and practical experience with applying mathematical concepts. Every chapter includes worked examples and exercises to test understanding. Programming tutorials are offered on the book's web site.

This updated and reorganized fourth edition of Software Testing: A Craftsman's Approach applies the strong mathematics content of previous editions to a coherent treatment of Model-Based Testing for both code-based (structural) and specification-based (functional) testing. These techniques are extended from the usual unit testing discussions to full coverage of less understood levels integration and system testing. The Fourth Edition: Emphasizes technical inspections and is supplemented by an appendix with a full package of documents required for a sample Use Case technical inspection Introduces an innovative approach that merges the Event-Driven Petri Nets from the earlier editions with the "Swim Lane" concept from the Unified Modeling Language (UML) that permits model-based testing for four levels of interaction among constituents in a System of Systems Introduces model-based development and provides an explanation of how to conduct testing within model-based development environments Presents a new section on methods for testing software in an Agile programming environment Explores test-driven development, reexamines all-pairs testing, and explains the four contexts of software testing Thoroughly revised and updated, Software Testing: A Craftsman ' s Approach, Fourth Edition is sure to become a standard reference for those who need to stay up to date with evolving technologies in software testing. Carrying on the tradition of previous editions, it will continue to serve as a valuable reference for software testers, developers, and engineers.

In this book leading scholars debate current issues and shed light on future prospects in the field of Knowledge Management. It presents new perspectives on knowledge and learning, including modes of knowing in practice, transactive knowledge systems, organizational narrations, and challenges conventional wisdom. It deals with emerging issues in knowledge and innovation embracing models of distributed innovation and forms of co-operation. It also includes problems in managing knowledge, leadership issues and how to measure knowledge.

Industrial IoT (IIoT) and Industry 4.0 are newly developing and fast emerging domains of interest among students, researchers, and professionals in academia and industry. Due to the popular demand of this topic, Introduction to Industrial Internet of Things and Industry 4.0 is written to serve a diverse readership from the domains of computer science and engineering, mechanical engineering, information technology, industrial engineering, electronics engineering, and other related branches of engineering. Based on the lead author ' s massive open online courses (MOOCs), this book can be used as a textbook on the emerging paradigm of Industry 4.0 and IIoT, as well as a reference for professionals working in sectors of IIoT. The book covers the significant aspects of IIoT in detail, including sensors, actuators, data transmission, and data acquisition, which form the core of IIoT. Topics and concepts are presented in a comprehensive manner, so that readers can develop expertise and knowledge. The book helps beginners to gain a basic idea of Industry 4.0 and IIoT as the first section is an overview of IoT applications, infrastructure-based protocols, cloud computing, and fog computing. The second section is designed to impart a basic knowledge of Industry 4.0 and IIoT as well as of the different phases of development in industry. Delving into more advanced areas, other sections in the book cover: The business models and reference architecture of IIoT The technological aspects of Industry 4.0 and IIoT Predictive and prescriptive analytics applied in IIoT-based implementations Applications and case studies of IIoT Key enabling technologies of IIoT To aid students and professional master IIoT and Industry 4.0, the book includes conceptual questions, exercises, and learning objectives.

Solutions Manual

Usable Security

Emerging Trends Report 2013-2014

Fundamentals of Machine Design

Engineering Fluid Mechanics

Handbook of Research on Emerging Trends and Technologies in Library and Information Science

There has been roughly 15 years of research into approaches for aligning research in Human Computer Interaction with computer Security, more colloquially known as 'usable security.' Although usability and security were once thought to be inherently antagonistic, today there is wide consensus that systems that are not usable will inevitably suffer security failures when they are deployed into the real world. Only by simultaneously addressing both usability and security concerns will we be able to build systems that are truly secure. This book presents the historical context of the work to date on usable security and privacy, creates a taxonomy for organizing that work, outlines current research objectives, presents lessons learned, and makes suggestions for future research.

Volume is indexed by Thomson Reuters BCI (WoS). A forum of researchers, educators and engineers involved in various aspects of Machine Design provided the inspiration for this collection of peer-reviewed papers. The resultant dissemination of the latest research results, and the exchange of views concerning the future research directions to be taken in this field will make the work of immense value to all those having an interest in the topics covered. The book reflects the cooperative efforts made in seeking out the best strategies for effecting improvements in the quality and the reliability of machines and machine parts and for extending their fields of application.

Theory of Elasticity and Plasticity is designed as a textbook for both undergraduate and postgraduate students of engineering in civil, mechanical and aeronautical disciplines. This book has been written with the objective of bringing the concepts of elasticity and plasticity to the students in a simplified and comprehensive manner. The basic concepts, definitions, theory as well as practical applications are discussed in a clear, logical and concise manner for better understanding. Starting with, general relationships between stress, strain and

deformations, the book deals with specific problems on plane stress, plane strain and torsion in non-circular sections. Advanced topics such as membrane analogy, beams on elastic foundations and plastic analysis of pressure vessels are also discussed elaborately. For better comprehension, the text is well supported with: □ Large number of worked-out examples in each chapter. □ Well-labelled illustrations. □ Numerous Review Questions that reinforce the understanding of the subject. As all the concepts are covered extensively with a blend of theory and practice, this book will be a useful resource to the students.

The objective of *Off-Balance Sheet Activities* is to gain insights into, and propose meaningful solutions to, those issues raised by the current proliferation of off-balance sheet transactions. The book has its origins in a New York University conference that focused on this topic. Jointly undertaken by the Vincent C. Ross Institute of Accounting Research and New York University's Salomon Center for the study of Financial Institutions at the Stern School of Business, the conference brought together academic researchers and practitioners in the field of accounting and finance to address the issues with the broad-mindedness requisite of a group whose approaches to solutions are as different from each other as their respectively theoretical and applied approaches to the disciplines of finance and accounting. The essays are divided into two sections. The first covers issues surrounding OBS activities and banking and begins with a brief introduction that places the essays into context. OBS activities and the underinvestment problem, whether loan sales are really OBS, and money demand and OBS liquidity are examined in detail. Section two, which also begins with a brief introduction, focuses on issues of securitized assets and financing. A report on recognition and measurement issues in accounting for securitized assets is followed by three separate discussion essays. Other subjects covered include contract theoretic analysis of OBS financing, the use of OBS financing to circumvent financial covenant restrictions, and debt contracting and financial contracting. The latter two contributions are also followed by discussion essays. This unique collection of papers will prove to be an interesting and valuable tool for accounting and finance professionals as well as for academics involved in these fields. It will also be an important addition to public, college, and university libraries.

Off-balance Sheet Activities

A New Roadmap for Entrepreneurial Success

The Uruguay Round Agreement on Agriculture An Evaluation of its Implementation in OECD Countries

THEORY OF ELASTICITY AND PLASTICITY

Air Pollution

A valuable guide for new and experienced readers, featuring the complex and massive world of IoT and IoT-based solutions.

English is an essential part of the curriculum of any competitive examination and this book helps in improving one's grasp on the language that would give an edge for those sitting to take make or break examination. English Language for all competitive exams is a comprehensive book designed to cater to every student appearing for competitive exams like SSC/Banking/Insurance/MBA/Railways/NDA/CDS/UPSC/GATE/B.Ed/Hotel Management/CLAT etc. The book includes over 2500 Practice Questions for all Competitive exams. The book covers all important topics and every chapter also have detailed theory along with tips and techniques. The book is written in simple words, is easy to use and understand. Each chapter comprehensively contains detailed description of important rules and enough practice exercises with detailed explanations. Almost all types of objective questions with new pattern that appear in Competitive examinations have been compiled together to help the candidates in understanding the rationale behind the answers.

This book evaluates the implementation of the Uruguay Round on Agriculture, how effective it has been, and what policy lessons can be drawn.

This new anthology features nearly 200 poems by thirty-one poets representing over 160 years of Indian Poetry in English.

Digital Geometry in Image Processing

Introduction to Industrial Internet of Things and Industry 4.0

A deep dive into distributed ledgers, consensus protocols, smart contracts, DApps, cryptocurrencies, Ethereum, and more, 3rd Edition

Notes on Quantum Mechanics

Fundamentals of Robotics

Cases on Practical Applications for Remote, Hybrid, and Hyflex Teaching

The lecture notes presented here in facsimile were prepared by Enrico Fermi for students taking his course at the University of Chicago in 1954. They are vivid examples of his unique ability to lecture simply and clearly on the most essential aspects of quantum mechanics. At the close of each lecture, Fermi created a single problem for his students. These challenging exercises were not included in Fermi's notes but were preserved in the notes of his students. This second edition includes a set of these assigned problems as compiled by one of his former

students, Robert A. Schluter. Enrico Fermi was awarded the Nobel Prize for Physics in 1938.

With the perpetual advancements of technology, library and information science professionals are tasked with understanding these technologies and providing accurate and comprehensive information to other potential users. These professionals must develop best practices for understanding these technologies in order to best serve other users. The Handbook of Research on Emerging Trends and Technologies in Library and Information Science is a critical research book that examines advancing technologies and new innovations and their influences on library and information sciences for improved best practices. Featuring an array of topics such as digital libraries, distance education, and information literacy, this publication is essential for librarians, knowledge managers, information retrieval specialists, library and information science professionals, information scientists, researchers, web librarians, academicians, educators, IT specialists, and managers.

eBusiness & eCommerce

Manipulators, Wheeled and Legged Robots

Building Materials in Civil Engineering

Bioinformatics Algorithms

Introduction to E-commerce