• Books of the Week •

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TEXTBOOKS
Textbooks will be listed separately the last issue of each month.

ANIMAL ECOLOGY IN TROPICAL AFRICA —D. F. Owen—Freeman, 122 p. plates, drawings, $5. A biology text in essay form, intended to be useful to university students in tropical Africa, emphasizing peculiarly tropical problems or problems that can best be studied in the tropics.

CELL—Jeffrey J. W. Baker—Am. Education Publications, 31 p., illus., paper, 25¢; minimum order: 10 booklets ($2.50) direct to publisher, Education Center, Columbus, Ohio 43216. Presents concepts of modern cell anatomy as an aid to beginners in the study of cell physiology.

THE CHEMICAL BOND— J. J. Lagowski— Houghton, 200 p., diagrams, paper, $2.95. Supplementary reading for the professional student of chemistry or physics who wants to understand in greater detail the basis for our modern theories of chemical bonding.

CHEMICAL EQUILIBRIUM—Allen J. Bard— Harper, 202 p., graphs, $7.50. This text presents a rigorous introduction to the solution of problems in chemical equilibria in general, and in ionic equilibria in particular, with emphasis on the material balance and electroneutrality approach.

CHEMISTRY CALCULATIONS: With a Focus on Algebraic Principles—Alexander Vavoulis— Holden-Day, 140 p., $4.95; paper, $2.50. Intended for any chemistry beginner who has difficulty in applying algebra to chemistry problems.

COMMUNICATION SYSTEMS AND TECHNIQUES—Mischa Schwartz, William R. Bennett and Seymour Stein—McGraw, 618 p., diagrams, $16.50. An up-to-date reference volume for engineers and scientists, treatment is highly mathematical, suitable as textbook in specialized courses at graduate level.

COMPUTERS SELF-TAUGHT THROUGH EXPERIMENTS—Jack Brayton—Sams, H. W., 192 p., illus., paper, $4.25. A simplified introduction to computer techniques and transistors, and to computer operations.

THE CONCEPT OF ENERGY—D. W. Theobald—Barnes & Noble, 192 p., diagrams, $7.50. Written for working scientists and advanced undergraduate students, the book aims to explore the place of the concept of energy in the natural sciences.

DIRECT ENERGY CONVERSION— George W. Sutton, Ed.—McGraw, 342 p., illus., $14.50. Designed as a text and reference volume for graduate students and professional engineers, covers solar photo-voltaic cells, fuel cells, thermoelectric power generation, thermionics and MHD power generation.

ECOLOGICAL METHODS with Particular Reference to the Study of Insect Populations— T.R.E. Southwood—Barnes & Noble, 391 p., illus., $13.50. Provides a comprehensive account of the methods used to measure, describe and analyze animal populations and communities with emphasis on methods most relevant to work on insects and other nonmicroscopic invertebrates.

ELEMENTARY ELECTRONICS—D. Hywel White—Harper, 172 p., graphs, diagrams, $9.50. Undergraduate course, begins with principles and proceeds to a level of reasonable skill in practical circuit and device design.

THE EVOLUTION OF AMERICAN SECONDARY SCHOOL TEXTBOOKS: Rhetoric & Literature, Algebra, Geometry, Natural History (Zoology), Botany, Natural Philosophy (Physics), Chemistry, Latin and Greek, French, German & World History as taught in American Latin Grammar Schools, Academies and early High Schools before 1900—John A. Nietz—Tuttle, 265 p., 28 plates, $5. A history of U.S. secondary school education before 1900.

FUNDAMENTALS OF ELECTRONICS, Vol. I—George E. Owen and P. W. Keaton—Harper, 337 p., diagrams, $14. Provides the main topics of electronics in a unified manner, offering a course at an advanced level to students in physics, biophysics and engineering. Mathematics used include operational calculus and linear analysis.

HYDROGEN COMPOUNDS OF THE METALLIC ELEMENTS—K. M. Mackay—Barnes & Noble, 186 p., $10. This text treats the chemistry of hydrogen compounds of the metals, including "metalloids" such as arsenic, germanium and silicon. For advanced undergraduates and graduate students.

INTRODUCTION TO SOLID STATE PHYSICS—Charles Kittel—Wiley, 3rd ed, 648 p., illus., $12.50. Presents a complete modernization of the standard introductory textbook, develops the interaction of waves with periodic structures as a unifying theme. 300 new drawings and photos.

INTRODUCTION TO STATISTICAL IDEAS: For Social Scientists—G. Kalton—Barnes & Noble, 58 p., graphs, paper, $1. Short treatise in mathematical style, deals with the principles of summary statistics, sampling errors and testing relationships, designed for subsidiary courses in statistics.

LONGITUDINAL SPACE-CHARGE WAVES —R. E. Trotman—Barnes & Noble, 219 p., diagrams, $5.50. Gives a complete and detailed theoretical treatment of the subject, addressing advanced undergraduates and graduate students of electrical engineering and physics.

NOISE AND ITS EFFECT ON COMMUNICATION—Nelson M. Blachman—McGraw, 212 p., diagrams, $13.50. Presents the useful fundamentals of random processes and their spectra, the effect of nonlinear transformations upon a signal and noise, the statistical theory of detection and information theory.

NUCLEAR WAR AND NUCLEAR PEACE— Y. Harkabi, transl. from Hebrew by Yigal Schenkman—I.P.F.S.T. (Davy, Daniel), 303 p., $7.50. Written in 1963, this is required textbook in the course on international relations at the Hebrew University of Jerusalem.

OUR POLLUTED WORLD: Applied Ecology of Air and Water—Thomas G. Aylesworth—Am. Education Publications, rev. ed., 47 p., photographs, paper, 25¢; minimum order: 10 copies ($2.50) direct to publisher, Education Center, Columbus, Ohio 43216. Classroom study material on secondary school level.

PHYSICAL CHEMISTRY—Farrington Daniels and Robert A. Alberty—Wiley, 3rd ed., 767 p., illus., $9.95. Intended for a comprehensive first course in physical chemistry, this revised edition places more emphasis on the mathematical approach which is of increasing importance for physical chemistry.

PHYSIOLOGY—Sidney Ochs and others, Ewald E. Selkurt, Ed.—Little, Brown, 2nd ed., 795 p., illus., $12.50; paper, $8.50. Concise yet comprehensive text on the fundamentals of mammalian physiology for students of medicine, dentistry and the allied professions.

THE PHYSIOLOGY OF TREMATODES—J. D. Smyth—Freeman, 256 p., plates, drawings, paper, $4. This text attempts to give a full account of the physiology of the trematoda from the egg, through the developmental stages, to the adult worm.

PRINCIPLES OF CRIMNOLOGY—Edwin H. Sutherland and Donald R. Cressey—Lippincott, 7th ed., 721 p., $9.95. A classic text in the field, revised to incorporate the findings of current research on delinquency, crime and correction.

PRINCIPLES OF SCIENTIFIC AND TECHNICAL WRITING—Jackson E. Morris—McGraw, 257 p., $6.95. Textbook written for use in an engineering extension course designed to emphasize the cultivation of a simple, correct and vigorous scientific and technical writing style.

THE QUEST FOR ABSOLUTE ZERO: The Meaning of Low Temperature Physics—K. Mendelsohn—McGraw, 254 p., illus., paper, $2.45. Authoritative introductory book for university students, presented by research scientist in such form to be of interest to the general reader.

SCIENTIFIC MANAGEMENT OF LIBRARY OPERATIONS—Richard M. Dougherty and Fred. J. Heinritz—Scarecrow Press, 258 p., illus., $7. Intended to serve both as a textbook for library school students and as a handbook for practising librarians, the book describes the major analysis techniques in step-by-step detail.

SOCIETIES: Evolutionary and Comparative Perspectives—Talcott Parsons—Prentice Hall, 120 p., $3.95; paper, $1.50. Text in the Foundations of Modern Sociology Series, deals with the components of the total society as a social system and compares primitive, archaic, intermediate and "seedbed" societies from the historical perspective.
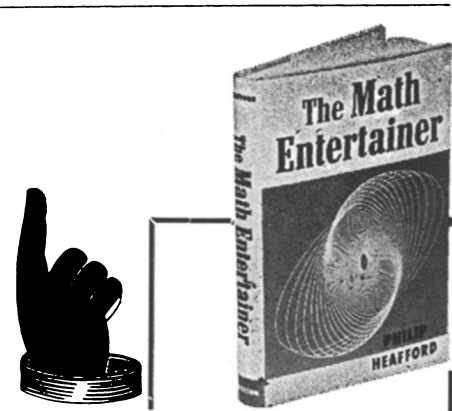
SOLID STATE AND SEMICONDUCTOR PHYSICS—John P. McKelvey—Harper, 512 p., diagrams, $13.75. Text for a two-term course for seniors and beginning graduate students majoring in physics, electrical engineering, metallurgy and materials sciences.

THERMODYNAMICS: Principles and Applications to Engineering—Ernst Schmidt, transl. from 3rd German edition by J. Kestin—Dover, 532 p., diagrams, paper, $3. May prove useful as a supplementary textbook for a modern course in thermodynamics, insofar as it deals with applications to prime movers, propulsion, rockets and elementary heat transfer.

TOPOLOGICAL GROUPS—L. S. Pontryagin, transl. from Russian by Arlen Brown—Gordon & Breach, 2nd ed. 543 p., prof. ed. $17.50; ref. ed. $32.50. Advanced text and monograph for the mature student of mathematics, deals with the concept of a Lie group, Lie algebras and the structure of compact Lie groups.

TRANSIENTS IN POWER SYSTEMS— Harold A. Peterson—Dover, 361 p., illus., paper, $3. Reprint (1951), intended to serve as a combination reference and textbook, the book is a practical survey of the particular phenomena which can cause unusual transients.

UNDERSTANDING AMPLITUDE MODULATION—Irving M. Gottlieb—Sams, H. W., 160 p., illus., paper, $3.25. A text on the practical implementation of amplitude modulation, intended for technicians, servicemen and radio amateurs.