Book Reviews

Acids and Bases: Their Quantitative Behaviour. R. P. Bell. London: Methuen; New York: Wiley, 1952. 90 pp. Illus. $1.50.

This is another of the Methuen monographs on chemical subjects so invaluable as a pocket reference manual to specialists in the field.

A brief history of concepts and definitions of acids and bases is followed by a discussion of acid-base equilibria in water in the two introductory chapters. Acid-base behavior in nonaqueous solvents is treated in the third chapter, and interionic attraction in the fourth. The relation of acid strength to molecular structure, with special emphasis on organic acids is discussed in the fifth chapter. Under "Acid-Base Catalysis" the author covers such reactions as neutralization, deuterium exchange, catalyzed interconversion of tautomers, and the acid hydrolysis of esters. A brief discussion of the G. N. Lewis theory of acids and bases closes the book.

The text is accompanied by tables and graphs, with general references to periodicals. At the end of each chapter is a short list of general reference works and review articles. The author admits to incomplete coverage of the literature.

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Pharmaceutical Calculations. 2nd ed. Willis T. Bradley, Carroll B. Gustafson, and Mitchell J. Stoklosa. Philadelphia: Lea & Febiger, 1952. 290 pp. Illus. $3.75.

This book is based on the original text by W. T. Bradley. It is well organized and contains many desirable new features, such as a discussion of significant figures, problems in dispensing pharmacy, commercial pharmacy problems, the use of logarithms and exponentials, problems in H-ion concentration and pH. Stress is placed on significant numbers throughout the text.

Illustrated examples are well chosen and clearly explained. All ingredients used in problems and prescriptions are common to current pharmaceutical practice. The book adequately accomplishes the purpose of the authors—to furnish a text concerned exclusively with the arithmetic of modern applied pharmacy. Some may be concerned over the inclusion of such material as isotonic solutions, saponification value, and other chemical problems; these, however, are phases of practical pharmacy.

A satisfactory number of practice problems is included for each section, and a comprehensive set of review problems is included in the back of the book. The answers to the problems of certain chapters are given in full—for others only the answers to the odd-numbered problems.

The binding and printing of the book are of good quality, and the format has been modernized and made more attractive than the previous editions. This book would be a useful textbook for teaching the subject of pharmaceutical calculations and should prove useful to the student at all times for review of the arithmetic of pharmacy.

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Practical and Experimental Geography. W. G. V. Balchin and A. W. Richards. London: Methuen; New York: Wiley, 1952. 135 pp. Illus. $2.75.

This unusual book by two British geographers can be of infinite value in a very practical way to teachers of geography and natural science. As far as the writer is aware, it represents the first attempt to present under one cover a comprehensive collection of techniques, mechanisms, and diagrams for explaining geographical principles to students. Although the authors have aimed the book at the secondary teacher, it can be equally useful to the instructor of elementary courses of college level.

The book is divided into five parts of varying merit. The first, largest, and by far the best, presents a wide variety of devices by which earth-sun relations can be clearly and simply demonstrated. The mechanisms vary in complexity from a cardboard ball made from interlocking cardboard circles representing planes of meridians and parallels, to a mechanically ingenious tellurian constructed of Meccano parts, knitting needles, and rubber balls. Each is portrayed by clearly conceived and well-executed line drawings, and a list of necessary materials is included. Many of the ideas are novel and appear to have originated with the authors; others have been borrowed from British periodicals not widely circulated in America.

The next three parts (landforms, meteorology and oceanography, and mapping) are much less original and far too brief. Some aspects are quite surprising—for example, the authors are apparently not aware that protractors may be graduated in per cent. Their mapping methods measure vertical angles in degrees, with the resultant involved calculations.

Although nothing new is presented in the final section on cartographic devices, it does give a collection of useful techniques for a beginning teacher.

Despite its weaknesses, this handy reference book should be available to teachers and college instructors. It is practical, its suggestions are always feasible, the materials used are readily available, and the directions and illustrations clear and lucid. If the request of the authors for additional ideas is heeded, a future edition, expanding the weaker portions of this first edition, should make an outstanding work.

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