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Work Out

Physics

'O' Level and GCSE

H. J. P. Keighley

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MACMILLAN

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To Biz, for her patience, kindness and help

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Preface

The book is designed to help students revise for the 'O' level examination in physics. It has been written with an eye on the proposed GCSE syllabuses so that it can be used by those preparing for this examination when it replaces 'O' level. Each chapter contains complete answers to examination questions. These answers, together with the summaries at the beginning of each chapter, cover the work needed for the examinations of the different boards. Most students find it helpful to see and study worked examples, but it is, of course, essential that they understand them! To aid understanding, additional explanations have sometimes been added. Square brackets have been used for these explanations so that they are easily distinguished from the answer to the question. Cross-references are also given where it is felt that this will lead to a better understanding of the work.

In each chapter there is a section entitled 'Have you mastered the basics?'. This is designed to enable students to ensure that they have mastered the essentials. The answers to these questions are given, in most cases, by reference to the appropriate section in the chapter.

Wherever possible, actual examination questions have been included, but as some boards will not give permission for their questions to be used as worked examples, the rest of the questions are recast questions based on those set by the various boards. Since many of the questions are actual examination questions, they sometimes include more than one topic. No attempt has been made to limit questions to ones on a single theme, as this would be unrealistic, but cross-references are given when it is felt that this would be helpful.

At the end of each chapter there is a selection of examination questions for the student to answer. Answers and considerable help with the solutions are provided. It is hoped that these will be an aid to students who do not have access to a tutor.

The number of straight descriptive questions in examinations has decreased over the years, but many boards still set them and no doubt will continue to do so. For this reason, and for completeness, many of the main descriptive parts of the various syllabuses have been included.

There is an index at the end of the book which may be used to revise a particular topic or a part of a topic.

Finally I must express my thanks to friends who have kindly read parts of the manuscript and given valuable advice.

Marlborough College, 1985

H. J. P. K.

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