knowledge be expected to give quantitative results for actual cells, but it serves as an invaluable guide to understanding and to further research.

The book is noteworthy also for the ingenious electrode designs it describes, for the fuel-cell applications it lists, and for the information it contains on fuel-cell developments by others—information fully up to date at the time of publication. An English table of contents and comprehensive chapter summaries in English will prove useful aids to many. The casual reader may find some of the book excessively detailed in the tradition of doctoral dissertations. Be that as it may, this reviewer looks forward to a companion volume on the oxygen electrode, which should help fuel cells along the hard road to widespread practical use.

Tables of Higher Functions (6th ed.). By Jahnke-Emde-Lösch. Revised by Friedrich Lösch. 318 pp. (B. G. Teubner, Stuttgart) McGraw-Hill Book Co., Inc., New York, 1960. $14.00. *Reviewed by A. A. Maradudin, Westinghouse Research Laboratories.*

IN common, I suspect, with many of my contemporaries, I had as a constant companion during my undergraduate and graduate school days a paperback edition of Jahnke and Emde. The innumerable references to this compilation of tables of higher functions in the scientific literature past and present amply attest to its status as the standard reference work of its kind. It was with considerable pleasure that I found the new, completely revised edition, prepared by Professor Friedrich Lösch of the Stuttgart Technical College, to be almost all that its predecessors were, and in many ways more besides. The changes in this edition are of two kinds: changes in the format and changes in the contents. The former are readily apparent on opening the book. The tables and text are set in clean, easy-to-read type. Most tables are now provided with first or second differences to facilitate interpolation. The discussions of the various functions, their definitions and properties have been expanded in every case, and the bibliography has been enlarged and brought up to date. The printing of the explanatory text in both German and English has been retained, as have the many graphs and relief maps of the special functions. An attempt has been made to bring the notations for the various special functions into line with current usage.

New tables have been added, while others have been expanded or revised. For example, to the tables of the Legendre functions found in earlier editions have been added tables of the Tschebyscheff, Laguerre, and Hermite polynomials in a section on orthogonal polynomials, while the Fresnel integrals are now tabulated for small increments of their arguments. Tables of the Einstein and Debye functions have also been included. These and other additions to the present edition were, however, not achieved without some sacrifices. For example, the Lommel-Weber and Struve functions in the new edition are tabulated at coarser

increments of their arguments than in previous editions, and most of the material in the addenda to the paperback edition has been omitted, in particular the tables of solutions of the cubic equation. In general, however, the deletions are less significant than the additions in the new edition which should be considered a worthy successor to the previous editions. I'm not throwing away my paperback copy, however.

Careers in Physics (second ed.). By Alpheus W. Smith and Winston L. Hole. 310 pp. Long's College Book Co., Columbus, Ohio, 1960. $5.95. *Reviewed by D. J. Montgomery, Michigan State University.*

EVEN if all the members of the AIP needn't read this book, they need at least to know about it. This evaluation isn't just book reviewer's extravagance —every physicist sooner or later finds himself being solicited for information or opinion as to the choice of physics for a career. He can minimize his misinformation and yet bolster his bias with the aid of this presentation by Dean Smith and Doctor Hole. They have diligently striven to give a fair, enthusiastic, and complete account of the major opportunities open to physicists in America.

High-school and college students are the audience for whom the book is especially intended, and the level of presentation is appropriate for this group. The quality of the writing is satisfactory, but regrettably not excellent. A very good job has been done in weaving together the compilational parts of the work, but the historical and philosophical portions could well use a little matter-of-factness. The accuracy of the information is high, if the reviewer's limited direct experience, but somewhat wider hearsay evidence, affords an adequate basis of judgment.

Following introductory general chapters on physics as a way of life, the fields of specialization are described. Then comes the main body of the book, a description of careers in the academic world, in industrial laboratories, in governmental service, and in research institutes. Right in the middle of these is a chapter on careers in the nuclear sciences, an inconsistent classification motivated by the popular image of the physicist of today. Each walk of life is described sympathetically and intelligently. The authors' conviction that the academic life is the good life shows through, it is true, but this fact merely instances and emphasizes the devotion that physics inspires in its disciples in any field. The book concludes with a chapter on the likely growth of opportunities in physics, and with four appendixes, some of dubious relevance.

The burden of the message, that physics offers psychologically satisfying and financially adequate careers to those endowed with the requisite aptitude and character, comes through well. It makes a member of the profession a little humble and a little proud when he sees this stated in the old-school style, and a little relieved and grateful to find competent documentation at hand.