ELECTRICAL PRINCIPLES II

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ELECTRICAL PRINCIPLES II

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Preface

A sound knowledge of the principles of electricity is essential to technicians in all branches of the electrical and electronics industry; this book covers the requirements of Principles of Electricity II of TEC courses.

The book is divided into ten chapters to provide a step-by-step development of the main areas of work. Examples, both worked and unworked, are included. The first chapter deals with the fundamental units of electricity together with associated mechanical quantities. There follows a chapter on d.c. circuits in which methods of dealing with a range of circuits are described. In chapter 3, capacitors and capacitor combinations are discussed. In chapters 4 and 5 the important topics of magnetic fields and electromagnetic induction are dealt with, leading to the basic principle of the transformer. Chapter 6 covers the basis of alternating-current theory, which leads to work on single-phase a.c. circuits in chapter 7. Chapter 8 is devoted to the important topic of measuring instruments and measurements. The final two chapters deal with aspects of electronics, including diodes, rectifier circuits, transistors and amplifiers.

I would like to thank the editorial and production staff of the Macmillan Press for their advice and help during the production of the book. Finally, it is a pleasure to thank my wife for her excellent work during its preparation.

NOEL M. MORRIS