

amount of new knowledge is being produced." In order to achieve this major goal, the authors have organized their text into three major sections: "General Principles of Microbiology"; "Sanitary and Industrial Microbiology"; and "Disease-Producing Microorganisms—Pathogenic Microbiology," encompassing thirty short chapters.

Unfortunately, the authors have not achieved their objective of updating the text. The references are narrow and for the most part, outdated. The illustrations are definitely in need of improvement and updating; for example, the illustrations of the electron microscope, the modern binocular microscope, and so on are not reflective of the modern instrumentation available to microbiologists. The taxonomic treatment used in the text is from *Burgey's Manual* seventh edition, rather than the newer eighth edition. In summary, the book may be marginally acceptable for use in some microbiology courses, but its ability to contribute to a modern up-to-date microbiology course will be minimal.

The laboratory manual is organized into seven major sections: "Basic Principles of Microbiology"; "Methods and Techniques for Isolation, Pure Culture Studies, and Classification of Bacteria"; "Soil and Sanitary Microbiology"; "Microbial Genetics"; "Pathogenic Microbiology"; "Serological Procedures"; and "Viruses, Molds, Parasitic Animals, and Identification of Unknowns." Within these major sections are 26 laboratory exercises, all fairly easy to perform and requiring a minimum of equipment. Each laboratory consists of the typical cookbook list of materials required for each student, a step-by-step procedure, brief list of questions, and blank worksheets.

One can only judge the worth of a laboratory manual after having taught from it; but in my opinion, the manual will be only of value in the most basic microbiology laboratory and then the value will be marginal. The major disappointment in the manual is the lack of any attempt to provide an inquiry approach or indepth quantitative analysis of laboratory data.

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Related Fields

HUMAN PHYSIOLOGY: THE MECHANISMS OF BODY FUNCTION, by Arthur J. Vander, James H. Sherman, and Dorothy S. Luciano. 2nd ed., 1975. McGraw-Hill Book Co. (1221 Ave. of the Americas, New York 10020). 621 p. \$14.95 hardback.

This college level textbook, now in its second edition, will quickly establish itself as one of the most popular introductory textbooks available today. The content is much the same as other basic

physiology textbooks, but the framework and the presentation are strikingly different.

Using control theory as a background, the authors have organized the material into three sections to emphasize the fundamental features of cell functions. Section 1, "Basic Cell Functions," is an extensive treatment of cell physiology; section 2, "Biological Control Systems," analyzes the precise mechanisms specialized cells use to control cell functions; and the third section, "Coordinated Body Functions," integrates the material from the preceding sections.

The text is clearly written and the content follows a logical sequence. The authors are thorough in their discussions and skillful in clarifying problem areas (for example, kidney physiology and membrane potentials). A major attribute of the book are the supportive figures (more than 500) and the tables.

Readers familiar with the first edition will find that the text has been reset in a new type and several sections have been rewritten and expanded. The index has also been expanded. One major change is the condensation and re-writing of the chapters "Electrical Properties of Cells" and "Neural Control Mechanisms" into one chapter, logically placed in the second section of the book.

This book is highly recommended for anyone studying or reviewing introductory physiology.

Karen Brelford
Columbia, Md.

DYNAMIC ANATOMY AND PHYSIOLOGY, by Ben Pansky. 1975. Macmillan Publishing Co. (866 Third Ave., New York 10022). 694 p. \$12.95.

With the current spate of new books and revised editions in the area of anatomy and physiology, one's first impression is that this contribution by Pansky must at the very least be redundant and at the most be rather foolhardy. The goodly number of excellent publications in this subject impels the reader to examine any new attempt with a hypercritical eye. Nevertheless, this new textbook stands close scrutiny very well; it is a well-conceived and attractively styled first edition. It follows a logical organization of cell and tissue considerations in the early chapters; then the organ-system sequence of chapters follows. Within each organ-system, structure is elucidated first, function is then explained, and, finally, in most chapters, the system is discussed with respect to select examples of well-known pathologies. There is an abundance of well-executed diagrams accompanying each topic. Up-to-date findings within most areas are included and the most modern terminology and quantitative units are employed. Special or unique features include chapters on aging, development, and defense

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