REVIEWS.

The Dublin University Calendar for the Year 1920-1921.

Dublin: Printed at the University Press and Published by Hodges, Figgis & Co., 20 Nassau Street, Dublin, 1920. 8vo. Pp. 60*+495+cxxv.

THIS volume includes, in addition to the usual contents of Volume I. of past University Calendar, a continuation of lists given in the special supplemental volume for the academic year, 1912-1913; and also a section showing the present status of Trinity College as to numbers as well as a list of Parliamentary electors registered in 1920 up to June 30th. This list includes 178 names.

It is gratifying to observe that the numerical strength of Trinity College has risen to that of pre-war times. The total number of students on the College Books under the Degree of M.A. is now 1,268—women, 231; men, 1,037. This is a most satisfactory advance on the corresponding numbers for 1917-1918 and 1918-1919—721 (the mid-war low water mark), and 777.

An item of interest to the medical profession is the fact that on July 1st, 1920, there were 92 students in Medicine who were not on the books in Arts. Some of these students, however, have already obtained the B.A. degree, for their names appear in the list of Parliamentary electors.

Colloids in Biology and Medicine. H. BECHHOLD. Translated from the Second German Edition, with Notes, by J. G. BULLOWA, A.B., M.S. D. Van Nostrand Co., New York. Pp. 464. 54 illustrations. Price 31/6.

THE tremendous development of colloidal chemistry during the present century is due to the realisation of the widespread importance of the subject, following upon the illuminating researches of W. B. Hardy in 1899.

The extent of the field of investigation may be judged

from the admirable and marvellously cheap reports published yearly during the last three years by the British Association under the title of: "Colloid Chemistry and its Industrial Applications." In these reports the reader turns from the subject of fermentation to cements, from fuel to biochemistry, until he is tempted to say, with Macbeth: "What; will the line stretch out unto the crack of doom?"

The importance of colloid chemistry is due to the fact that colloids are of universal distribution and are present in plants, animals, and many manufactured products.

All the physiological processes found in the human body occur in complex colloidal systems, and a correct understanding of the elementary properties of these systems is necessary for a scientific conception of physiological and pathological changes in the organism.

Professor Bechhold's book, translated by Professor Bullowa, is an attempt to collect and present the facts of colloidal chemistry that chiefly concern biology and medicine. In this he succeeds, in spite of the difficulties due to the nature of the subject, which is young and growing rapidly.

The first part of the book is a carefully-arranged introduction of over a hundred pages. The chapter on methods of colloidal research is up-to-date and well illustrated. The second part is devoted to "Biocolloids" and deals with the colloidal aspect of proteins, fats and the like. The chapter on Lipoids is scanty, both from a chemical and a colloid standpoint, but the following chapter on proteins is good. As might be expected, the author is much influenced by the doctrines of Brailsford Robertson, which tends to an over-emphasis of the physical side of the subject at the expense of the chemical side. Sorensen's recent monograph on the osmotic pressure of protein emulsoids presumably appeared too late for inclusion.

The latter portions of the book, dealing with what may be termed colloid physiology, will be novel to many readers in this country. The subject suffers somewhat in continuity owing to the great number of isolated facts discovered, but

will be of service to medical workers as being one of the first comprehensive accounts of the subject, and will be a useful supplement to Bayliss's classical text-book. A short chapter on microscopical technique completes a volume of nearly five hundred pages, well produced and illustrated, and altogether a most valuable contribution to contemporary medical science.

W. R. F.

A Course of Practical Physiology. By G. A. BUCKMASTER and H. R. B. HICKMAN. Wright & Sons, Ltd., Bristol, 1920. Pp. 138. Price 5/- net.

AN up-to-date little book by the Professor of Physiology at Bristol, designed, apparently, to precede or supplement the class-books on biochemistry.

There are several features. Many experiments on the frog are omitted and instead experiments applicable to the human subject are introduced. This has much to commend it. Too many courses of practical physiology ignore such important exercises as the use of the stethoscope, and the elementary experiments on hearing and other special sensations; the student is supposed to collect such information during his hospital work.

The book is concise and emphatic, but has several textual ambiguities which may lead to confusion: "The current flows outside the battery from the positive pole to the negative pole, and inside the battery from the negative to the positive (sic)." In the estimation of urea on page 112 the strength of the enzyme solution is apparently left to chance, or the student. We also note that the authors retain the use of that abominable reagent, ammonium sulphide, in the preparation of reduced hæmatin (hæmo-chromogen). A trial of sodium hydrosulphite, as advocated by Halliburton, is generally sufficient to result in its inclusion as a general reagent.

For elementary class work this book should be very useful: it is portable, and well provided with blank pages for notes and designs.

W. R. F.

Midwifery by Ten Teachers. Edited by COMYNS BERKELY, RUSSELL ANDREWS, J. S. FAIRBAIRN. 2nd Edition. Arnold, London. 1920. Pp. 743.

IF the above volume represents the opinion of *Ten Teachers* their unanimity is as remarkable as it is rare in medicine. A pleasing and notable feature in the new edition is the chapter on Ante-Natal Hygiene. The clear and concise summary of the physiology of digestion which opens the section on the "Toxæmias of Pregnancy" marks a new departure in the treatment of this subject in most textbooks. In a book written ostensibly for the student more stress might have been laid on the necessity for frequent auscultation of the foetal heart during the second stage of normal labour, and its importance, as an essential guide to foetal prognosis during that stage, pointed out to him.

In the section dealing with the treatment of puerperal sepsis the distinction is not very clearly made whether the accoucheur should adopt active intra-uterine treatment in all cases of sepsis, or only in very definite cases of sapræmia. However, these are the only small matters which call for comment in an excellent book.

The *Ten Teachers* are too modest in claiming only final year students for their readers, the volume ought, and will, appeal to a large number of practitioners who desire to possess a very readable and reliable work on the important subject of obstetrics.

The Coolidge Tube. Its Scientific Applications—Medical and Industrial. By H. PILON. Authorised translation. London: Baillière, Tindall and Cox, 8 Henrietta Street, Covent Garden. 1920.

Nor only radiologists, but the general public, are already becoming familiar with the Coolidge Tube. Its advent marks an epoch in radiography and radio-therapy. M. Pilon's book, explaining its principles and giving an account

of its modifications and the experimental work done in connection with it, is therefore acceptable.

The book is divided into three parts. The first deals with the nature of the tube, its different models and the accessory apparatus for heating and controlling the cathodal filament.

Part 2 gives an account of experiments directed to examine the properties of the tube and its radiation. An interesting chapter deals with the emission of x -rays from points other than the focal spot. This was investigated by pinhole photography of the anode, and though of scientific interest is not of practical importance in radiography. Moreover, these vicarious radiations can be screened off by means of an ingenious method of hooding the anode. The fixity of the focal point, however—a matter which is important, is shown to favour the Coolidge Tube against other patterns.

The last part may be described as an apology for the Coolidge Tube, answering satisfactorily several groundless criticisms. The wonderful flexibility of penetrative power is well illustrated by radiograms of such diverse objects as small insects and steel weldings. Some experiments and suggestions concerning the protection of the operator conclude the volume.

We have not seen the book in the original French, and are disposed to think it has probably lost somewhat in clarity of expression in the translation; it is well illustrated, however, and on the whole may be described as a clear and complete account of the subject.

W. G. HARVEY.

Induction Coil Design. By M. A. CODD. With 169 illustrations, including 14 plates. London: E. & F. Spon, Ltd., 57 Haymarket, S.W. 1. New York: Spon & Chamberlain, 120 Liberty Street. 1920.

It is doubtful if a book of over 200 pages on induction coil design will appeal to a large public. Those, however, who

are sufficiently interested in the working of coils to read through Mr. Codd's volume will, we are sure, derive satisfaction. It is an excellent book. Written by a thorough master of his subject, and profusely illustrated by photographs, drawings, charts and graphs, it might appear at first glance to be for experts only. It is, however, so simply and clearly written that it is readily intelligible to those who have but the most superficial knowledge of coil construction.

Mr. Codd rightly insists that the action of a coil should be regarded not merely in the light of ordinary electro-magnetic phenomena, but also as partaking of the nature of high-frequency effects. The importance in *x*-ray production of the peak as compared to the rest of the curve is well demonstrated.

Separate chapters are devoted to the core, the primary winding, the secondary winding, the condenser and to interrupters, while further chapters on measuring instruments, coil-testing, insulators and coil design conclude the book. The Coolidge Tube receives its share of consideration.

The requirements of radiographers and of wireless operators are dealt with. Alternative methods of current conversion such as the Snook machine are not described, being outside the scope of the title, and there is little doubt but that the coil is once again coming into preference for *x*-ray work, it being now recognised that the high milleampereage of the interrupterless machines is not synonymous with efficient *x*-ray production.

We commend this book to all interested in its subject.

W. G. HARVEY.

A Manual of Obstetrics. By J. C. HIRST, M.D. 216 illustrations. Published by Saunders & Co. 1919. 14/- net.

THIS book is well written and contains numerous illustrations. The author considers the entire subject of obstetrical hæmorrhage in one chapter; his treatment for placenta prævia (7th month), central or partial, is podalic version, in

the description of which he emphasises the need for stringent asepsis, also recommending the manual dilatation of the cervix in these cases, a procedure which we would regard as somewhat dangerous, owing to the liability of extensive laceration of the cervix. In view of this his concluding sentences in this paragraph are significant—" Unless the physician is confident of his ability to perform the dilatation and version *quickly* (the italics are ours), he had better not attempt it." " Too rapid extraction of the child may rupture the uterine segment, and this rupture spontaneously is not rare." Surely, therefore, in a uterus in this condition it would seem extremely inadvisable, to put it mildly, to attempt to dilate the cervix at all. How much more, therefore, ought a quick dilatation to be deprecated?

The author goes on to consider accidental hæmorrhage external and concealed. Under the heading of treatment he states that—" Vaginal packing is useless in controlling the hæmorrhage." Presumably he means in either case. He advocates manual dilatation followed by version or forceps, and in some cases abdominal Cæsarean section, and if necessary removal of the uterus. The technique of replacing a retroverted uterus is well described and illustrated, and the examination of patients six weeks after delivery and the correction of any existing displacement is advocated. In his chapter on obstetrical operations, the author makes a statement that cannot be too strongly emphasised:—" There is a greater chance of infection in obstetric cases than in any other surgical case. The nearer an obstetric case is managed like a major surgical operation, the better will be the immediate and remote results."

This book, although differing somewhat in its teaching from that of the Dublin School, contains much valuable information.

R. E. T.