

of other countries, though, of course, they are primarily intended to apply to the methods and scales used by the Survey of India.

Part 1 contains tables for the projection of maps falling within the latitudes embraced by India: on the polyconic projection, which is that employed for the larger scale topographical maps; on the modified secant conical for small scale and general maps; and a table for the projection of the sheets of the *Carte Internationale*, on the millionth scale, of which India has produced so many sheets. Part 2 displays a series of mathematical tables in general use in survey operations, also metrical equivalents; mathematical and physical constants; geodetic data (fundamental co-ordinates adopted by the Survey of India); and, at the end, a few pages of useful mathematical formulæ. Part 3 comprises a set of tables covering all the ground required by the topographical surveyor in his triangulation and astronomical work in the field.

These tables are a considerable advance on the previous editions, and Dr. Hunter deserves great credit for the way in which they have been presented. They have been prepared most carefully so as to assist in the solution of almost any problem with which the surveyor is likely to be confronted. The plan of publishing each part separately has added very much to their convenience for use in the field or office.

Part 4, Geodetic Tables, is under compilation, and may shortly be expected; while Part 5, explaining the forms and formulæ in use in the Survey of India, is in contemplation. The parts already issued contain full explanations of the tables, and also, in most cases, examples showing how the tables are used in practice.

H. L. CROSTWAIT.

*Travaux pratiques de physique générale: exécutés à l'Institut de Physique de la Faculté des Sciences de Strasbourg en vue du certificat d'études supérieures de physique générale.* Par Prof. H. Ollivier. Première série: Sujets de 45 manipulations, réparties en 30 séances de 4 heures. Pp. 104 + 9 planches. (Paris: J. Hermann, 1924.) 12 francs.

PROF. OLLIVIER'S "Cours de physique générale" has already been the subject of favourable notice in these columns. The present volume on advanced practical physics maintains the high standard we have been led to expect from the professor of physics of the University of Strasbourg. It forms the first part of a treatise on the subject, and contains an account of those experiments which are repeated each year by all students attending the advanced course. It is assumed that the student has already attended an elementary laboratory course, is familiar with the theory of many of the instruments, and has a fair knowledge of mathematics. Classical experiments predominate in this first volume, and the apparatus used is carefully constructed and tested. Many of the instruments described are expensive, and students are expected to use them with the utmost care and to obtain results of a high degree of accuracy.

The experimental hints and cautions given in the text are most valuable, and all teachers will appreciate the "recommandations générales," prominently displayed early in the course: "Il ne faut toucher avec les doigts ni les parties graduées des appareils, ni les

verniers, ni les poids de précision, ni les pièces optiques: lentilles, miroirs, nicols, lames quart d'onde, etc." Amongst the experiments we note with special interest Rowland's method of determining the mechanical equivalent of heat, the use of the stroboscope, photography, including photography in colours by the Lumière process (in this case no directions are given), a study of elliptically polarised light (arranged by M. G. Foëx), magnetisation of an iron ring using a fluxmeter, and the behaviour of a three-electrode lamp. A novel and interesting feature in a text-book of practical physics is the series of nine plates containing excellent photographs of the Institute of Physics of the Faculty of Sciences of Strasbourg and of the apparatus arranged for experimental work in the laboratories.

H. S. A.

*An Introduction to the Study of Cytology.* By Dr. L. Doncaster. Second edition. Pp. xiv + 280 + 24 plates. (Cambridge: At the University Press, 1924.) 21s. net.

It is not always that literary ability and scientific method are wed together in sufficient degree to produce a sound scientific text-book which is, at the same time, of literary merit. In recent years few famous biologists have possessed both these qualities in greater degree than the late Prof. Leonard Doncaster. It is, therefore, with special pleasure that we welcome the appearance of a second edition of his well-known book on "Cytology."

A monograph on any highly specialised branch of study has one great advantage over a work produced by the collaboration of a number of authors in that it possesses a greater unity of purpose, as the conception of a single mind, than could be produced by the most successful team work. In this respect all must admit that Prof. Doncaster's book is pre-eminent. But to maintain this quality becomes a most serious difficulty to the editor of a posthumous edition. This Mr. Grey has admirably overcome, and, although introducing much new and useful material, has in no way detracted from the arrangement and theme of the book as a whole.

The book would have been improved, perhaps, if more space had been given to the recent extensive advances in our knowledge of the cytoplasmic inclusions. Further, we cannot help feeling that much too little space is devoted to a consideration of the various types of cells of the soma of higher forms, for almost the entire book is concerned chiefly with the reproductive processes of gametogenesis, fertilisation, and segmentation.

The production of the volume is excellent, and we are pleased more especially with the illustrations. We consider the edition a well-written and instructive text-book for the student and research worker.

F. W. ROGERS BRAMBELL.

*A School Chemistry.* By O. J. Flecker. Pp. viii + 238. (Oxford: At the Clarendon Press; London: Oxford University Press, 1924.) 3s. 6d. net.

AMONG the minor compensating advantages of the War period was the check given to the ever-rolling stream of text-books on elementary science, but now that paper and printing are less costly, the tide appears to be rising again; let us hope it will not overwhelm