Irrigation Engineering By P N Modi

BARTLETT CERVANTES

Irrigation Engineering Cambridge University Press
Designed primarily as a textbook for the undergraduate students of civil and agricultural engineering, this comprehensive and well-written text covers irrigation system and hydroelectric power development in lucid language. The text is organized in two parts. Part I (Irrigation Engineering) deals with the methods of water distribution to crops, water requirement of crops, soil-water relationship, well irrigation and hydraulics of well, canal irrigation and different theories of irrigation canal design. Part II (Water Power Engineering) offers the procedures of harnessing the hydropotential of river valleys to produce electricity. It also discusses different types of dams, surge tanks, turbines, draft tubes, power houses and their components. The text emphasizes on the solutions of unsteady equations of surge tank and pipe carrying water to power house under water hammer situation. It also includes computer programs for the numerical solutions of hyperbolic partial differential equations. KEY FEATURES : Provides worked out examples and problems (in SI units). Presents all possible methods of design including Ranga-Raju-Misri's new approach of canal design. Gives numerous illustrations to reinforce the understanding of the subject. Besides undergraduate students, this book will also be of immense use to the postgraduate students of water resources engineering.
Manual of Irrigation Engineering Springer
Irrigation engineering is a branch of civil engineering that is involved in controlling and harnessing the various natural sources of water. This branch investigates various aspects of agriculture and irrigation in detail to determine the future prospects of irrigation. Irrigation engineering analyzes the efficiency of different irrigation systems to monitor their benefits and drawbacks. The main responsibility of irrigation engineering is to design and plan cost-effective and efficient irrigation systems. There are various advantages as well as disadvantages of developing irrigation systems but the benefits are far more than its disadvantages. One of the primary responsibilities of irrigation engineers deals with the problems that may arise in the watershed or the agricultural fields. In addition, irrigation engineers also deal with aspects such as the study of problems related to water, soil, crop relationship, and the design and structure of dams, canals, and other hydraulic and irrigation structures. This book is compiled in such a manner, that it will provide in-depth knowledge about the theory and practice of irrigation engineering. With state-of-the-art inputs by acclaimed researchers in this field, it targets scholars and professionals.
Text Book of Irrigation Engineering Atlantic Publishers & Dist
The application of limited amounts of water to plants at required intervals is known as irrigation. It helps in the growth of crops and in maintaining landscapes. It also plays a vital role in re-vegetating the disturbed soils in dry areas. The branch of engineering which deals with harnessing and controlling the water which is obtained from natural sources and distributing it for agricultural purposes is known as irrigation engineering. There are various types of irrigation methods such as micro-irrigation, drip irrigation, and sprinkler or overhead irrigation. Micro-irrigation uses a piped network to distribute water under low pressure. Drip irrigation is a system that drops water directly at the plant's roots. Sprinkler or overhead irrigation is a system where water is piped to the central locations within the field and distributed by high-pressure overhead sprinklers. This book provides comprehensive insights into the field of irrigation engineering. It will serve as a reference to a broad spectrum of readers. Those in search of information to further their knowledge will be greatly assisted by this textbook.
Irrigation and Water Resources Engineering Forgotten Books
This textbook provides a comprehensive treatment of irrigation engineering for advanced undergraduates and graduate students. It does not require a background in calculus, hydrology, or hydraulics, offering a one-stop overview of the entire field of study. It includes everything a student of irrigation engineering needs to know: concepts of climate, soils, crops, water quality, hydrology, and hydraulics, as well as their application to design and environmental management. To demonstrate the practical applications of the theories discussed, there are over 300 worked examples and end-of chapter exercises. The exercises allow readers to solve real-world problems and apply the information they've learned to a diverse range of scenarios. To further prepare students for their future careers, each chapter includes many illustrative diagrams and tables containing data to help design irrigation systems. For instructors' use when planning and teaching, a solutions manual can be found online alongside a suite of PowerPoint lecture slides.
Irrigation Engineering Wentworth Press
This textbook focuses specifically on the combined topics of irrigation and drainage engineering. It emphasizes both basic concepts and practical applications of the latest technologies available. The design of irrigation, pumping, and drainage systems using Excel and Visual Basic for Applications programs are explained for both graduate and undergraduate students and practicing engineers. The book emphasizes environmental protection, economics, and engineering design processes. It includes detailed chapters on irrigation economics, soils, reference evapotranspiration, crop evapotranspiration, pipe flow, pumps, open-channel flow, groundwater, center pivots, turf and landscape, drip, orchards, wheel lines, hand lines, surfaces, greenhouse hydroponics, soil water movement, drainage systems design, drainage and wetlands contaminant fate and transport. It contains summaries, homework problems, and color photos. The book draws from the fields of fluid mechanics, soil physics, hydrology, soil chemistry, economics, and plant sciences to present a broad interdisciplinary view of the fundamental concepts in irrigation and drainage systems design.
Irrigation Engineering Nabu Press
This book is an invaluable resource for anyone involved in irrigation engineering. It covers a wide range of topics, from the design of irrigation systems to the management of water resources. The author, Robert Burton Buckley, was a respected expert in the field of irrigation and his practical advice is based on years of experience. Whether you are an experienced engineer or just starting out, the Irrigation Pocket Book is an essential reference. This work has been selected by scholars as being culturally important, and is part of the knowledge base of civilization as we know it. This work is in the "public domain in the United States of America, and possibly other nations. Within the United States, you may freely copy and distribute this work, as no entity (individual or corporate) has a copyright on the body of the work. Scholars believe, and we concur, that this work is important enough to be preserved, reproduced, and made generally available to the public. We appreciate your support of the preservation process, and thank you for being an important part of keeping this knowledge alive and relevant.
IRRIGATION AND WATER POWER ENGINEERING New Age International
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Irrigation Management Trieste Publishing
Excerpt from Manual of Irrigation Engineering The need of a comprehensive treatise on irrigation has been so frequently brought to my attention during the last few years, that I have

undertaken to write this book with the hope that it may help those who are engaged in the study or practice of irrigation engineering. It is chiefly the result of original investigation, the descriptions of works being made from personal observation in America, Europe, and India. About the Publisher Forgotten Books publishes hundreds of thousands of rare and classic books. Find more at www.forgottenbooks.com This book is a reproduction of an important historical work. Forgotten Books uses state-of-the-art technology to digitally reconstruct the work, preserving the original format whilst repairing imperfections present in the aged copy. In rare cases, an imperfection in the original, such as a blemish or missing page, may be replicated in our edition. We do, however, repair the vast majority of imperfections successfully; any imperfections that remain are intentionally left to preserve the state of such historical works.

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Sprinkler and Drip Irrigation Forgotten Books

This book is simply a compilation of facts, figures and formulae bearing on the everyday work of an irrigation engineer. It has its origins in the author's peronal notebooks from 33 years' work in India.

Facts, Figures, and Formulae for Irrigation Engineers Scientific Publishers

The Book On Irrigation Management: A System Approach Volume I Was Published In 1990 By M/S Atlantic Publishers And Distributors Which Got Very Good Response All Over The Country. The Concept Of Irrigation Management Includes Many Entities. The Attempt Has Been Made To Throw Light On The Left Over Matters In This Volume. It Covers Various Chapters Pertaining To Farm Irrigation Management, Methods Of Irrigation And Drainage, Scheduling Of Irrigation Based On Consumptive Use, Moisture Regimes For Optimum Plant Growth, Relationship Between Irrigation And Crop Production As Well As Aspect Of Irrigation Engineering, Soils And Agronomy. It Deals With The Inter¬Disciplinary Approach On The Irrigation Management As Whole System For Interaction Between The Concerned.

Irrigation Engineering Legare Street Press

This textbook is a comprehensive volume on sprinklers and drip irrigation and covers all the basic and fundamentals concepts related to these topics. It is the first book to consider relative-flow-ratio as an evaluation criterion for both sprinkler and drip irrigation designs. It also discusses various types of sprinklers (used for irrigation), their complex layouts, design methodologies, selection criteria explained with practical examples, and their operations and maintenance under different conditions. In addition to operation and maintenance of drip irrigation components, the book also explains the drip irrigation hydraulics and various design aspects and the effect of the same on their performance. It also has one important chapter on Rhizosphere modelling which introduces the state-of-the-art technologies in optimal irrigation and fertigation scheduling. Worked out examples and solved problems in the chapters would aid to learning and understanding of the topic among the students. Given the contents, the book will be extremely useful for the undergraduate and postgraduate students of agriculture engineering, irrigation engineering and civil engineering. This textbook will also be useful for researchers, engineers and professionals working in these areas.

Laboratory and Field Manual on Irrigation Engineering Springer

The Book Irrigation And Water Resources Engineering Deals With The Fundamental And General Aspects Of Irrigation And Water Resources Engineering And Includes Recent Developments In Hydraulic Engineering Related To Irrigation And Water Resources Engineering. Significant Inclusions In The Book Are A Chapter On Management (Including Operation, Maintenance, And Evaluation) Of Canal Irrigation In India, Detailed Environmental Aspects For Water Resource Projects, A Note On Interlinking Of Rivers In India, And Design Problems Of Hydraulic Structures Such As Guide Bunds, Settling Basins Etc.The First Chapter Of The Book Introduces Irrigation And Deals With The Need, Development And Environmental Aspects Of Irrigation In India. The Second Chapter On Hydrology Deals With Different Aspects Of Surface Water Resource. Soil-Water Relationships Have Been Dealt With In Chapter 3. Aspects Related To Ground Water Resource Have Been Discussed In Chapter 4. Canal Irrigation And Its Management Aspects Form The Subject Matter Of Chapters 5 And 6. Behaviour Of Alluvial Channels And Design Of Stable Channels Have Been Included In Chapters 7 And 8, Respectively. Concepts Of Surface And Subsurface Flows, As Applicable To Hydraulic Structures, Have Been Introduced In Chapter 9. Different Types Of Canal Structures Have Been Discussed In Chapters 10, 11, And 13. Chapter 12 Has Been Devoted To Rivers And River Training Methods. After Introducing Planning Aspects Of Water Resource Projects In Chapter 14, Embankment Dams, Gravity Dams And Spillways Have Been Dealt With, Respectively, In Chapters 15, 16 And 17.The Students Would Find Solved Examples (Including Design Problems) In The Text, And Unsolved Exercises And The List Of References Given At The End Of Each Chapter Useful.

Principles of Irrigation Engineering Callisto Reference

The irrigation water is considered as the essential input for crop production. Over exploitation of natural water resources has caused a menace for the future human generations. The depletion of underground water table in high productivity areas and under utilization of the water resources in rain fed areas of the country, poor irrigation efficiency and high seepage losses from conveyance system, poor land development and mismanagement of the irrigation water resources has acquired alarming proportions. As the share of water for agriculture in future is going to reduce, there will be tremendous pressure to produce more per drop of water in order to meet the food and other requirements of burgeoning population of the country. The existing irrigation water resources are not utilized judiciously and their mismanagement has lead to problems like low production efficiency, salinization, water logging and degradation of land. To manage these problems and increase the production efficiency of irrigation, it is pertinent to adopt judicious methods of irrigation water use, by efficient on-farm irrigation management based on scientific approach. Therefore, a comprehensive knowledge of available soil moisture and its constants, scheduling and quality of irrigation water and proper drainage techniques is crucial. This manual on irrigation engineering is an attempt to fulfil this urgent need as it covers all major aspects of irrigation water management. Although, manual is meant primarily for the students of agricultural universities, yet it will provide valuable basic information and guide to the scientific community and field functionaries.

Manual of Irrigation Engineering Syrawood Publishing House

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Irrigation Practice and Irrigation Engineering CRC Press

This book presents a variety of policy adoption methods, irrigation scheduling, and design procedures in micro irrigation engineering for horticultural crops. The chapters range from policy interventions to applications of systems for different crops and under different land conditions. Compiling valuable information and research, the book is divided into three main sections: Policy Options: Drip Irrigation Among Adopters Irrigation Scheduling of Horticultural Crops Design of Drip Irrigation Systems The editors present valuable research and information on micro irrigation methods in an effort to focus on innovation and evolving new paradigms for efficient utilization of water resources. The adoption of micro irrigation systems can be a panacea for irrigation related problems and can help to increase the yield and area under cultivation, especially for small farmers without abundant technological resources. Micro Irrigation Engineering for Horticultural Crops: Policy Options, Scheduling, and Design will be valuable for agricultural engineering students, irrigation engineers, and scientists/professors in engineering.

Irrigation Engineering CRC Press

Improving agricultural water use efficiency (WUE) is vitally important in many parts of the world due to the decreasing availability of water resources and the increasing competition for water between different users. Micro irrigation is an effective tool for conserving water resources. Studies have revealed a significant water savings, ranging from 40% to 70% under drip irrigation compared with surface irrigation. This new volume, Engineering Interventions in Sustainable Trickle Irrigation: Irrigation Requirements and Uniformity, Fertigation, and Crop Performance, presents valuable research that evaluates crop water and fertigation requirements, examines optimum irrigation and fertigation scheduling, and analyzes the performance of agricultural crops under micro irrigation. With an interdisciplinary perspective, this volume addresses the urgent need to explore and investigates the current shortcomings and challenges of water resources engineering, especially in micro irrigation engineering. The volume discusses crop water requirements, fertigation technology, and performance of agricultural crops under best management practices. The chapter authors present research studies on drip irrigated tomato, chilies, cucumber, eggplant, cabbage, garlic, sugarcane maize, cashew nut, sapota, banana, mango, and blueberries. Removing the research gap, this volume provides new information that will be valuable to those involved in micro irrigation engineering.

Principles of Irrigation Engineering, Arid Lands, Water Supply, Storage Works, Dams, Canals, Water Rights and Products

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Irrigation Engineering

Amit Student Pocket Dictionary