Textbook Of Hydrology Dr P Jaya Rami Reddy

This text combines the science and engineering of hydrogeology in an accessible, innovative style. As well as providing physical descriptions and characterisations of hydrogeological processes, it also sets out the corresponding mathematical equations for groundwater flow and solute/heat transport calculations. And, within this, the methodological and conceptual aspects for flow and contaminant transport modelling are discussed in detail. This comprehensive analysis forms the ideal textbook for graduate and undergraduate students interested in groundwater resources and engineering, and indeed its analyses can apply to researchers and professionals involved in the area.

The technological advances of recent years include the emergence of new remote sensing and geographic information systems that are invaluable for the study of wetlands, agricultural land, and land use change. Students, hydrologists, and environmental engineers are searching for a comprehensive hydrogeologic overview that supplements information on hydrologic processes with data on these new information technology tools. Environmental Hydrology, Second Edition builds upon the foundation of the bestselling first edition by providing a qualitative understanding of hydrologic processes while introducing new methods for quantifying hydrologic parameters and processes. Written by authors with extensive multidisciplinary experience, the text first discusses the components of the hydrologic cycle, then follows with chapters on precipitation, stream processes, human impacts, new information system applications, and numerous other methods and strategies. By updating this thorough text with the newest analytical tools and measurement methodologies in the field, the authors provide an ideal reference for students and professionals in environmental science, hydrology, soil science, geology, ecological engineering, and countless other environmental fields.

Understanding groundwater recharge is essential for successful management of water resources and modeling fluid and contaminant transport within the subsurface. This book provides a critical evaluation of the theory and assumptions that underlie methods for estimating rates of groundwater recharge. Detailed explanations of the methods are provided - allowing readers to apply many of the techniques themselves without needing to consult additional references. Numerous practical examples highlight benefits and limitations of each method. Approximately 900 references allow advanced practitioners to pursue additional information on any method. For the first time, theoretical and practical considerations for selecting and applying methods for estimating groundwater recharge are covered in a single volume with uniform presentation. Hydrogeologists, water-resource specialists, civil and agricultural engineers, earth and environmental scientists and agronomists will benefit from this informative and practical book. It can serve as the primary text for a graduate-level course on groundwater recharge or as an adjunct text for courses on groundwater hydrology or hydrogeology. For the benefit of students and instructors, problem sets of varying difficulty are available at http://wwwbrr.cr.usgs.gov/projects/GW_Unsat/Recharge_Book/

Hydroclimatology provides a systematic structure for analysing how the climate system causes time and space variations (both global and local) in the hydrologic cycle. Changes in the relationship between the climate system and the hydrologic cycle underlie floods, drought and possible future influences of global warming on water resources. Land-based data, satellite data, and computer models contribute to our understanding of the complex time and space variations of physical processes shared by the climate system and the hydrologic cycle. Blending key information from the fields of climatology and hydrology - which are not often found in a single volume - this is an ideal textbook for students in atmospheric science, hydrology, Earth and environmental science, geography, and environmental engineering. It is also a useful reference for academic researchers in these fields.

Introduction - 1st International Expert Meeting on Urban Flood Management

Urban Hydrology and Hydraulic Design

Mechanics of Groundwater in Porous Media

Climate Change and Water Resources

Elements of Physical Hydrology

Handbook of Applied Hydrology, Second Edition

Based on the bestselling book, Rivers of North America, this new guide stands as the only primary source of complete and comparative baseline data on the biological and hydrological characteristics of more than 180 of the highest profile rivers in Europe. With numerous full-color photographs and maps, Rivers of Europe includes conservation information on current patterns of river use and the extent to which human society has exploited and impacted them. Rivers of Europe provides the information ecologists and conservation managers need to better assess their management and meet the EU legislative good governance targets. Coverage on more than 180 European rivers Summarizes biological, ecological and biodiversity characteristics Provides conservation managers with information to resolve conflicts between recreational use of rivers, their use as a water supply, and the need to conserve natural habitats Data on river hydrology (maximum , minimum and average flow rates), seasonal variation in water flow Numerous full-color photographs Information on the underlying geology and its affect on river behaviour

A comprehensive, self-sufficient and up-to-date text providing complete information on various aspects of groundwater assessment, development and management. It gives a balanced presentation of theory and field practice using a multidisciplinary approach to aid in solving problems from a variety of data bases. The coverage in this book includes: Aquifer tests and evaluation of aquifer properties Stream gauging and measurement of discharge and stage of wells Ground water exploration Geomorphic and geologic control on ground water Estimation of individual components of ground water recharge, discharge and ground water balance Ground water development and management. The book contains a large number of figures, examples of complex interpretative techniques and methodologies, case histories, and problems along with answers. With its integrated, multidisciplinary approach, the book would serve as a valuable reference book to hydrogeologists, geologists, geophysicists, hydrologists, hydrometerologists, and irrigation,

agricultural and drilling engineers, as well as those concerned with planning and decision making. Researchers and students would also find this an indispensable text.

Fully Updated Hydrology Principles, Methods, and Applications Thoroughly revised for the first time in 50 years, this industry-standard resource features chapter contributions from a "who's who" of international hydrology experts. Compiled by a colleague of the late Dr. Chow, Chow's Handbook of Applied Hydrology, Second Edition, covers scientific and engineering fundamentals and presents all-new methods, processes, and technologies. Complete details are provided for the full range of ecosystems and models. Advanced chapters look to the future of hydrology, including climate change impacts, extraterrestrial water, social hydrology, and water security. Chow's Handbook of Applied Hydrology, Second Edition, covers: · The Fundamentals of Hydrology · Data Collection and Processing · Hydrology Methods · Hydrologic Processes and Modeling · Sediment and Pollutant Transport · Hydrometeorologic and Hydrologic Extremes · Systems Hydrology · Hydrology of Large River and Lake Basins · Applications and Design · The Future of Hydrology

Hydrology and water resources analysis can be looked at together, but this is the only book which presents the relevant material and which bridges the gap between scientific processes and applications in one text. New methods and programs for solving hydrological problems are outlined in a concise and readily accessible form. Hydrology and Water Resource Systems Analysis includes a number of illustrations and tables, with fully solved example problems integrated within the text. It describes a systematic treatment of various surface water estimation techniques; and provides detailed treatment of theory and applications of groundwater flow for both steady-state and unsteady-state conditions; time series analysis and hydrological simulation; floodplain management; reservoir and stream flow routing; sedimentation and erosion hydraulics; urban hydrology; the hydrological design of basic hydraulic structures; storage spillways and energy dissipation for flood control, optimization techniques for water management projects; and methods for uncertainty analysis. It is written for advanced undergraduate and graduate students and for practitioners. Hydrologists and water-related professionals will be helped with an unfamiliar term or a new subject area, or be given a formula, the procedure for solving a problem, or guidance on the computer packages which are available, or shown how to obtain values from a table of data. For them it is a compendium of hydrological practice rather than science, but sufficient scientific background is provided to enable them to understand the hydrological processes in a given problem, and to appreciate the limitations of the methods presented for solving it.

Peatland Restoration and Ecosystem Services

Subsurface Hydrology

Groundwater Science and Engineering

Hydroclimatology

Statistical Modelling in Hydrology

Water Supply Engineering

Publisher's Note: Products purchased from Third Party sellers are not guaranteed by the publisher for quality, authenticity, or access to any online entitlements included with the product. Understand the fundamentals, methods, and processes of modern hydrology This comprehensive engineering textbook offers a thorough overview of all aspects of hydrology and shows how to apply hydrologic principles for effective management of water resources. It presents detailed explanations of scientific principles along with real-world applications and technologies. Engineering Hydrology: An Introduction to Processes, Analysis, and Modeling follows a logical progression that builds on foundational concepts with modern hydrologic methods. Every hydrologic process is clearly explained along with current techniques for modeling and analyzing data. You will get practice problems throughout that help reinforce important concepts. Coverage includes: •The hydrologic cycle •Water balance •Components of the hydrologic cycle •Evapotranspiration •Infiltration and soil moisture •Surface water •Groundwater •Water quality •Hydrologic measurements •Streamflow measurement •Remote sensing and geographic information systems •Hydrologic analysis and modeling •Unit hydrograph models •River flow modeling •Design storm and design flood estimation •Environmental flows •Impact of climate change on water management

This state-of-the-art, research level text considers the growing volume of research at the interface of hydrology and ecology and focuses on: the evolution of hydroecology / ecohydrology process understanding hydroecological interactions, dynamics and linkages methodological approaches detailed case studies future research needs The editors and contributors are internationally recognised experts in hydrology and ecology from institutions across North America, South America, Australia, and Europe. Chapters provide a broad geographical coverage and bridge the traditional subject divide between hydrology and ecology. The book considers a range of organisms (plants, invertebrates and fish), provides a long-term perspective on contemporary and palaeo-systems, and emphasises wider research implications with respect to environmental and water resource management. Hydroecology and Ecohydrology is an indispensable resource for academics and postgraduate researchers in departments of physical geography, earth sciences, environmental science, environmental management, civil engineering, water resource management, biology, zoology, botany and ecology. It is also of interest to professionals working within environmental consultancies, organizations and national agencies.

Provides a Balance between the Mathematical and Physical Aspects and the Engineering Applications Written for engineering and science students, Mechanics of Groundwater in Porous Media explains groundwater from both a mathematical and qualitative standpoint. The book builds up the theory of groundwater flow starting from basic physics and geometric intuition, and on to applied practice through real-world engineering problems. It includes graphical illustrations as well as solved illustrative problems throughout the text. Considers the Steady-State Motion of Groundwater The book starts off by introducing the overall picture of groundwater, its relationship with the hydrological cycle, and other terminology used in the mechanics of groundwater flow though porous means. It presents a synopsis of basic definitions, concepts, and the fundamental principles of fluid mechanics and soil mechanics, which are necessary prerequisites for an adequate understanding of the book's core material. The engineering applications are deducted from

geometric and physical reasoning, with a minimum use of mathematical abstraction. Mechanics of Groundwater in Porous Media is written primarily to serve as a textbook for senior undergraduate and upper-level graduate students in civil and environmental engineering, environmental science, hydrogeology, and geology, as well as a resource for practicing engineers.

An attempt is made to place before students (degree and post-degree) and professionals in the fields of Civil and Agricultural Engineering, Geology and Earth Sciences, this important branch of Hydroscience, i.e., Hydrology. It deals with all phases of the Hydrologic cycle and related opics in a lucid style and in metric system. There is a departure from empiricism, with emphasis on collection of hydrological data, processing and analysis of data, and hydrological design on sound principles and matured judgement. Large number of hydrological design problems are worked out at the end of each article, to illustrate the principles involved and the design procedure. Problems for assignment are given at the end of each chapter, along with objective type and intelligence questions.

Irrigation and Drainage Engineering

Flood Forecasting

Stochastic Hydrology and its Use in Water Resources Systems Simulation and Optimization

Urban Flood Management

Statistical Methods in Water Resources

Civil Engineering (Objective Types)

This book focusses on hydrological modeling, water management, and water governance. It covers the applications of remote sensing and GIS tools and techniques for land use and land cover classifications, estimation of precipitation, evaluation of morphological changes, and monitoring of soil moisture variability. Moreover, remote sensing and GIS techniques have been applied for crop mapping to assess cropping patterns, computation of reference crop evapotranspiration, and crop coefficient. Hydrological modeling studies have been carried out to address various issues in the water sector. MODFLOW model was successfully applied for groundwater modeling and groundwater recharge estimation. Runoff modeling has been carried out to simulate the snowmelt runoff together with the rainfall and sub-surface flow contributions for snow-fed basins. A study has been included, which predicts the impact of the land use and land cover on stream flow. Various problems in the water sector have been addressed employing hydrological models such as SWAT, ArcSWAT, and VIC. An experimental study has been presented wherein the laboratory performance of rainfall simulator has been evaluated. Hydrological modeling studies involving modifications in the curve number methodology for simulation of floods and sediment load have also been presented. This book is useful for academicians, water practitioners, scientists, water managers, environmentalists, and administrators, NGOs, researchers, and students who are involved in water management with the focus on hydrological modeling, water management, and water governance.

Thoughtfully illustrated, carefully written, and covering a broad spectrum of topics, this classic text clarifies a subject that is often misunderstood and oversimplified.

Flood Forecasting: A Global Perspective describes flood forecast systems and operations as they currently exist at national and regional centers around the globe, focusing on the technical aspects of flood forecast systems. This book includes the details of data flow, what data is used, quality control, the hydrologic and hydraulic models used, and the unique problems of each country or system, such as glacial dam failures, ice jams, sparse data, and ephemeral streams and rivers. Each chapter describes the system, including details about its strengths and weaknesses, and covers lessons learned. This helpful resource facilitates sharing knowledge that will lead to improvements of existing systems and provides a valuable reference to those wishing to develop new forecast systems by drawing on best practices. Covers global systems allowing readers to see a worldwide perspective with different approaches used by existing flood forecast systems Provides historical coverage allowing readers to understand why forecast systems have developed as they have and to see how specific systems have dealt with common problems encountered Presents a vision of what appears to be the future of hydrologic forecasting and difficulties facing hydrologic forecasting Provides a helpful resource to facilitate improvements to existing systems based on a best practices approach

Stochastic hydrology is an essential base of water resources systems analysis, due to the inherent randomness of the input, and consequently of the results. These results have to be incorporated in a decision-making process regarding the planning and management of water systems. It is through this application that stochastic hydrology finds its true meaning, otherwise it becomes merely an academic exercise. A set of well known specialists from both stochastic hydrology and water resources systems present a synthesis of the actual knowledge currently used in real-world planning and management. The book is intended for both practitioners and researchers who are willing to apply advanced approaches for incorporating hydrological randomness and uncertainty into the simulation and optimization of water resources systems. (abstract) Stochastic hydrology is a basic tool for water resources systems analysis, due to inherent randomness of the hydrologic cycle. This book contains actual techniques in use for water resources planning and management, incorporating randomness into the decision making process. Optimization and simulation, the classical systems-analysis technologies, are revisited under up-to-date statistical hydrology findings backed by real world applications.

Darwinian Expression of Vegetation Form and Function

Hydroecology and Ecohydrology

Estimating Groundwater Recharge

Urban Drainage

Stochastic Hydrology

Including Watershed Management

This volume is devoted to the derivation and application of simplified bioclimatic boundary conditions at vegetated land surfaces using natural selection of vegetation characteristics driven by productivity maximization. It investigates the internal control of forest growth by the vertical fluxes of light, CO2, water vapor, and heat within the canopy, as well as the external control offered by the balances of thermal energy and water. Through these means it seeks to determine how the physical characteristics and productivity of forest communities are related to the climates and soils in which they are found. Ecohydrology bridges the fields of hydrology and ecology and proposes new unifying principles derived from the concept of natural selection. It also has potential application in determining the response of vegetation to slow variations in climate and will provide fascinating reading for graduate-level students and research scientists working in ecohydrology, hydroclimatology, forest ecology, and surface water hydrology.

Emphasizes the interactive analysis of hydrological data made possible through the widespread availability of desktop computers. Demonstrates new techniques for assessing the adequacy and performance of hydrological models. Offers an in-depth discussion of examples drawn from numerous

applications such as the analysis of river flow extremes, regionalization of flow characteristics, infiltration of water into soil profiles, overland flow studies and rainfall-runoff modelling.
Beginning with the basics of water resources and hydrologic cycle, the book contains detailed discussions on simulation and synthetic methods in hydrology, rainfall-runoff analysis, flood frequency analysis, fundamentals of groundwater flow, and well hydraulics. Special emphasis is laid on groundwater budgeting and numerical methods to deal with situations where analytical solutions are not possible. The book has a balanced coverage of conventional techniques of hydrology along with the latest topics, which makes it equally useful to practising engineers.
Completely updated and with three new chapters, this analysis of river dynamics is invaluable for advanced students, researchers and practitioners.
Principles, Analysis and Design
A Textbook of Hydrology
Applied Mathematics in Hydrogeology
Engineering Hydrology: An Introduction to Processes, Analysis, and Modeling
A Text Book of Hydrology
Perspectives and Applications

Covering the various aspects of water and climate change, Climate Change and Water Resources presents the principles of climate change science and its effects on earth's water supply. Utilizing the knowledge and expertise from well-known experts in the field, the text provides a broad outline of the many interrelated aspects of climate variations,

Data on water quality and other environmental issues are being collected at an ever-increasing rate. In the past, however, the techniques used by scientists to interpret this data have not progressed as quickly. This is a book of modern statistical methods for analysis of practical problems in water quality and water resources. The last fifteen years have seen major advances in the fields of exploratory data analysis (EDA) and robust statistical methods. The 'real-life' characteristics of environmental data tend to drive analysis towards the use of these methods. These advances are presented in a practical and relevant format. Alternate methods are compared, highlighting the strengths and weaknesses of each as applied to environmental data. Techniques for trend analysis and dealing with water below the detection limit are topics covered, which are of great interest to consultants in water-quality and hydrology, scientists in state, provincial and federal water resources, and geological survey agencies. The practising water resources scientist will find the worked examples using actual field data from case studies of environmental problems, of real value. Exercises at the end of each chapter enable the mechanics of the methodological process to be fully understood, with data sets included on diskette for easy use. The result is a book that is both up-to-date and immediately relevant to ongoing work in the environmental and water sciences.

Latest developments of urban hydrology and hydraulic design procedures for storm water management.Drainage planning is an approach that integrates both local and regional efforts to identify drainage conveyance and storage facilities based on hydrologic optimization and cost minimization individually and collectively. In general, the first six chapters cover the hydrologic procedures for rainfall and runoff predictions, and the next 12 chapters focus on hydraulic designs of urban channel, culvert, street inlet, sewer drain, detention basin, retention basin, infiltration basin, low impact designs, and storm water modeling techniques by various routing methods.Hydrology analyses are lengthy in calculation and repetitive in procedure. As a result, Excel Spreadsheet is the most useful and handy tool for hydraulic and hydrologic designs. This book includes 18 sets of spreadsheets developed for 18 subjects. With these spreadsheets, it is easy for the reader to conduct sensitivity tests. Many of the design methods documented in this book have been adopted as the recommended design procedure by Denver, Las Vegas, and Sacramento metropolitan areas in the United States. Based on these methods, there are many design computer models that have been developed and supported by the Denver metro governments for stormwater design purposes.

Students are exposed to hydrology for the first time primarily through this course, and students taking the course have not had an opportunity to be exposed to hydrologic jargon before. And, in most cases this course may be the only course the students may have in hydrology in their undergraduate schooling. Therefore, this hydrology course must be at an elementary level, present basic concepts of hydrology, and develop a flavor for application of hydrology to the solution of a range of environmental problems. It is these considerations that motivated the writing of this book.

Soil Moisture and Plant Dynamics
Ecohydrology
Hydrology and Soil Conservation Engineering
Water Management and Water Governance
River Mechanics
Past, Present and Future

Ecohydrology of Water-Controlled Ecosystems addresses the connections between the hydrologic cycle and plant ecosystems, with special emphasis on arid and semi-arid climates. This important topic is treated by building suitable mathematical models of the physics involved and then applying them to study the ecosystem structure and its response to rainfall and climate forcing in different parts of the world, including savannas, grasslands and forests. It investigates the vegetation response to water stress (drought), the hydrologic control on cycles of soil nutrients, and the dynamics of plant competition for water. The book also offers insights into processes closely related to soil moisture dynamics, such as soil-atmosphere interaction and soil gas emissions. This book will appeal to advanced students and researchers from a large range of disciplines, including environmental science, hydrology, ecology, earth science, civil and environmental engineering, agriculture and atmospheric science.
As introduced in Dr. Lee's 10-week class, Applied Mathematics in Hydrogeology is written for professionals and graduate students who have a keen interest in the application of mathematics in hydrogeology. Its first seven chapters cover analytical solutions for problems commonly encountered in the study of quantitative hydrogeology, while the final
While most books examine only the classical aspects of hydrology, this three-volume set covers multiple aspects of hydrology, and includes contributions from experts from more than 30 countries. It examines new approaches, addresses growing concerns about hydrological and ecological connectivity, and considers

the worldwide impact of climate change. It also provides updated material on hydrological science and engineering, discussing recent developments as well as classic approaches. Published in three books, Fundamentals and Applications; Modeling, Climate Change, and Variability; and Environmental Hydrology and Water Management, the entire set consists of 87 chapters, and contains 29 chapters in each book. Students, practitioners, policy makers, consultants and researchers can benefit from the use of this text.

The third edition of Fundamentals of Hydrology provides an absorbing and comprehensive introduction to the understanding of how fresh water moves on and around the planet and how humans affect and manage the freshwater resources available to them. The book consists of three parts, each of fundamental importance in the understanding of hydrology: The first section deals with processes within the hydrological cycle, our understanding of them, and how to measure and estimate the amount of water within each process. This also includes an analysis of how each process impacts upon water quality issues. The second section is concerned with the measurement and analytical assessment of important hydrological parameters such as streamflow and water quality. It describes analytical and modelling techniques used by practising hydrologists in the assessment of water resources. The final section of the book draws together the first two parts to discuss the management of freshwater with respect to both water quality and quantity in a changing world. Fundamentals of Hydrology is a lively and accessible introduction to the study of hydrology at university level. It gives undergraduates a thorough understanding of hydrological processes, knowledge of the techniques used to assess water resources, and an up-to-date overview of water resource management. Throughout the text, examples and case studies from all around the world are used to clearly explain ideas and techniques. Essay questions, guides to further reading, and website links are also included.

(in M. K. S and S. I Units)

Science, Policy and Practice

Environmental Hydrology, Second Edition

Elementary Hydrology

A Global Perspective

Hydrology

Urban Drainage has been thoroughly revised and updated to reflect changes in the practice and priorities of urban drainage. New and expanded coverage includes: Sewer flooding The impact of climate change Flooding models The move towards sustainability Providing a descriptive overview of the issues involved as well as the engineering principles and analysis, it draws on real-world examples as well as models to support and demonstrate the key issues facing engineers dealing with drainage issues. It also deals with both the design of new drainage systems and the analysis and upgrading of existing infrastructure. This is a unique and essential textbook for students of water, environmental, and public health engineering as well as a valuable resource for practising engineers.

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.

With an emphasis on methodology, this reference provides a comprehensive examination of water movement as well as the movement of various pollutants in the earth's subsurface. The multidisciplinary approach integrates earth science, fluid mechanics, mathematics, statistics, and chemistry. Ideal for both professionals and students, this is a practical guide to the practices, procedures, and rules for dealing with groundwater.

Over the last decades the world has witnessed a growing number of floods in urban areas. Climate change and rapid urbanization will exacerbate this trend. Flooding incidents in urbanized catchments and low-lying areas, such as polders, can lead to great public concern and anxiety, and their economical impact is severe. Apart from well-known flood prevention strategies, new approaches to the accommodation of floods are needed to create robust and sustainable solutions that enable us to cope with the ever-increasing urban pressure on flood-prone areas and the uncertainties created by climate change. Urban Flood Management comprises a multidisciplinary survey of recent developments in this field. Subjects like spatial and urban planning, flood insurance, flood resilience, flood proofing techniques, risk perception and preparedness and flood forecasting are treated by authorities from Brazil, India, the USA and Europe. Urban Flood Management will provide anyone active in the fields of water, risk and urban management with the latest information and insights that were obtained with a global and multidisciplinary approach.

Rivers of Europe

Development and Management

Hydrology and Water Resource Systems Analysis

Ecohydrology of Water-Controlled Ecosystems

Hydrogeology

Handbook of Engineering Hydrology (Three-Volume Set)

An interdisciplinary book tackling the challenges of managing peatlands and their ecosystem services in the face of climate change.

Streamlined to facilitate student understanding, this second edition, containing the latest techniques and methodologies and some new problems, continues to provide a comprehensive treatment of hydrology of watersheds, soil erosion problems, design and installation of soil conservation practices and structures, hydrologic and sediment yield models, watershed management and water harvesting. It also deals with the special

requirements of management of agricultural and forested watersheds. This book is designed for undergraduate students of agricultural engineering for courses in hydrology, and soil and water conservation engineering. It will also be of considerable value to students of agriculture, soil science, forestry, and civil engineering. KEY FEATURES Emphasises fundamentals using numerous illustrations to help students visualise different phenomena Offers lucid presentation of field practices Presents the analysis and design of basic hydraulic structures Devotes an entire chapter to watershed management Provides numerous solved design problems and exercise problems to develop a clear understanding of the theory Gives theoretical questions, and objective type questions with answers to test the students' understanding.

Engineering Hydrology

Ground Water Assessment

Hydrological Modeling

Fundamentals of Hydrology