CONTROL ENGINEERING

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Theory, worked examples and problems

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PREFACE

The main object in producing this textbook is to provide a series of worked exercises and unworked problems, with answers, in control engineering topics. The general standard aimed at is that of an electrical or mechanical engineering first degree, or the Council of Engineering Institutions examinations in Control System Engineering (Section A of the new syllabus). A small number of the examples are suitable for H.N.C. and H.N.D. courses.

Each chapter is preceded by a brief introduction covering the essential points of theory relevant to the problems that follow and stressing the fundamental principle.

A selection of problems is taken from past examination papers set by the Institution of Electrical Engineers, the Council of Engineering Institutions and Leeds Polytechnic. In this respect, my thanks are due to the Council of Electrical Engineers, the Council of Engineering Institutions and the governing body of the Leeds Polytechnic, for permission to use questions taken from their examination papers, the solutions to which are my own responsibility.

The work is divided into eight main chapters, each dealing with specific aspects of the chosen control section, and an attempt has been made to cover a reasonably wide spread of subject material in the worked examples that follow.

The ninth chapter consists of miscellaneous problems that did not fit directly under the chosen chapter headings but that nevertheless the reader should find helpful in studying control engineering theory.

No attempt has been made to include analog or digital computer examples, since the author feels that these topics are sufficiently specialised to justify a book to themselves, and in fact there are several such good books on the market.

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Leeds,
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R. V. Buckley