BOOK REVIEWS

Lezioni nulla teoria delle funzioni di una variabile complesa. By G. Sansone. Padova, Cedam, 1947. Vol. 1, 8+359 pp. L. 750. Vol. 2, 11+564 pp. L. 950.

These two volumes on the theory of analytic functions are based on lectures given by the author at the University of Florence. As can be expected from the size of this treatise a much wider variety of topics is covered than usual. A brief summary of the contents of the various chapters gives an indication of the material included in each of the two volumes.

Volume 1: Chap. 1, Power series and elementary functions; Chap. 2, Integral theorems of Cauchy, Laurent series; Chap. 3, Factorization theorem of Weierstrass; Chap. 4, Entire functions and the theorem of Picard; Chap. 5, Euler-Maclaurin and Lagrange series, asymptotic series and methods of summability.

Volume 2: Chap. 7, Dirichlet series, Riemann zeta function, hypergeometric series; Chap. 8, Conformal mapping, Riemann's theorem; Chap. 9, Harmonic functions, Dirichlet and Neumann's problems; Chap. 10, Hyperbolic metric and applications to conformal mapping; Chap. 11, Elliptic functions; Chap. 12, Fuchsian functions.

The broadness of the theory of analytic functions has naturally forced the author to restrict himself in his choice of topics and any choice would have invited a criticism. It seems, however, unfortunate that the theory of multivalued functions and Riemann surfaces were left out entirely. Both in his choice of topics and in their treatment the author has followed classical lines. In the opinion of the reviewer the injection at some places of a more modern point of view could have increased the value and interest of the book. The point set topology of the two-dimensional plane is not given as full a consideration as might be desired and in at least two cases the proofs are not complete on this point. But as an over-all judgment the author gives a clear, careful and thorough exposition of the theory. The many references to original papers and later contributions which are included in the text should be particularly valuable to the reader.

F. BOHNENBLUST

A treatise on set topology. Part I. By R. Vaidyanathaswamy. Madras, Mahadevan, 1947. 6+304 pp. Rs. 16–4.

This book begins with three introductory chapters on sets; topics treated here are algebras of subsets of a set, rings and fields of sets and