SOLUTIONS OF THE QUESTIONS ON MAGNETISM AND ELECTRICITY SET AT THE INTERMEDIATE SCIENCE AND PRELIMINARY SCIENTIFIC PASS EXAMINATIONS OF THE UNIVERSITY OF LONDON FROM 1860 TO 1884

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Solutions of the Questions on Magnetism and Electricity Set at the Intermediate Science and Preliminary Scientific Pass Examinations of the University of London from 1860 to 1884 by F. W. Levander

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F. W. LEVANDER

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MAGNETISM AND ELECTRICITY

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INTERMEDIATE SCIENCE AND PRELIMINARY SCIENTIFIC PASS EXAMINATIONS

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UNIVERSITY OF LONDON FROM 1860 TO 1884

TOOBTHER WITH

DEFINITIONS, DIMENSIONS OF UKITS, MISCELLANEOUS EXAMPLES, ETC.

BY

F. W. LEVANDER, F.R.A.S.

ASSISTANT MASTER, UNIVERSITY COLLEGE SCHOOL, LONDON -

AUTHOR OF "A GENERAL INDEX TO THE ASTRONOMICAL REGISTER AND EDITOR OF "MATRICULATION OURSTIONS ON HISTORY AND GEOGRAPHY," ETC.

SECOND EDITION, CORBECTED AND ENLARGED

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PREFACE TO THE FIRST EDITION.

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It frequently happens that persons, desirons of presenting themselves for Examinations, are deterred from doing so by a want of some further information as to the requirements of the Examiners than can be gained from a mere syllabus, or from the inspection of a few examination papers.

It has been thought, therefore, that a progressive arrangement of all the questions on Magnetism and Electricity set at the Preliminary Scientific and First B.Sc. Pass Examinations of the University of London during twenty years, with answers in full, would be serviceable to those who desire to pass either of those Examinations, as well as to others who study the Science without such ulterior object.

It will be seen that the same ground is covered by other examinations, such as the Oxford and Cambridge Local, those held under the Irish Intermediate Education Act, the Military Entrance Examinations, etc. It has

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PREFACE.

been considered advisable to prefix the Dimensions of Units which are required for more advanced questions.

I have to express my obligations to those writers whose labours have placed them in the foremost rank of authorities on Electrical Science, and whose works have in some instances, unacknowledged elsewhere, been freely laid under contribution.

THE present Edition has been almost entirely re-written and enlarged by the insertion, in their proper places, of the questions set during the last five years.

July 13th, 1885.

For a very complete list of works on the subject the student is referred to *The Bibliography of Electricity and Magnetism*, by G. May, 1884.

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. The questions in each section are arranged in progressive order, but similar ones set in different years are not repeated. ł

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